

Gender and sustainability at the heart of the Amazon: a look at the bioentrepreneurs

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Abstract

The popular and solidarity economy (PSE) aims to achieve collective well-being through activities based on solidarity. The Amazon region of the Republic of Ecuador is closely linked to extractive activities, which risk affecting the health of local populations and accelerating forest degradation. Furthermore, poverty in this region affects 57% of the population, forcing families to engage in harmful forestry activities with significant environmental consequences. International cooperation, providing financing to promote bioenterprises, has generated sustainable alternatives for these populations. In this context, associativity emerges as a mechanism that generates sources of income for families dedicated to the preservation of forests, presenting itself as a viable solution to this problem. This research aims to determine how the financing of international cooperation influences the associative processes of the PSE, taking as a case study the Association of Wayusa Producers of Limoncocha, Ecuador. This association is part of the " Proamazonía " project financed by the Ecuadorian government and the United Nations Development Program (UNDP). Data was collected through semi-structured surveys and focus groups with key stakeholders. The results suggest that it is possible to achieve both economic and social benefits through the associative process. These include empowering Indigenous women, integrating them into the production process under fair conditions and preserving local culture. Consequently, this improves the quality of life of families and, at the same time, prevents the expansion of the agricultural frontier, promoting the economic and environmental sustainability of the area.

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Introduction

The Popular and Solidarity Economy (PSE) is an alternative theory that promotes development focused on individual well-being, based on solidarity, reciprocity, and environmental sustainability. It emerged in the 1970s when cooperative and non-capitalist economic approaches gained relevance in the region. In the case of Ecuador, there is a legal framework that recognizes the PSE as a third sector. Article 283 of the Constitution of the Republic of Ecuador establishes: "The economic system is social and supportive; it recognizes the human being as subject and end; it tends to a dynamic and balanced relationship between society, the State and the market." (Asamblea Nacional Constituyente de la República del Ecuador, 2008)

Ecuador has witnessed a significant proliferation of projects promoted by international cooperation to promote productive initiatives within the PSE paradigm. Implementing these projects primarily seeks to address income generation issues in sectors of the population that historically face socioeconomic disadvantages. (Carranza and Mejía, 2021; Hidalgo-Romero, Pulgar Salazar and Coral Guerrero, 2024). The main problem in the Amazon region is poverty, which according to INEC figures, will reach 57% by 2022 (INEC, 2022), forcing the population to dedicate themselves to activities such as forest clearing, fishing, livestock farming and artisanal mining that erode the land and destroy the habitat of the area.

International cooperation has worked permanently with indigenous communities in the Amazon region intending to promote ventures that can generate income for the population, avoiding migration from the countryside to the city, extractive activities, and the lack of opportunities in the territories. The execution of these projects has not been without challenges and controversies. A major point of discussion has centered on the impact that integration into capitalist economies of scale can have on traditional and culturally embedded production methods, such as the *chakra* system. (Veloz, Tulla and Vera, 2023).

Chakra is an ancient, sustainable agricultural method of cultural importance in Ecuador. Organizations face the dilemma of adopting capitalist models to achieve efficiency while preserving ancient practices. The search for economies of scale and higher income can jeopardize cultural wealth and environmental sustainability, creating a dilemma in *chakra*-related projects. (FAO, 2023). The relationship with *Chakra* seeks to improve the quality of life of the members of the communities with which it collaborates, in a continuous fight to have food sovereignty and overcome extreme poverty (Coral-Guerrero, 2023).

Women play a fundamental role in the Amazonian family economy, she is in charge of the family's food sovereignty and the care of the home, the guardian of the seeds, however, her participation in decision-making regarding the economy of the home has been historically scarce. Previous studies (Almeida Vélez, 2017; Palacios Zurita and Ortiz, 2018; Amofah, 2021) have examined connections between elements such as gender-related associations and environmental sustainability. Although these works serve as valuable references, studies that analyze these aspects of ancestral knowledge and international cooperation have been less explored. In this sense, the link between these elements significantly contributes to this study.

This research aims to determine how resources from international cooperation influence the associative processes of the PSE, using as a case study the Association of Wayusa Producers of the Limoncocha Biological Reserve, supported by the Proamazonía project. Thus, the research question that guides this study is: "How does international cooperation impact bioentrepreneurship projects focused on sustainable development and the social economy in specific indigenous communities?" Likewise, this research postulates the hypothesis (H1) that international cooperation plays a crucial role as a catalyst for the success of bioentrepreneurship projects, specifically in Indigenous communities that seek to reconcile environmental protection and the preservation of their culture.

The base information for this case comes from the project "Promotion of Bioentrepreneurship and Expansion of the Cultivation of Organic Wayusa and Derivatives in the Kichwa Community of Limoncocha, Shushufindi Canton, Province of Sucumbíos" (2021-2023), which is a significant initiative in the field of social entrepreneurship in the area.

The wayusa is linked to the ancestral knowledge of Kichwa women, who use the leaves in decoction for baths that allow: to recover from postpartum symptoms, protecting themselves from snake bites and getting stronger for work. in the "*chakra*". The Kichwa uses the fresh or dried leaf as an anti-arthritic, anti-flu, anti-rheumatic, expectorant, emmenagogue, and stimulant. The secondary metabolites isolated from the leaf extract are caffeine, theobromine, chlorogenic acid, and catechin [2], the latter being a flavonoid of relevance for its antioxidant effect. (Ganchozo et al, 2020)

This project, supported by the management of ProAmazonía, a government entity of Ecuador, and the financial support of the United Nations Development Program (UNDP), focuses on promoting family bioentrepreneurship, with special emphasis on women without fixed incomes in the Limoncocha community. The justification for this project, which is part of our case study, lies in several key aspects. First, it addresses the needs of a vulnerable group, such as women without a fixed income, by providing opportunities for economic and social empowerment. This approach not only contributes to female empowerment by offering them the possibility of generating a second income but also promotes gender equality in the community. Although the project focuses mainly on women, it does not discriminate against men in the community, thus ensuring inclusive integration of all its members.

Secondly, the initiative promotes sustainable agricultural practices by encouraging the cultivation of organic guayusa on land already dedicated to agriculture, thus avoiding deforestation and the transformation of forests into arable areas. This sustainable approach not only protects the environment but also ensures the long-term viability of the project.

Finally, the integration of family bioentrepreneurship in the project strengthens the local economy and promotes self-sufficiency. By training and supporting local entrepreneurs, a sustainable production and marketing network is created that benefits the entire community, improving their quality of life and promoting inclusive and environmentally responsible economic development.

This case addresses the economic and social needs of a vulnerable group, promotes sustainable practices, and seeks to strengthen the local economy.

This article is divided into several sections. Section 2 analyzes theories related to the Popular and Solidarity Economy (PSE), its relationship with international cooperation, and ancestral knowledge. Section 3 describes the research methodology using a case study approach. Section 4 presents the results based on data collection and analysis. Section 5 offers conclusions and analyzes them. Finally, section 6 specifies the limitations of this study.

Literature review

Social and solidarity economy: an alternative approach to sustainable development in Latin America

The social and solidarity economy (SSE), as this alternative form of economic activity is known, encompasses a multitude of practices and intrinsic values among its participants. In essence, when talking about the concept of SSE, we are referring to an evolving economic approach in which construction elements are characterized by cooperative behaviors (Coraggio, 2009). Furthermore, this economy places the human being at its center for the comprehensive satisfaction of their needs, considering capital as a means to achieve this end (Carranza and Mejía, 2021).

A substantial group of authors postulates the SSE as an alternative development model that presupposes that humans can cooperate and seek collective well-being within a framework of reciprocity and solidarity (Coraggio, 2018; Chaves-Ávila and Gallego-Bono, 2020).

In this regard, Latin American literature maintains that the SSE refers to an alternative development model in response to the neoliberal policies implemented in countries since the 1980s, emphasizing the need to explore alternative paths to transform the reality of the region (Coraggio, 2018; Villalba- Eguiluz et al., 2020).

The authors affirm that the SSE is particularly linked to overcoming problems characteristic of underdevelopment, such as unemployment, poverty, and low income (Duque *et al.*, 2021). In this context, case studies become particularly relevant as important sources to illustrate the processes of socioeconomic and productive transformation at the local level, demonstrating the potential of the SSE as a catalyst for sustainable development.

Furthermore, the literature refers to social enterprises and cooperatives as forms of organization that have received broader theoretical development due to their historical importance (Baturina, 2018; Chaves-Ávila and Gallego-Bono, 2020). Another group of authors maintains that this economic approach is determined by the context in which it operates. Although the organizations of all countries share certain characteristic features, there are territorial specificities that give different facets to productive activities. (Eizaguirre, 2016; González, Benavides and Aragadovay, 2020; Duque *et al.*, 2021). This dependence on context is crucial as it determines the unique dynamics of the SSE in each locality.

In this context, associativity is a specific way of participating in economic activity in horizontal conditions characterized by reciprocity, self-management, and solidarity (Espín, 2022). It allows the changing realities of society to be addressed through strengthened collective efforts (Coraggio, 2018). This form of organization constitutes a type of social entrepreneurship that allows democratic decision-making, not only generating economic resources for working members and their families but also empowering women through their earned income, thus promoting an economic-productive cycle. virtuous at the local level (Carranza and Mejía, 2021).

Popular and Solidarity Economy in the Andean countries: ancestral knowledge and international cooperation in sustainable development.

In Ecuador, this economy is known as the Popular and Solidarity Economy (EPS), characterized by the incorporation of the term “popular”, which encourages a wide range of actors involved in the informal sector to adopt such practices in their productive activities. It is not limited exclusively to cooperatives and associations but includes a variety of organizational forms, such as community organizations and popular economic units.

Likewise, associativity presupposes cooperation between individuals and democratic participation to satisfy their needs and achieve collective well-being with the search for "good living" as the ultimate goal (Carranza, 2013). A key element of the SSE in Latin America, specifically in the Andean region, is the cultural connection and heritage of indigenous peoples, where there is not a single vision but rather a multiplicity of perspectives that converge and mix, generating diverse ways of seeing life, nature and productive activities (Coral, 2018). For this reason, ancestral knowledge is a defining element in the implementation of the Social and Solidarity Economy in the Andean countries. These ancestral knowledge systems serve to shape a unique approach to economics and, at the same time, economics contributes to the preservation of these ancestral knowledge systems (Almeida Vélez, 2017; Coral, 2018; Amofah, 2021). Case studies are essential to explore how indigenous communities in the Amazon region conceive and build a Social and Solidarity Economy (SSE). These cases not only analyze socioeconomic and productive aspects but also consider the influence of worldview and culture in the configuration of the SSE in these Indigenous associative ventures (Coral, 2018; Espín, 2022). Wayusa leaves are essential in the culture of the Indigenous communities of the South American Amazon for their medicinal and spiritual use. Their trade generates income for indigenous peoples and promotes environmental conservation by discouraging deforestation (Gimenez, 2019).

In this sense, international cooperation supports the Social and Solidarity Economy (SSE) in Latin America, in line with the UN 2030 Agenda, which encompasses environmental sustainability. In Ecuador, ESS promotes initiatives that combine profits with social benefits and a strong concern for environmental conservation.

According to the literature, international cooperation has played a fundamental role in promoting association processes that boost local economies and create virtuous economic-productive circles. International cooperation goes beyond financial resources and involves education, technical support, exchange of experiences, and partnerships. Cooperation strategies must take these aspects into account and contribute to local development and community capacity. (Cabeza Pullés and Coral Guerrero, 2016).

Furthermore, the literature shows that international cooperation increases its impact on improving living conditions when Indigenous women are included in associative processes. This inclusion has multiple effects on the life of the communities involved, since it promotes the integration of women into productive activities and energizes the economic and social life of indigenous communities. (Almeida Vélez, 2017; Amofah, 2021).

Socioeconomic and Environmental Challenges in the Limoncocha Biological Reserve

This research focuses on the case study of the Wayusa Producers Association, located in Limoncocha, in the Amazon region of Ecuador. This association has distinctive characteristics that make it a relevant case to study. The Limoncocha Biological Reserve, established in 1985, is recognized by the RAMSAR Convention as a "Wetland of International Importance", located in the parish of the same name within the Shushufindi Canton, Sucumbíos Province, approximately 210 km from Quito, capital of Ecuador.

In this region, the abundance of biodiversity and non-renewable resources stands out. It is located near the Yasuní National Park, which has the greatest biodiversity per square kilometer in the world. However, its strategic location presents socioeconomic and environmental challenges, exacerbated by the drop in oil prices since 2015 and increasing pressure on natural resource extraction. This endangers environmental sustainability and the quality of life of the local community.

The community of Limoncocha has maintained a close relationship with the oil companies located near the natural reserve, where the women have carried out minor jobs such as cleaning, cleaning, and feeding. Although these tasks contribute to the family economy, they do not represent an economic model that allows them to grow or contribute to their territory, quite the opposite.

The research is based on the "Proamazonía" project, financed by UNDP, to limit agricultural expansion and promote the inclusion of women in productive activities. Through the association, women are empowered, increase their income, and improve their lives. The project began in 2021, focusing on bioenterprises for sustainable production and conservation, with a budget of \$50,000 for organic wayusa leaves. The SEK Ecuador International University and its Socio-Environmental Research Program supported the project, taking advantage of the rich tradition of ancestral knowledge and community organization.

Research methodology

Case study

In the social sciences and particularly in social economics research, the case study is an extremely flexible methodological resource that allows exploring various characteristics and structural elements of the topic of study. This methodology has been widely used in the field of Social and Solidarity Economy (SSE) to investigate different productive experiences and generate specialized knowledge in the field.

The objective of the case study is to achieve a deep knowledge of the variables that make up the subject of study, establish the existing relationships between them and understand the context that surrounds the case. In essence, it is a methodology that allows deep immersion in a specific case to obtain abundant and contextualized information (Almeida Vélez, 2017).

Wayusa Producers Association, two levels of analysis were used: the individual level and the group level. For the analysis at the individual level, 32 semi-structured surveys were conducted with women heads of household in the organization, focusing on socioeconomic data and expectations related to the initiative. Additionally, focus groups were conducted to explore organizational aspects and members' perspectives on project development. These two approaches allow a comprehensive understanding of the producer's organization, its challenges, and its expectations regarding the productive initiative.

Study Subject: Association of Wayusa Producers of the Kichwa Community of Limoncocha

The community of Limoncocha is located in Ecuador, specifically in the province of Sucumbíos, within the Shushufindi canton. The Kichwa people of the Amazon are made up of two groups that share the same linguistic and cultural tradition: the Napo- Kichwa people and the Kichwa people of Pastaza or Canelo-Kichwa. Their traditional language is Runa Shimi or "people's language", which has several dialects. This group also uses Spanish, particularly in their interactions with mestizo groups.

Illustration 1. The geographical location of the project is the Limoncocha parish, Ecuador.



Source: Instituto Nacional de Estadísticas y Censos - INEC, 2023

The first Kichwa settlement in the area dates to 1958 when migrants of this nationality arrived from Tena, Mishahuallí and Archidona, sailing along the Napo River, and settling on the shores of the Limoncocha lagoon. Since their initial settlement, the Kichwa residents of Limoncocha have faced significant limitations to their development. In 2022, Limoncocha Parish reported the following statistics: 57% of its population living in poverty, a high school attendance rate of 37.31%, and a mortality rate of 59 deaths per 100,000 inhabitants. (INEC, 2022).

This community faces the problem of lack of income as there are limited development opportunities in the area. In this context, the community has faced the dilemma of expanding the agricultural frontier at the expense of the forest, which would provide them with subsistence income but could endanger the sustainability of their economic activity in the medium and long term.

For this reason, it was necessary to explore other alternatives that simultaneously offered sustainability and profitability. In this context, the association emerged as an opportunity to generate income through bio-enterprises that would contribute to the comprehensive development of the community by preserving its cultural heritage and applying its ancestral knowledge, hand in hand with international cooperation funds.

Data collection

Obtaining primary data from project participants involved the creation of specific questionnaires designed to conduct 32 semi-structured surveys. This information collection method has significant value

as it allows the identification of both quantitative and qualitative aspects, such as socioeconomic data, organizational details, and expectations to evaluate the willingness of actors to participate in the proposed project.

A total of 32 surveys were conducted with household heads, mostly women, who owned farms as part of the study sample. This survey covered various socioeconomic and sociodemographic dimensions, among others. Furthermore, the profile of the women leaders in the Limoncocha community is characterized by having ages between 30 and 60 years, mastery of the Kichwa and Spanish languages, commitment to subsistence agriculture, experience in sustainable agriculture, knowledge of Amazonian biodiversity and ability to actively participate in research.

Furthermore, the unit of analysis was the family, and the informant qualified to answer said survey was the head of the family, mostly women. It should be noted that each family can be composed of 4 to 7 members, which indicates that the impact of the project is broad.

This survey had several axes of socioeconomic, sociodemographic, nature, etc., as expressed in Table 1.

Table 1. Main characteristics of the Community

Variables	Characteristics
Profile	Women who are heads of families, preferably with three or more dependents.
sociodemographic	Age: 30-60 years
	Location: Residents of the Limoncocha community.
	Language: Local indigenous Kichwa language, bilingual with Spanish.
	Marital status: Any condition, but they must be responsible for the support of their families.
socioeconomic	Small farmers dedicated to the cultivation of subsistence products, including, among others, wayusa.
	They maintain a modest family economy and obtain income mainly from the sale of surplus crops.
Necessary experience and knowledge.	Practical experience in traditional agriculture and sustainable farming techniques.
	Knowledge of Amazonian biodiversity and native crops contributes to the prevention of deforestation.
	Previous participation in projects or activities related to environmental protection and forest conservation (not essential).
Availability and attitude.	Willing to actively participate in focus groups and surveys.
	Ability to transmit your knowledge and experiences clearly and effectively.
	They are motivated to learn new growing techniques and practices and share them with their community.
Additional Considerations/Profile Risks	Possible time constraints due to work and family responsibilities.
	Logistical challenges of living in remote areas.
	Linguistic and cultural barriers that may affect communication with the consulting team.

Own elaboration

On the other hand, focus groups constitute a very flexible and open method of collecting information, in which a moderator engages in a conversation with a group of people, in this case, members of the Producers Association, to address issues relevant to the research, and encourage intragroup

communication. This procedure produces key information that plays a fundamental role in the investigation process (Barbour, 2007). This method allowed for the collection of in-depth information on the perceptions, beliefs, and opinions of the participants, as well as the exploration of motivations, emotions and the specification of the problems facing the organization.

Focus groups were held at different times to address specific issues with the association. In fact, between October 2021 and November 2022, activities included the legalization of the association, the exploration of ancestral knowledge, the analysis of work management in the 'chakra', debates on gender and rights, environmental planning, review of labor rights and the establishment of the Commercial Association of Wayusa Producers, concluding with product testing of wayusa leaves.

The project is in a preliminary state and the impact results can be measured in the medium and long term. The article is limited in a certain way to narrating the first steps in the construction of an Association of Wayusa Women Producers, the legal procedures, the discussions within the community and the implementation of the project.

Results

The role of international cooperation

International cooperation plays a fundamental role in supporting associations and promoting productive initiatives that make up the Social and Solidarity Economy.

United Nations Development Program (UNDP), through the "Proamazonía" project, which promotes "the sustainable and integrated management of natural resources, contributing to the eradication of poverty and sustainable human development" (PROAMAZONÍA, 2021) As an initiative of the government of Ecuador, it has invested a sum of USD 50,000, allocated to various aspects of the venture.

These funds were complemented with contributions from the counterpart, that is, the Producers Association with USD 28,200 and the counterpart from the SEK International University with USD 21,800. In total, the project had funding of \$100,000. It is important to highlight that this investment was not limited only to the transfer of financial resources but also focused on providing support and transfer of knowledge.

For the intervention and project design, a participatory approach was necessary to identify local needs and promote community empowerment. This involved focusing on qualification, not only on the quantification of resources, in line with the perspective defended by Cabeza Pullés and Coral Guerrero (2016).

Coordination between institutions such as UNDP, SEK International University and the Wayusa Producers Association has demonstrated the power of cooperation. This collaboration has benefited producers, allowing them to promote the production of organic Wayusa as a sustainable business alternative. International cooperation has enriched the knowledge and capabilities of producers, effectively directing their resources towards sustainable practices in their productive environment, thus strengthening their development and sustainability.

Associativity and Productivity

The development of the project required promoting associativity between different families belonging to the indigenous community. To achieve this objective, participatory workshops were held to legally establish an association dedicated to the production and marketing of wayusa leaves and promote trust and collaboration as the central axis of the production process.

Furthermore, of the 32 surveys carried out, 3.2% of respondents are in the age range "under 24 years old", 62.5% are between 25 and 44 years old, and the remaining 34.3% are between 45 and 64 years old. Regarding marital status, 6.25% are single, 21.88% are in a common law union, 68.75% are married and 3.13% are widowed. Regarding gender, 25% of the respondents are men and 75% are women.

In the context of the family nucleus, the number of members was identified according to their age groups. There were 79 individuals under 14 years of age, considered children; 47 people between 15 and 24 years old, categorized as early working age; 61 people between 25 and 54 years old, defined as optimal working age; 11 people between 55 and 64 years old, considered of mature working age; and 7 people over 65 years of age, classified as elderly. In total, 91 men and 114 women benefited directly or indirectly from the project.

The occupational activity of the family nucleus has an average of 31 hours per week. Of the total number of people, 20 are dedicated to public service activities, 29 work in agriculture, 4 are temporary workers in oil companies, 2 are involved in the tourism sector, 7 are housewives and 32 are students.

On the other hand, 24.1% of income comes only from the father of the family, while 20.7% is generated only from the mothers. 51.7% of the income is generated jointly by both parents, and the remaining 3.4% comes from another member, in this case the son-in-law of the family, who contributes to the generation of income in a specific way.

It is worth noting that the associative process of this organization is closely intertwined not only with the generation of income but also with the preservation of forests through the production and marketing of wayusa leaves. This venture challenges the traditional norms of the capitalist system, which focuses on individual profit, and reorients it towards the achievement of collective well-being, both within the association and for the benefit of society.

As observed in similar studies (Almeida Vélez, 2017; Veloz, Tulla and Vera, 2023), the associative strategy is positive when those involved are committed and co-responsible for the productive results of the initiative.

Through an effective process of support and accompaniment to the community and the association, the associative bond has been strengthened and the various actors involved in the production process have been empowered. The empowerment of participating actors has been one of the most notable achievements of this process. By obtaining its legal personality from the competent government entity and establishing its statutes, the members of the association have obtained greater control and autonomy over their organization. This support has enriched the community's capacity and resources in administrative, organizational, and technical matters, allowing it to assume a more active and autonomous role in its activities.

Likewise, to improve productivity, the organization promoted the modernization of administrative management through a detailed business plan. The transfer of knowledge empowered member partners, generating commercial strategies to make a medium and long-term income project viable. The implementation of the plan marked a significant step, strengthening the vision and sustainability. The financing allowed us to increase the productive capacity of the farms, from 27 to 32 farms, and expand the cultivation of wayusa by 7.5 hectares for production and marketing purposes.

Wayusa derivatives stand out. Previously, the organization lacked the logistical infrastructure necessary for such processing. However, one year after the implementation of the project, the organization had a processing plant capable of producing 720 boxes daily, equivalent to 18,000 bags of Wayusa tea infusion. This advance represents a significant milestone in the development and commercial potential of the organization in the wayusa sector, which could represent an income of 720 USD per day for the Association. Meanwhile, with the small production, as indicated by the focus group an income of 500 USD is made at the end of the month, which is reinverted on the production plant and legal documentaries.

The organization went from having practically no means of production to having valuable assets that allow the sustainability of this bioentrepreneurship in the medium and long term, in line with the perspectives of various authors (Palacios Zurita and Ortiz, 2018; Verzosi, 2020).

A key aspect highlighted here is collective ownership, as the findings suggest that to improve the productive activities of organizations, it is necessary to move from individual ownership to collective ownership of the means of production. This significantly increases the likelihood that an organization can generate economic profits at the end of the fiscal year and, in turn, strengthen its economic sustainability process (Hidalgo Romero and Aldas Vargas, 2022).

Gender Approach

The achievements related to women's empowerment are quite evident. The research results show that the gender gap analysis carried out in the community has had a positive impact on raising awareness about women's participation in production and leadership processes. Proof of this is the formation of a board of directors made up mostly of women from the community (Salazar, Rivera and Salazar, 2022).

The associative project has served as a catalyst to promote respect and gender equality, which is reflected in greater female participation and leadership in roles that in the past were predominantly dominated by men. These advances have strengthened the social and cultural fabric of the community, contributing to a more inclusive and sustainable development.

After the project, various gender indicators were obtained, which reveal significant advances in women's participation and access to sustainable productive opportunities. For example, as a result of a democratic selection process among the 32 associates, a total of 4 women leaders were formed and consolidated. These leaders have the task of guiding and supervising the production processes on the farms, applying ancestral knowledge of the farm system, which must be preserved as part of the culture of the territory.

In this sense, the equitable inclusion of women and young people in leadership and strategic decision-making positions have proven to be of great value for the management and advancement of the project in question. This has been demonstrated in the case of the formation of the board of directors of the Wayusa - Limoncocha Producers Association, where young people and women from the community have assumed prominent roles. The diversity of perspectives obtained through this diversified inclusion in decision-making contributes significantly to promoting gender equality and, in turn, adds essential value to the project development dynamics.

Environmental Sustainability

Funding for the project has allowed the organization to establish a production process that protects the environment. In this context, the activity has been conceived and structured under a comprehensive environmental management plan applied to the 32 participating chakras, significantly enhancing the environmental sustainability of the process.

The implementation of environmental management and sustainability plans gains significant importance in the context of productive initiatives within the Social and Solidarity Economy (ESS). This is because economic progress must occur without deforestation or damage to the local ecosystem. Consequently, the production of Wayusa, a native crop, emerges as a paradigm of sustainable development that not only benefits the community but also protects the rich biodiversity of the Amazon.

Discussions and conclusions

This research project provides evidence of the effectiveness of strategies focused on sustainable development, particularly in specific communities. It highlights the feasibility of establishing profitable companies that are respectful of the environment.

Wayusa organic production enterprise with the main objective of preserving the native forest within the framework of the ESS. This approach presents a viable model of rural development that seeks to reconcile the protection of biodiversity with the sustainable management of valuable resources, hand in hand with international cooperation and academia.

The collaboration between the Association of Wayusa Producers of Limoncocha, together with public sector actors such as " Proamazonía ", the private sector such as the SEK International University, and international cooperation such as the UNDP, is essential to demonstrate that coordinated efforts can transform the conditions of life of the population, particularly in the transfer of knowledge and empowerment. Bioentrepreneurship projects focused on sustainable development and the social economy in specific Indigenous communities? Evidence supports the idea that international cooperation, in the context of projects aimed at promoting SSE, plays a crucial role as an important catalyst. This cooperation not only facilitates access to the resources necessary for the successful implementation of projects but also promotes the exchange of knowledge, experiences, and best practices. These exchanges strengthen the sustainability and impact of projects related to the social economy and rural development, generating positive long-term effects.

However, although cooperation is key to giving the initial boost, it is necessary to work on economic sustainability in the medium and long term, since in some cases a dependency on these resources has been created that limits the organization's capacity for growth.

Additionally, the constitution and legalization of this association before the competent authority have facilitated the strengthening and empowerment of the partners involved in this venture, giving them the ability to exercise control and influence over the decisions that will affect their trajectory and projection in the future.

It is important to highlight the relevance of associativity in the context of the Popular and Solidarity Economy (ESS) as an essential tool for the success of this undertaking. In this sense, international cooperation has played a fundamental role since it has been able to promote local development through the transfer of knowledge, technologies and necessary resources, which in turn modernize the production process and add value to the production of organic wayusa.

Likewise, the effective execution of the project was achieved thanks to the active participation of the local community, with a notable inclusion of women and young people. This inclusion has allowed women and young people to assume leadership and strategic decision-making roles, generating positive and significant impacts on the general management of the projects. This highlights that promoting gender equity and diversity in decision-making processes can act as a catalyst to drive more equitable and efficient development at the community level.

In fact, the fact that productive practices are based on ancestral knowledge of the chakra system highlights the relevance of traditional knowledge as a source of sustainable development strategies. This is a key finding, as it shows that it is possible to generate production processes that prioritize local culture over capitalist logic.

Finally, this research opens a future agenda in terms of how projects financed by international cooperation can influence sustained practices of solidarity by organizations and how this financing contributes to maintaining the logic of the SSE in contexts of mixed populations and areas. urban.

Limitations and direction for future research.

This research stands out for its ability to discover the components that make up the role of international cooperation in improving living conditions through the associativity of Indigenous women. However, it is important to note that these results cannot be generalized, since their extrapolation to other areas and geographical contexts, even those that may be similar, is limited due to the rich cultural diversity present

in the different indigenous communities. Therefore, considering specific variables is essential when approaching studies in other Indigenous communities.

At the same time, this study establishes a significant and multifaceted research agenda that focuses on the interconnection between the culture of Indigenous communities and various forms of economic activity. In other words, this research begins the exploration of analyses that consider the implementation of solidarity practices and ancestral knowledge in a profit-oriented capitalist economic environment, without paying attention to the components mentioned.

It is recommended to deepen the study through both quantitative and qualitative measures that allow determining the impact of the association in the territory once the project is consolidated and results can be observed in the population.

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