

National Observatory of Social and Solidarity Economy Projects, PRONACES, Research Networks and the 2030 Agenda

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ABSTRACT

The National Observatory of Social and Solidarity Economy (SSE) Projects is a strategic instrument designed to articulate applied research, public policy, and sustainable territorial development in Mexico. Its structure integrates the principles of the Social and Solidarity Economy (SSE), the National Strategic Programs (PRONACES), and the Sustainable Development Goals (SDGs) of the 2030 Agenda, through the Systemic Quintuple Helix (QHS) methodology, widely documented in recent studies (Martínez Gutiérrez, 2025; Martínez-Gutierrez et al., 2024). This methodology brings together government, academia, enterprises, associations, and consultants to strengthen social innovation ecosystems and generate evidence for decision-making. This article describes the conceptual, methodological, and operational structure of the Observatory, as well as the results derived from its implementation across the Northern, Central, and Southern regions of the country through the Social and Solidarity Economy Research Network (RIESS), recognized for its national reach (Martínez Gutiérrez et al., 2025). Experiences related to the consolidation of SSE Development Nodes (NODESS), the preparation of Voluntary Local Reviews (VLRs), capacity-building programs, and the systematization of community projects are analyzed. Findings show significant progress in multilevel governance, community participation, institutional strengthening, and the generation of systemic indicators, aligned with international literature on SDG traceability (Martínez Gutiérrez & Jiménez Bernardino, 2026). The article concludes that the Observatory is a replicable and scalable model for strengthening territorial capacities, with the potential to consolidate a national ecosystem of 100 VLRs and contribute to the achievement of the 2030 Agenda.

Keywords: Social and solidarity economy, QHS methodology, PRONACES, 2030 agenda, National observatory

INTRODUCTION

The construction of a conceptual framework around the National Observatory of Social and Solidarity Economy Projects (Pronaces) requires starting with a broad contextualization of both the role it plays at the national level and its relationship with international agendas, especially the 2030 Agenda for Sustainable Development.

This observatory emerges as a platform aimed at connecting academic, institutional, and community actors in order to analyze, systematize, and promote practices linked to the social and solidarity economy, thus generating spaces where applied research and public policies are articulated (Gutierrez, Suarez et al., 2025).

In this sense, it is important to recognize that the social and solidarity economy involves a diverse set of organizations, including cooperatives, mutual societies, associations, and foundations, which share values such as democratic functioning and orientation towards the general interest. The purpose is not limited to economic performance but incorporates broad social and cultural objectives. This gives a differentiated character with respect to purely lucrative schemes, since there is a vocation to redistribute benefits to the community (Jiménez Bernardino, Haro Ramírez et al., 2025).

This vision is consistent with the sustainability principles contemplated by the 2030 Agenda as it is directly linked to goals related to equality, social justice and inclusive economic development. The genesis of Pronaces within the Tecnológico Nacional de México (TecNM) also responds to a strategic need: to strengthen research networks in social economy in national and international collaboration. Through this articulation, it seeks not only to produce scientific knowledge, but also to influence practical processes that can transform local realities. This initiative has been led by experienced researchers in the National System of Researchers, ensuring that the agenda developed integrates rigorous evaluation and monitoring criteria (Gutierrez, Suarez et al., 2025).

Scientific intentionality is combined here with a political concern to collect situated experiences and align them with global commitments. If we look at previous experiences in Latin America, we find a scenario characterized by social structures where historical inequalities persist. Latin America has faced structural problems such as poverty, violence, and gender inequality, thus affecting social and economic progress (Romero Ocaño et al., 2025).

Within this context, initiatives such as Pronaces offer opportunities to address such problems through collaborative approaches that include both the academic sector and the productive and governmental segments. The potential impact is amplified when these projects are directly linked to the specific targets of the Sustainable Development Goals (SDGs).

The inter-institutional nature of Pronaces is evidenced in formal agreements between different TecNM campuses. For example, some collaborations have led to conferences highlighting the links between this type of project and global guidelines such as those established by the United Nations in the 2030 Agenda (Chávez Remigio, 2025). These meetings serve to exchange empirical

data on socio-economic impact, analyse legislative challenges and specify operational mechanisms for sustainable development.

THEORETICAL FRAMEWORK

In many cases, there is an effort to identify organizational or sociocultural barriers that hinder equitable participation, which also connects with critical aspects related to female leadership and labor equity documented in other regional research (Romero Ocaño et al., 2025). The integrative approach of Pronaces cannot be separated from the broader debate on critical educational models capable of generating collective awareness of social problems. The critical pedagogy inspired by Paulo Freire offers relevant clues on how to articulate community educational processes to enhance emancipatory practices (Bernardino, Gutierrez et al., 2025).

An observatory focused on the social economy can adopt horizontal communicative elements and encourage participation from different social sectors to nourish its analyses and proposals. This means breaking with traditional hierarchical logics within the academic field and promoting co-construction of knowledge between researchers, productive actors and organized civil society. The challenge is to find effective ways to measure results without reducing them only to conventional economic indicators. Instead of exclusively evaluating financial or productive variables, the cultural, social and environmental impact aligned with the SDGs should be considered.

Presenting Mexican reports to forums such as ECOSOC implies a recognition of the work carried out at the local level within internationally shared conceptual frameworks. Thus, Pronaces acts as a bridge between the specific conditions of the national territory and a global agenda marked by collective interests that transcend geographical borders. From a critical-scientific perspective, it is clear that this observatory represents something more than a database or a documentary repository: it functions as an active node within academic networks that seek to produce effective political advocacy supported by rigorous evidence. Even so, such dynamics face inherent tensions, for example between the short times of political emergencies versus the prolonged periods demanded by serious research, which could influence expected results or even rethink operational strategies according to changing contexts (Gutierrez, Suarez et al., 2025).

METHODOLOGICAL APPROACH

The Social and Solidarity Economy (SSE) is based on principles of cooperation, equity and sustainability, constituting an alternative model to traditional economic systems. Its origin is linked to cooperative and community experiences that seek to respond to social needs through collective organization and social innovation (Martínez Gutiérrez et al., 2025a). In Mexico, SSE has been recognized as a strategic axis for regional development, especially within the framework of the National Strategic

Programs (PRONACES) and the UN 2030 Agenda. The RIESS Network articulates these efforts through the creation of NODESS (SSE Promotion Nodes), which function as spaces for social innovation and inter-institutional linkage (Zazueta Villavicencio et al., 2025a). The conceptual framework of the SSE is complemented by the Fifth Systemic Helix (QHS), an evolution of the Triple Helix of Etzkowitz and Leydesdorff (1997), which integrates five actors: government, academia, companies, associations and consultants. This model allows sectoral ecosystems to be analyzed from an interdisciplinary perspective, favoring the generation of projects with social and environmental impact (León López et al., 2025b). Recent literature highlights that SSE not only contributes to economic growth, but also to applied social ergonomics, by improving quality of life and community cohesion. In the Southern Region, for example, economic models based on native corn and energy sustainability projects have been developed, which reinforce cultural identity and food security (Balderrabano Briones et al., 2025c).

RESULTS

In summary, the theoretical framework of this study is based on three pillars:

1. SSE as an alternative model of development.
2. QHS as a multisectoral articulation methodology.
3. The link with the SDGs as a global sustainability strategy.

This conceptual framework allows us to analyze the contributions of the RIESS Network in Mexico and position them as an international reference in the integration of research, public policy and community action.

Social and Solidarity Economy (SSE)

The SSE promotes economic models based on cooperation, solidarity, and sustainability (Martínez Gutiérrez et al., 2025). Its alignment with the SDGs strengthens territorial capacities and fosters social innovation.

Systemic Quintuple Helix (QHS)

The QHS is an evolution of the Triple Helix, integrating five sectors for systemic development (Martínez Gutiérrez, 2025). Its application in Mexico has enabled the articulation of innovation ecosystems and the development of sectoral diagnostics.

PRONACES and the 2030 Agenda

PRONACES guide research toward national priority problems. The 2030 Agenda requires evidence-based monitoring mechanisms such as VLRs (United Nations, 2024).

RIESS Research Network

RIESS brings together TecNM researchers from three regions of the country, generating projects, publications (see Table 1, Table 2 and Table 3), and social innovation ecosystems (Martínez Gutiérrez et al., 2025). The Observatory is structured through the QHS methodology, integrating four main components (Martínez Gutiérrez, 2025).

Table 1: Publications of researchers in Northern Mexico of the RIESS network.

Title of the Project	Institutions
SDG 17: National Alliance NODESS TIJUANA in northern, central and southern Mexico with the 2030 Agenda	Technological Institute of Tijuana Autonomous University of Baja California Secretary of Public Education Technological Institute of Tijuana International University of La Rioja, Spain FACAM – Colleges of Campinas, Brazil Universidad de la Serena, Chile Catholic University of El Salvador, El Salvador
SDG 17; Research and Development of the UN 2030 Agenda, Case: International RIESS Network	Pontificia Universidad Javeriana de Bogotá, Colombia University of Panama National University, Costa Rica National Technical University, Costa Rica University of Costa Rica, Costa Rica
History of the Tecnm Mexicali Nodess and its impact on the Date marketing	Technological Institute of Mexicali
Building knowledge networks: the Instituto Tecnológico de Ensenada and its contribution to the TecNM RIESS Network	Technological Institute of Ensenada
Industria 4.0 y gestión del conocimiento en Yucatán: estrategias para la Sostenibilidad desde el fortalecimiento del ecosistema de innovación	Technological Institute of Merida
Initiative of workshop of cooperatives for the common welfare. Case Los Cabos Institute of Technology	Technological Institute of Higher Studies of Los Cabos
Innovation and its relationship with business development in Agua Prieta, Sonora: key actor SDG 9	Technological Institute of Agua Prieta
Gender Equity and Women's Leadership on the Sonoran border: legislative advances and challenges towards the 2030 Agenda	Technological Institute of Agua Prieta
Quality of life in housing for the development of the Communities of Huatabampo	Technological Institute of Huatabampo
Productive transformation and sustainability: proposal for solar drying of fruits in rural communities and the creation of a NODESS	Technological Institute of Huatabampo Center for Marine Studies 22 Yavaros Campus

Table 2: Publications of researchers in central Mexico of the RIESS network.

Title of the Project	Institutions
Systemic Development (QHS). Doctoral thesis cases in administration at TecNM	Technological Institute of Tijuana University of Sonora, México Yutong Bus, China SENEAM Tijuana International Airport, Mexico
Public policies for Sustainable innovation. Cases of Doctoral Thesis in Administration at TecNM	Instituto Tecnológico de Tijuana, Mexico Secretary of Anti-Corruption and Good Government Executive Secretariat of the 2030 Agenda, Mexico
Teaching complexity to The future: social economy and solidarity, and scenarios prospects for the TecNM	Interdisciplinary Center for Research and Teaching in Technical Education (CIIDET-TecNM)
Analysis and impact of the Energy Resources in Mexico and other countries in the social economy. Case study of a Agrivoltaic plot	University of Guadalajara Technological Institute of Tijuana Center for Research and Technological Assistance and Design of the State of Jalisco A.C.
Comparative analysis of The legal frameworks of the Social and solidarity economy: The law of the social economy and Solidarity (LESS) of Mexico and Law 454 of 1998 of Colombia	University of Guadalajara, Mexico Universidad San Buenaventura, Cali, Colombia
Cooperative Education from School: Strategy to Strengthen Cohesion Social in Mexico	University of Guadalajara Technological Institute of Tijuana Center for Research and Technological Assistance and Design of the State of Jalisco A.C.
Critical Didactics and Social Economy: New Horizons in Upper Secondary Education	University of Guadalajara Technological Institute of Tijuana Center for Research and Technological Assistance and Design of the State of Jalisco A.C.
Education for the future: Contributions of the Institute Tecnológico de Nogales to SDGs of the 2030 Agenda	Technological Institute of Nogales
Nodess, TecNM Nogales Community Support	Technological Institute of Nogales
Environmental impact	Technological Institute of Nogales

Table 3: Publications of researchers in the south of Mexico of the RIESS network.

Title of the Project	Institutions
Social and solidarity economy, cooperativism and Agenda 2030; an ecosystem for Research Veins	Technological Institute of Tijuana

(Continued)

Table 3: Continued.

Title of the Project	Institutions
SDG 2: Zero hunger and the social economy in Zempoala: a community study based on applied statistics	Technological Institute of Tijuana Technological Institute of Cancun Technological Institute of Ursulo Galvan Higher Technological Institute of Tierra Blanca
NODESS of the south; Promotion of the Social and Solidarity Economy in the Southeast of Mexico	Technological Institute of Villahermosa Technological Institute of Tlaxiaco Technological Institute of Tlaxtla Gutierrez Technological Institute of Chontalpa
Environmental Education in Higher education. Case Administration students	Technological Institute of Merida
Teaching to change the world: the social and solidarity economy in education	Technological Institute of Villahermosa
Community leadership and participation in the social and solidarity economy	Technological Institute of Tuxtepec
NODESS 2025 Cooperative Strengthening Circuit	CRODE Orizaba Higher Technological Institute of Tierra Blanca
Economic model for communities and their relationship with native maize (ZEA MAYS): Tlaxiaco case	Technological Institute of Tlaxiaco Technological Institute of Tlaxtla Gutierrez Technological Institute of Villahermosa Tecnológico Nacional de México
Sustainability and Energy Efficiency in Agriculture: Modernizing a Livestock Barn and Native Corn Cultivation Using Solar and Wind Energy	Technological Institute of Villahermosa Technological Institute of Tlaxiaco

CONCLUSION

The analysis of the case studies of the Social and Solidarity Economy Research Network (RIESS) in the North, Central and South regions of Mexico allows us to establish several relevant conclusions: SSE as an alternative model of sustainable development. The revised projects show that the social and solidarity economy is an effective way to address social, economic and environmental problems. SSE promotes community cooperation, gender equity, food security and technological innovation, directly aligning with the Sustainable Development Goals (SDGs) of the 2030 Agenda (Martínez Gutiérrez et al., 2025a; León López et al., 2025b; Balderrabano Briones et al., 2025c). The Fifth Systemic Helix (QHS) as an integrative methodology. The application of QHS has proven to be a solid methodological framework for articulating diverse actors, government, academia, companies, associations, and consultants—in social impact projects. Its use in the three volumes shows that social innovation requires a systemic and collaborative vision. Differentiated but complementary regional impact. In the North, projects

focus on social innovation, gender equity, and sustainable housing. At the Central and Southern Mexico, contributions focus on cooperative education, public policy, and clean energy. Future lines of research. It is recommended to move towards the creation of homogeneous impact indicators, which allow the systematic measurement of the results of SSE in Mexico. It is also suggested to explore the integration of SSE with emerging sectors such as the digital economy and the energy transition (See Figure 1).



Figure 1: Social and solidarity economy research network (RIESS Network).

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