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Resilience and Livelihoods; A community development model

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ABSTRACT

Objective: Formulate a community development model to contribute to rural resilience at the states of Campeche, Chiapas, Tabasco, Yucatán and Quintana Roo, Mexico.

Design/methodology/approach: The project execution considered the incursion in high and very high marginalization communities with populations between 300 and 3,800 inhabitants, throughout five states. Sustainable livelihoods and the logical framework made it possible to systematize and analyze the collected data to characterize the potential territorial development, carried out with a secondary sources review and a field phase. A social innovation agenda was formulated with descriptive files of projects and potential financing sources.

Results: 93 localities established in 14 micro-regions in five states were intervened. Ninety extension workers were trained in community development, 216 training actions took place, 90 community databases compiled, 90 community development plans, 90 integration acts of community consultation and planning bodies (CCPB) and 14 acts of integration of extension groups for the microregional development (EGMD).

Limitations of the study/implications: The duration of the project prevented the implementation of community development plans.

Findings/conclusions: The present model consider the individuals participation as the basis for the life quality improvement of the community, based on territorial appreciation and the collective identity framed in participatory processes.

Keywords: Quality of life, sustainable livelihoods, social network analysis.

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INTRODUCTION

In Mexico, 73.03% (3,888,764) of the country's rural economic units relate to family farming schemes (subsistence) with no market linkage (SAGARPA-FAO, 2014); however, the public policy promoted in the sector shows a hegemonic character with the purpose of promoting agricultural exports specialization (Reynolds *et al*., 1993; Appendini, 1995). Unfortunately, the strategy has contributed to the polarization of production systems in the Mexican countryside; including, on the one hand, the agro-export sector, producers in transition, and, on the other, the producers who are the target population of assistance programs to combat poverty. Usually the latter linked to smallholder production schemes (52.81 million Mexicans; approximately 44.60% of the population during the 2008-2018 period) concentrated in the South-Southeast Region, particularly in Veracruz (4.54 million), Chiapas (3.93 million), Oaxaca (2.60 million), Guerrero (2.36 million) among others (CONEVAL, 2019). Paradoxically, the South-Southeast Region has more than 70% of the biodiversity of North America and is part of the Mesoamerican Biological Corridor, so it is convenient to question the logic followed in development policies from above (top down), which propose schemes hegemonic valid for all the territories of Mexico (SEDATU, 2013; Rózga, 2013). This document is framed as a development proposal from below (bottom up), where the micro-social space or community makes it possible to focus attention on the internal interactions between actors and their arrangements as a basis to cement development strategies or sustainable livelihoods (SL) as an alternative to the hegemonic agricultural policy implemented in the sector (Rózga, 2013; Méndez, 2015). The SL are based on the development potential of the territory, and involve natural, productive resources, anthropogenic activity related to the use, conservation and exploitation of resources, therefore, it is the basis for the generation of income and satisfaction of the needs of the rural population (Vázquez-Barquero, 2007).

The capitals that make up the SL are human, which represents all those elements linked to the rural population such as health status, population growth, migration, and social capital. This involves the relationships or links established by the inhabitants, natural capital, which relates the natural resources of the territory (land, flora, fauna, bodies of water, etc.), the physical capital, which considers the basic infrastructure and those production goods used by the populations to satisfy their basic needs and carry out their productive activity, and the financial capital, which considers access to markets, the construction of rural and complementary income, but also the availability of money or equivalent (Alobo, 2015). It is worth mentioning that the conversion of assets to capital through the production of goods and services is of vital importance, with a view to contributing to the improvement of the quality of life of the rural population within the framework of community development. The above as a process of social construction that pursues the development and strengthening of rural resilience based on the development potential of the territory (natural resources, productive resources and anthropic activity) from the perspective of the community (Carlson *et al*., 2017; Pastor, 2015; Zarazúa and Gómez-Carreto, 2014). Rural resilience, therefore, is the ability of a rural territory to positively adapt its economic, social, natural structure, etc., based on the identified livelihoods, and to maintain continued development over time in the face of adverse situations that generate serious impacts (Sánchez-Zamora *et al*., 2016; Méndez, 2016). Therefore, a community development model was formulated to contribute to rural resilience in the states of Campeche, Chiapas, Tabasco, Yucatán and Quintana Roo, Mexico.

MATERIALS AND METHODS

The execution of the project considered the incursion into communities of high and very high marginalization with a population of between 300 and 3,800 inhabitants, established in five states, between July 2017 and March 2018, under the auspices of the Instituto Nacional para el Desarrollo de Capacidades del Sector Rural, A.C. (INCA Rural, A.C.) within the framework of the Extension Center for Community Development (PM171032) project for Campeche, Chiapas, Tabasco, Yucatán and Quintana Roo.

The methodological tools used were sustainable livelihoods and the logical framework, which allowed the systematization and analysis of data collected in the characterization of the development potential of the territory (natural resources, productive resources and anthropogenic activity), carried out with a review of secondary sources and phase field. Subsequently, a community development plan was formulated with descriptive sheets of projects and potential sources of financing.

The methodological proposal proposes the participation of the individual as a basis to contribute to the improvement of the quality of life of the community, for which

the integration of the consultation and community planning bodies (CCPB) and of the extension groups for micro-regional development (EGMD) are vital. For the purposes of this model, the CCPB was contextualized as a space for permanent participation of community actors that allows the development and consolidation of the processes of empowerment and construction of Roadmap Agendas of intervention strategy. The integration of the CCPB considered the identification of key actors with the applicability of social network analysis, dissemination of the call for the integration of the CCPB, the planning of the participatory assembly, the signing of the act of installation and compilation of the personal file of the members of the CCPB and finally, the protest of the members of the CCPB. Meanwhile, the EGMD as multi-community bodies will seek to develop and strengthen the capacities of the members of the CCPB, in such a way that these bodies analyze, prioritize, promote and promote community development plans that contain the strategies identified from the means of life and community optics (Alamilla *et al*., 2018).

RESULTS AND DISCUSSION

In this study 93 localities, established in 14 microregions, in five states were intervened. Ninety extension workers were trained in community development, 216 training actions carried out, 90 community databases, 90 community development plans, 90 acts of integration of CCPB, and 14 acts of integration of EGMD (Figure 1 and Table 1).

In total, 26 follow-up or training events were held, among them: workshops to introduce methodologies and tools of the community intervention strategy to state trainers, follow-up meetings and presentation of extension workers, among others (Figure 2).

One of the neuralgic points that the project faced was the identification of the target population, so we proceeded to integrate the unique databases of beneficiaries or BDU (Annex II of the SAGARPA operating rules, 2017), with documentary supports that guarantee the authenticity and veracity of the information. The extension model evaluated in this work showed that the relationship with an educational and research institution provides important contributions to the model since that is where novel information is found. However, not having control over the hiring of extension agents, it hinders the formation of interdisciplinary groups for technology transfer, to form; for example, groups of extension agents with agronomic, livestock, social, administrative and technological profiles, in such a way that the production systems improve, working with the beneficiaries that facilitates the generation of new local entrepreneurs and can migrate to economically higher social strata. In this regard, Cadena-Iñiguez *et al*. (2018) pointed out that the incorporation of ICTs in agricultural production systems is an innovation that needs to be adopted by producers and break the paradigms that technologies are not applicable to the field and are very expensive. Like Landini (2014), the highest percentage of extension workers were men (62%), with university studies (100%) and 5% with postgraduate studies. The average age was 30 years. Although the extension agents were trained in the community development extension model, Landini (2014) recommends training them in service and management of social processes, especially group management, participatory process management, ability to teach and empathize, etc. in order to improve the extension processes. The foregoing agrees with the model presented in this work. Finally, this model has methodological tools that lead communities to value themselves for what they are and have and to identify their productive potential with a focus on equity and gender (Figure 3).

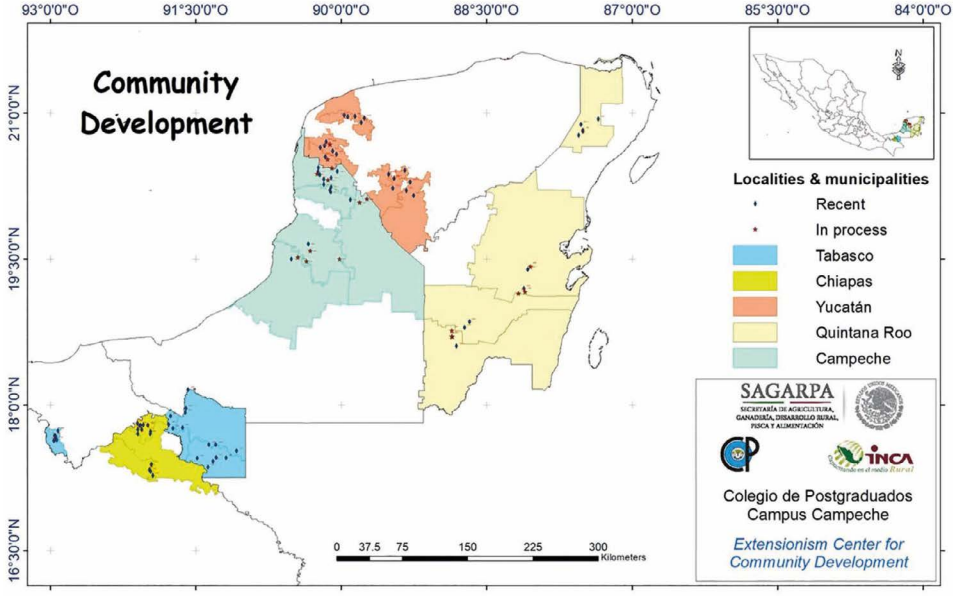

Figure 1. Map of intervened localities. Data from INEGI, CONAPO.

Table 1. List of intervened localities in selected states, ordered based on the microregion to which they belong (Alamilla *et al.*, 2018).

State	Municipality	Micro-area	Locality	Habitants
CAMPECHE	CALKINI	Camino Real	Concepción	351
			San Agustín Chunhuás	401
			Pucnachén	865
			San Antonio Sahcabchén	1858
			San Nicolás	369
			Santa Cruz Ex-Hacienda	1255
			Santa Cruz Pueblo	1908
			Tepakán	1895
			Santa María	236
	HECELCHAKÁN		Pocboc	1624
			Santa Cruz	1118
			Dzitnup	891
	CAMPECHE	CAMPECHE CENTER	Nohakal	880
			Pich	1756
			Tixmucuy	497
			San Luciano	319
			Adolfo Ruiz Cortínez	378
	CHAMPOTÓN		Hool	1181
			Santo Domingo Kesté	3763
	HECELCHAKÁN	CHENES	Nohalal	522
	HOPELCHÉN		Chunyaxnic	364
CHIAPAS	CATAZAJÁ	CATAZAJÁ	Agua Fría	571
			Emiliano Zapata (San Joaquín)	377
			Loma Bonita	1071
			La Tuza (Maceo)	437
			Ignacio Zaragoza	963
			Santa Cruz 2da. Sección de Loma Bonita	390
			Cuauhtémoc	728
			Punta Arena	1365
			El Rosario	666
	PALENQUE	PALENQUE ALTOS	Belisario Domínguez Norte	379
			San Antonio	428
	SALTO DE AGUA		América Libre	1263
			Estrella de Belén	396
			Nuevo Mundo	353
QUINTANA ROO	FELIPE CARRILLO PUERTO	CARRILLO PUERTO	Noh-Bec	2045
			Uh May	480
			X-Hazil Sur	1422
			Andrés Quintana Roo	346
			Reforma Agraria	314
	OTHON P. BLANCO	OTHÓN P. BLANCO	Altos de Sevilla	605
			San Pedro Peralta	766
			Lázaro Cárdenas Segundo	699
			San Román	530
			Morocoy	1293
			La Libertad	421
	LÁZARO CÁRDENAS	LÁZARO CÁRDENAS	Cristóbal Colón	341
			San Cosme	361
			San Francisco	767
			San Juan de Dios	360
			Ignacio Zaragoza	2213

Cuadro 1. Continuación.

State	Municipality	Micro-area	Locality	Habitants
YUCATAN	HALACHÓ	HALACHÓ	Cuch Holoch	2017
			Kancabchén	460
			Santa María Acu	1437
	MAXCANU		Granada (Chican Granada)	476
			San Rafael	1252
			Chunchucmil	1091
			Paraíso	656
			Santa Rosa (Santa Rosa de Lima)	913
			Coahuila (Santa Teresa Coahuila)	626
	MANI	PUUC	Tipikal	951
	OXKUTZCAB		Emiliano Zapata	1350
	TEKAX		Canek	308
			Manuel Cepeda Peraza	573
			Pencuyut	1524
	TICUL		Pustunich	2480
			Yotholín	2267
	HUNUCMA	TETÍZ	Hunkanab	466
	TETIZ		Tetiz	3939
			Nohuayún	777
	UMAN		Dzibikak	1388
			Oxcum	1175
TABASCO	TEAPA	TEAPA	Ignacio López Rayón 1Ra. Sección	552
			José María Morelos y Pavón 1ra. Sección	422
			Mariano Pedrero 1Ra. Sección (La Providencia)	381
			José María Morelos y Pavón (Las Delicias)	815
			José María Morelos y Pavón (Santa Rita)	489
			Las Lilias	365
	BALANCÁN	BALANCÁN NORTE	El Pípila	512
			Constitución	523
			Miguel Hidalgo y Costilla	292
			Ingeniero Mario Calcáneo Sánchez	319
	EMILIANO ZAPATA		Emiliano Zapata (Sección Jobal)	344
			Nuevo Chablé	407
	BALANCÁN	TENOSIQUE	Mactún	1055
			Jolochero	737
			Arroyo el Triunfo 2Da. Sección	342
	TENOSIQUE		Canitzán	308
			Emiliano Zapata 2Da. Sección (El Carmen)	443
			Ignacio Zaragoza	357
			San Isidro Guasiván	361
			Los Rieles de San José	336
			Crisóforo Chiñas	353

CONCLUSIONS

The innovation in this model is to use a series of analysis tools to carry out a diagnosis focused on the capital available to producers and to focus their requirements from their perspective and not from a vertical vision of the extensionist or government program. It proposes to generate groups of extension agents from different disciplines that allow meeting the needs of rural actors, leading producers to be agricultural microentrepreneurs, and leading them towards a vision of wealth from different points of view.

Figure 2. Photographic evidence of the different processes of the extension model. A) Interdisciplinary work and training team for regional coordinators B) Training for extension agents, C) Approval of innovation agendas, D) Protest of the Community Consultation and Planning Body (CCPB), E) Extension Groups for Micro-regional Development (EGMD).

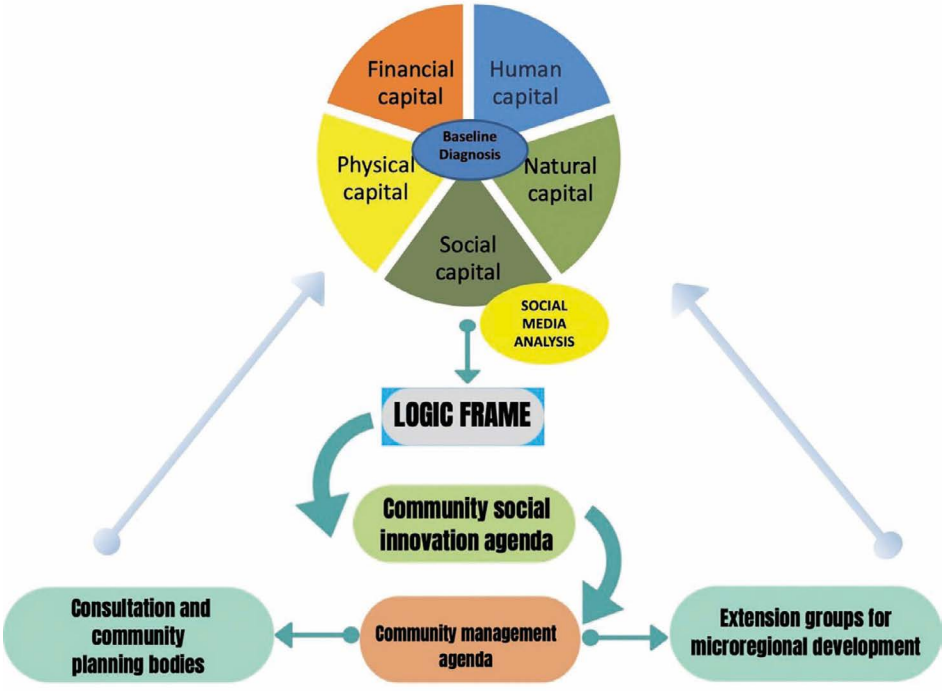

Figure 3. Community Development Model (Alamilla *et al.*, 2018).

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