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A Systemic and Transdisciplinary Study to Contribute to Decolonial Futures in Two Indigenous Municipalities of Chiapas, Mexico

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Abstract: We draw from participatory action research and sustainable livelihood approaches to integrate a systemic and transdisciplinary methodological proposal capable of contributing to decolonial futures for indigenous peoples. This methodological proposal is illustrated with two decades of research experience collaborating with Mayan Tseltal communities in Chiapas, Mexico, to contribute towards improving their life strategies. The conceptual framework employed was Local Socio-Environmental Systems, a soft system proposal made up of four sub-systems that are interrelated, based on their formations in a particular territory framed within specific historical regimes. Community workshops were organized, and ethnographic fieldwork was conducted. The findings were systematized through Grounded Theory coding processes and linguistic translation. The results focus on (a) showing the process of alignment of the transdisciplinary horizon from the interests of three groups of actors participating in the accompaniment (communities, academia and civil society), (b) analyzing the emergence of Tseltal ethos associated with territory, family lineages, community harmony and dignified life that complexified the initial methodological proposal and (c) detailing the reinterpretation and appropriation that social subjects made to the category “capitals” of the livelihood framework. We conclude by reflecting on ‘knowledge dialogues’ and epistemic decolonization to which transdisciplinary research has given rise, to the extent that the accompanied Tseltal communities are currently demanding recognition of their political autonomy from the state.

Keywords: systems thinking; transdisciplinary; socioecological systems; dialogue of knowledge; decoloniality; futures; indigenous peoples



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1. Introduction

Over the last few decades, there has been increasing academic interest in development research that looks to improve the living conditions of marginalized sectors, such as large parts of rural and indigenous populations in Latin America. This interest has propitiated the emergence and consolidation of theoretical frameworks and methodological approaches concerned with overcoming the legacy of colonial thinking and its practices, especially among scientific and government institutions.

To ensure a deeper understanding of this colonial legacy, its implications and challenges, Systems Thinking (ST) can provide key theoretical and methodological elements. For example, from ST, we can scrutinize the highly interdependent and structural character of economic patterns, social inequality and ecological degradation [1,2]. Also, an ST approach can be of great use in identifying patterns of behavior over time in such structures [3]. Thus, within the ST approach, there is an increasing move towards soft approaches rather than formal models that make predictions or engineering systems in a

way that promotes more holistic epistemic reflections—among the actors involved—capable of thinking about the system from multidimensional angles [4,5].

Undoubtedly, three of the frameworks with the widest research scope that embrace an ST approach are Participative Action Research (PAR), the Sustainable Livelihood Approach (SLA) and the Transdisciplinary Method (TM).

PAR is part of a family of research methodologies (action-research, action-learning, etc.) whose objective is to pursue, at the same time, action and research results. The latter is achieved through the participation of the social subjects in the research, i.e., they go from being the “objects” of study to the “subject” or protagonist of the research [6]. PAR uses the following methodological approach based on progressive cycles: (a) group reflection on how the research will be, (b) planning of the research activities and the steps to follow, (c) actions based on the research activities forecasts and (d) systematization of the data collected and the action-research process as a whole [7,8]. To do so, PAR usually promotes educative and pedagogical spaces inspired by different emancipatory perspectives and ideas such as “Southern Epistemologies”, which looks forward to overcoming the imposition of a unique source of knowledge validated with the cartesian method [9].

SLA analyzes the political-economic structures and contexts of vulnerability, as well as the resources and opportunities for change that rural households bring into play when they develop strategies to maintain or transform their ways of life [10]. SLA incorporates a number of concepts from sociologist Pierre Bourdieu [11,12], like the constructs of social reproduction and categories such as “field” (a set of force relations among agents or institutions) an “habitus” (generative schemes from which social subjects perceive the world and act in it), specifically, his understanding of social reproduction through the analysis of the forms of capital (i.e., human, financial, physical, natural and social) that are mobilized by given individuals and social groups [13]. On the other hand, TM connotes a research strategy that crosses disciplinary boundaries to create a holistic approach based on problem-solving [14]. However, going beyond disciplinary boundaries to include non-academic knowledge often situates us at different levels of reality and requires a third party included in the research process who must be able to recognize complexity and match differences and contradictions [15]. As can be seen, the three briefly characterized approaches are highly systemic in recognizing the inherent complexity of the realities studied, as well as in seeking transformations based on multi-actor processual approaches.

The purpose of this paper is to present an example of the use of System Thinking within a long-term PAR project that drew on and integrated the SLA approach and TM. The referred project took place in the state of Chiapas, Mexico, over a corresponding period from 2007 to 2015. We established a collaborative relationship with Mayan Tseltal communitarian leaders and Catholic Church organizations with the goal of contributing to the definition of a model of autonomous indigenous municipality guided by philosophies and ethics of life according to Tseltal Leaders’ worldview and history.

The approach we constructed ad hoc from our previous experience in PAR, SLA and TM was the Local Socio-environmental Systems (LSES) framework. This framework is an adaptation of the SLA and conceives the area of study as a complex adaptive system made up of four sub-systems, which are interrelated since they are connected to a concrete territory. Also, it recognizes the influences of internal and external actors and institutions, which occurs under the rules established by regimes. We refer to socio-environmental regimes as those regulations resulting from international agreements implemented in specific territories by national and sub-national agencies to address social and environmental issues [16].

Our intention was to build a theory in an abductive manner while accompanying PAR processes. The objective was to create the conditions, so the local population could strengthen their capacities to identify, characterize and organize their resources, knowledge, capacities and relationships and, through the design of collective action strategies, decide on and implement specific projects aimed at improving their living conditions.

This process began by bringing territorial action groups made up of indigenous producers and leaders -men and women- (known as *cargos*) together, whose technical, productive, organizational and analytical capacities were strengthened thanks to the support provided by groups of academics and civil society organizations. A key moment was a collective deliberation meeting led by the *cargos*, aimed at re-signifying, from their cosmovision, the LSES categories proposed by us in the academic sector.

This paper is organized in three other sections in addition to this introduction. First, we present a theoretical framework in which we deepen the LSES framework and its relationship with transdisciplinarity. Next, we detail our methodological approach. In it, we include territorial planning schemes and the phases and objectives of some participatory workshops. Next, we refer to the coding techniques we used when analyzing the primary data and emerging theoretical categories based on Grounded Theory. In the Section 3, we focus on analyzing the emergence of the Tzeltal ethos “*stalel kuxlejaltic*” (our way of being), *Lekil Kuxlejaltic* (dignified life) and *Jun Pajal O’tanil* (harmony), as well as on showing how the relational conception of the territory of the Mayan communities of the Chiapas Highlands enriched our LSES framework. From a ST approach, we confirmed how the actions of individuals, families and communities are defined and interact on the basis of a set of values (i.e., social, spiritual, ecological), not only economic ones. Its application meant that the strategies proposed favored the capacities and resources of the action groups and were directed towards the fulfillment of a socially shared objective of the common good. In the final section, we conclude by reflecting on how a transdisciplinary research process, oriented by ST, accompanied the cognitive emancipation of social subjects and supported the orientation of decolonial futures whose epicenters of action are dignified life and territorial autonomy.

2. Theoretical Framework

During the past two decades, the SLA has been a theoretical and practical framework used by different instances interested in promoting rural development [10]. SLA transitioned from focusing on increasing economic growth to putting forward the improvement of human wellbeing [17]. It also incorporated other notions, such as making emphasis on the poor and their needs, the importance of participation of people themselves, the concepts of resilience and sustainability and the importance of ecological problems.

Despite those changes and adaptations, there were a variety of criticisms with respect to the SLA [18]. Some of these were that, in methodological terms, SLA tended to overlook the peculiar ways of local livelihoods and focus mostly on networks and relationships that transcend the local system [19]. Nevertheless, almost none of these criticisms establishes that the SLA originated from, and continues to follow, the paradigm of development cooperation, strongly characterized by a western rationality tending to the universalism of the accumulation of capital(s) [9].

By recognizing the previous methodological weaknesses, and after more than a decade of study [16] and following suggestions such as the ones from Carney [20] and Scoones [18], our research team concluded that, in order to understand why families are poor/rich or vulnerable/resilient we must study processes situated at scales that go beyond the local. Also, we understood that, at the same time, we must understand the profound motivations that people have while making strategic decisions [16].

With these reflections, we confirm that, in order to achieve a decolonial process, we must commit ourselves to the recognition of the epistemic validity of other forms of knowledge different from the cartesian ones. We recognize how the modern capitalist society in which we live has privileged the kind of scientific knowledge that serves the ends of social groups with greater economic power. We consider that a decolonial process must be directed towards an “ecology of wisdom”, which proposes that there is no ignorance or knowledge in the abstract but that there is a principle of incompleteness for all forms of knowledge. This incompleteness implies that no single form of knowledge can have all the answers. An “ecology of wisdom” seeks to maximize the contributions of the different

forms of knowledge to overcome environmental devastation and the conditions of social injustice that modernity has favored [9].

2.1. Local Socio-Environmental Systems

In a recent work, one of the authors of this paper presented an alternative framework to the SL, which is a corner stone for the present study: the LSES [16]. The LSES is a conceptual framework rooted in system theory. It follows Luhmann’s [21] ideas about social systems, which he considers to be neither hierarchical nor nested, but rather consist of multiple interrelated sub-systems. We conceive LSES as a complex adaptive system made up of four sub-systems (landscape, groups of producers and local actors, socio-academic groups and political-economic groups) which are interrelated since they are connected to a single and concrete territory.

We understand a territory to be a social construction resulting from interactions among multiple actors involving power relationships [22]. This interaction is characterized by a minor or major level of influence, depending on the economic, political or social power mobilized by each of the actors and by the degree of their willingness to enter into substantive cooperative relationships oriented to the common good of the human communities that inhabit the territories.

We have classified those actors into three components: (a) rural producers and the organizations to which they belong, (b) socio-academic actors and (c) economic-political actors (Figure 1). Above them all, on the international level, we recognize what has been called as “regime”. In a previous document [16] (p. 11), we have defined a regime as a “set of principles, regulations, international summits, institutions and procedures for decision-making used to govern, considering different actors’ claims or interests, within specific economic sectors [23], including education and law”.

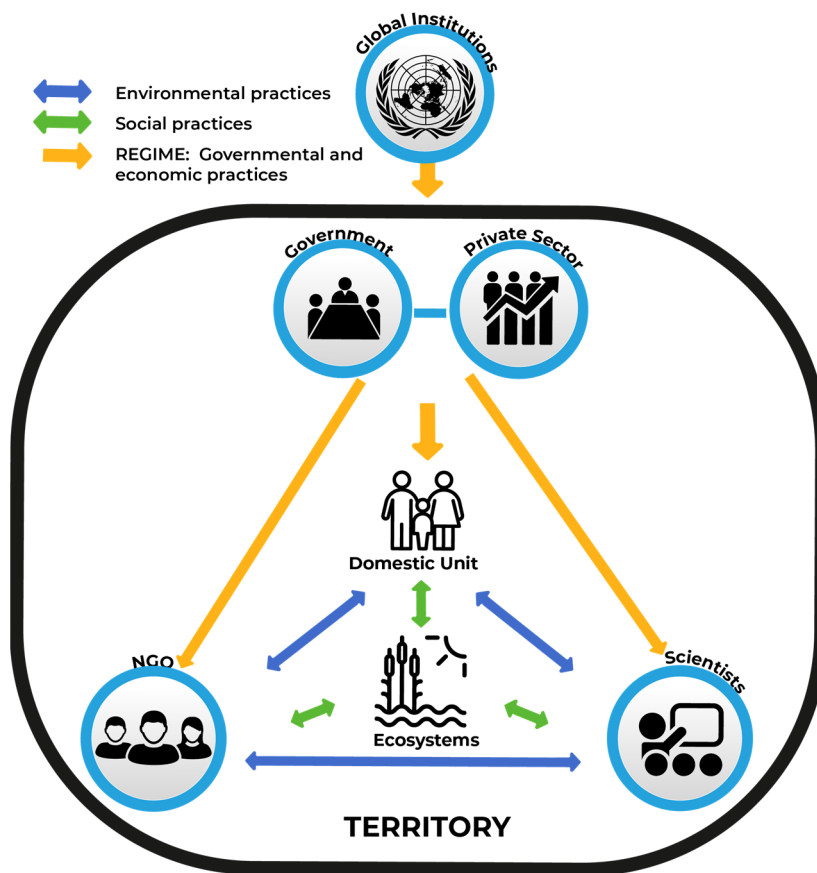


Figure 1. General conceptualization of the Local Socio-Environmental Systems (LSES) framework.

In recent decades, international regulations have guided public policies at the national or sub-national levels [24] on what we could refer to as socio-environmental regimes: regulations that are the result of the implementation of international agreements by some enterprises with linkages to the international market, to address social and environmental issues. Since those social and environmental issues are implemented in specific territories, they may also be referred to as territorial regimes [16].

In Figure 1, we represent the government and private sector in the same position, given the inherent links between state-building and capitalist economies. In the case of NGOs, they could be locally-based groups with a strong commitment to the creation of decent living conditions for households. Also, they could be organizations directly supported by transnational companies which are willing to influence the consumption habits of households or to promote some kind of use of natural resources (favorable to those companies). As for scientists, there may be those who work to justify extractivist models and those who seek to build alternatives to favor the regeneration and conservation of ecosystems and/or are looking forward to strengthening the capacities of households.

Those LSES are not static; different changes emerge from the relationships among various social groups present in the territory. In order to understand it, we must characterize those environmental dynamics (endogenous and external) affecting the territory (to see how it operated in Chiapas, see [25]). In the case of the territorial configuration, we have established [16] that LSES is “the result of historical social practices and power relations that conform people’s habitus [26]; and both local and external norms that govern daily life shape territorial livelihoods. So diverse livelihoods generate tangible and intangible values which are often disputed by local actors, while witnessed and/or influenced by external actors”.

By characterizing these components and their interactions, we will be able to analyze processes of change that occur in rural production systems and in indigenous territories. Achieving this point is a complex task, so we should conceive an LSES as a complex system that should be addressed through multiple disciplines. By using an ST, we consider it would be helpful to combine knowledge and practices from several fields such as agroecology, anthropology, sociology, economics, law and political sciences, as well as other types of knowledge like traditional and indigenous knowledge. The recognition of local knowledge as the base of our research could enhance a more specific and relevant definition of problems of study, what has been conceptualized as transdisciplinary.

2.2. Transdisciplinary Approach

Even though the transdisciplinary approach can be traced back to the studies of Piaget, it was Nicolescu [27] who conceived it as a formal scientific approach. He defines it as a method that can help us to cross the traditional scientific discipline borders. Nicolescu invites us to look forward and propitiate the emergence of more holistic and relational knowledge and practices. Nicolescu’s [27] proposal is based on three axioms:

- (1) Complexity: reality is more than the sum of its parts, so it is necessary to achieve harmony between mentalities and knowledge. This requires that knowledge be intelligible and comprehensible;
- (2) Levels of reality: there is interest in the dynamics generated by the action of several levels of reality at the same time, where discipline and transdiscipline are complementary;
- (3) Hidden Third: to build a new theory, the unification of another contradictory pair is sought, eliminating contradictions at a certain level of reality and giving way to an eventual new contradiction arising from the pressure of theory and experience. As new levels of reality are discovered, the previous theory would be replaced by more unified theories.

In Latin America, authors such as Collado, Madroñero and Alvarez [28], Merçon [29] and Toledo [30] established that transdisciplinary research should move towards a “dialogue of knowledge”. That does not mean that transdiscipline denies the benefits and contributions provided by the disciplinary approach [14,15]. What it seeks is both to give

recognition to knowledge based on another type of rationality and to contribute to the generation of spaces and forms of understanding between different kinds of knowledge and ways of socially constructing reality [31].

The expected scenario is one in which different disciplines could provide categories that complement each other within a specific problematic field that could be clearly defined using the references, notions and categories that emerged from several types of local knowledge and practices [32]. All of them are inspired by a coherent understanding of what social flourishing is within a specific cosmovision or “tradition”.

We understand the term “tradition” based on the ideas of Alasdair MacIntyre. He defines it as an “argument extended through in time in which some fundamental agreements are defined and redefined” [33] (p. 12). MacIntyre [34] has established different types of traditions, including what he considers the “good-ordered traditions”. These are based on a “progressive and cumulative process of agreements on some specific arguments” [33] (p. 12). A good-ordered tradition moves toward making itself more adequate in terms of the context’s nature and historical conditions. This is possible thanks to a recurrent process of deliberative analysis implemented by the members of a certain community, in which a specific way of life can ensure the fulfillment of all its members’ needs, so-called social flourishing.

This kind of analysis could help any community to solve different epistemological crises that might have occurred in the past. To achieve substantial agreements about the virtues and goods of its members, the community must decide which of the contending arguments is more compatible with their “tradition” or *telos* (final end).

We found this conception of “tradition” and how it guides communities very compatible with the analytic model proposed by Manfred Max-Neef [31]. This model contemplates four levels of analysis of reality. In ascending order, these are: (a) what exists (factual level); (b) what we are capable of doing (propositional level); (c) what we want to do (normative level); and (d) what we should do according to certain local values (teleological level; see Figure 2). Each of these levels can be analyzed from specific disciplines that act in a coordinated and interdisciplinary manner. Transdiscipline occurs when all levels are coordinated, with the teleological level (tradition) guiding the rest.

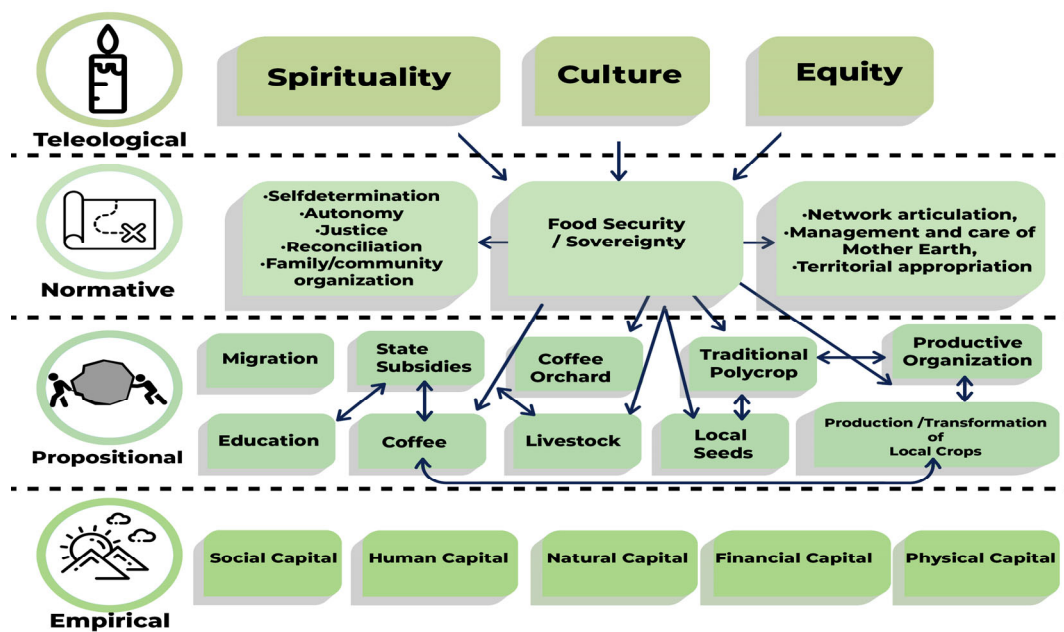


Figure 2. Transdisciplinarity analysis diagram.

This soft ST scheme analyzes how strategies could be oriented to address the problems beyond specific situations and thus achieve the clearest possible understanding of deeper

and existential aspects. In the end, those are the ones that give meaning to the actions and allow greater involvement and appropriation among the actors. Max–Neef considers that doing research on every one of those levels requires specific competences and an interdisciplinary synergy. Only if all those levels are coordinated, local actors can truly appropriate the strategies.

Understanding these levels and how they are conceived by local actors will not be something fortuitous nor immediate; it requires commitment, sensitivity and openness on the part of those of us who undertake PAR. Within this approach, scientific knowledge is never the reference from which traditional knowledge is validated. A real PAR occurs when complementarity is sought, propitiated and achieved.

Kendall [33] shares the experiences he had with Aborigine groups in Australia and establishes that any participative process should consider certain criteria such as: (1) the indigenous community must give their written consent, which must be the result of a detailed, informative process; (2) the research objectives should be defined by the community itself; (3) the community must have the results in an adequate format; (4) the research team must ensure that the community has control over the results. For Merçon [29] and Toledo [35], it is a matter of establishing an “ecology of experiences” that allows us to appreciate the interaction between the different human dimensions: feelings, beliefs, dreams, concerns, fears, trust, distrust, etc.

By using LSES—guided by an action approach of the soft ST type—and taking categories proposed by SL into consideration, we were able to conduct community diagnoses to identify available resources, using the categories physical capital, financial capital, natural capital, human capital and social capital. With them, we organized the resources, knowledge, capacities and relationships available to the family within a specific territorial and municipal scale, all of which could be mobilized through collective action strategies (see Appendix A).

3. Materials and Methods

The study site is located in the norther region of the state of Chiapas, in the south of Mexico, a territory where the majority of habitants recognized themselves as part of the Tseltal Culture. Our intervention took place, particularly in the municipalities of Chilón and Sitalá, 2 municipalities characterized by low Humane Development Index and high levels of poverty, malnutrition and vulnerability to climate change.

3.1. Multi-Stakeholder Approach

In 2007 the Research Group “Lifeways and Territorial Innovation” (MOVIT in Spanish) from *El Colegio de la Frontera Sur* (ECOSUR), a public research center, was invited to collaborate with the Jesuit Mission of Bachajón (BM) with the active participation of a group of Sisters of the Divine Shepherd. The intention was to build in the municipality of Chilón, Chiapas, an autonomous municipal government [36] guided by a specific philosophy and ethics consistent with the Tseltal tradition [37,38].

This ethos, known as *Jun Pajal O'tanil* (harmony or being 1 single heart) [38–40] and *Lekil Kuxlejilil* (dignified life) [41,42]—similar to other ones in Latin America, such as *Sumak Kawsay* (living in harmony, with dignity, plenitude and balance) from the Quechua culture and *Suma Qamaña* (excellence and plenitude in life) from the Aymara culture—sought to guide the processes of collective actions undertaken by the *cargos* with whom the BM had been working for more than ten years. Those Tseltal categories refer to a state of flourishing in which all human beings and other living beings coexist in harmony [37,43]. One of the main Tseltal leaders, Abelino Guzmán, explained the Tseltal ethos in an important meeting of our workshops. In his explanation, he reminisced about their past, almost like a kind of original Tseltal myth, which can allow us to recognize how Tseltal people consider the way in which harmony should be manifested:

“Our first fathers and mothers lived peacefully. They grew their children and worked in their plots; they respected the life of the mountains, rivers, caves, trees and all the

different species of animals. Our ancestors worked together to solve their problems. Although there were things that damaged and tried to destroy the wellbeing of family or village, they communicated and dialogued to find the root and the solution to the problem”.

The BM was familiar with the LSES framework developed by MOVIT, which we applied jointly in the first diagnostic exercise carried out in 2008. In 2009, we used this methodology in the training process of a group of local leaders (*cargos*): people whose role is known as *jColtaywanejetik*. These *cargos* are conflict solvers and human rights promoters, a type of included third parties such as those referred to by Edgar Morin [15] as strategic actors to build transdisciplinary translation and mediation processes. This was with the intention of promoting projects from the communities themselves that would result in improving the living conditions of the population [44].

This process involved a series of redesign workshops in which the contrasting discourses between the 3 parties became evident (see Section 4.1), and that was 1 of our first challenges. We agreed on taking Max–Neef’s transdisciplinary approach to articulate the cosmivision and social practices of the Tseltal population, the spirituality and social principles of BM and the technical knowledge of MOVIT [44].

We found Max–Neef’s scheme important because its hierarchical structure allowed us to integrate the logic of LSES: principles (what we should do), objectives (what we want), strategy (what we do) and capital (what we have). As a result, we had a common initial notion that contained the central ideas that mattered to the 3 groups. One of the main results was a series of diagrams of transdisciplinary analysis of Tseltal livelihood. They contained the different areas of BM, the problems they sought to address and the way in which they could mobilize resources within strategies consistent with the teleological level (Figure 2).

The LSES scheme was translated into Tseltal as *stalel kuxlejaltic* (our way of being), encompassing the traits and procedures that characterize a community and define its evolution in time and space within the territory. Within the procedures, both virtuous actions and internal contradictions and tensions are contemplated.

In conceptualizing the above, we started with the recognition that different ways of life coexist in the same territory, which is a product of social construction. Groups that share the same way of life coexist according to socially agreed rules, which are intended to be consistent with their meaning of life. These norms are based on the territory, which in turn is affected by external processes that generate vulnerability. Transdiscipline occurs when all levels are coordinated, with the teleological level guiding the rest (Figure 2).

3.2. Field Methods and Analysis Techniques

We consider the present research a “Case Study”. According to Sartori [45], this method facilitates the identification of factors that explain flaws and dynamics within a specific situation or study object. Our case was a real-life phenomenon in which we participated along with other local actors. We wanted to go beyond determining an abstraction, but contextualized research, all of which was later discussed in terms of a theory.

We applied the principles of Grounded Theory to the different field records we obtained in a 2 year period of research [46]. Our initial categories were taken from the SL and LSES framework, such as capital, strategies, values, norms, social flourishing, etc.

3.3. Participatory Workshops

Between 2010 and 2012, MOVIT collaborated with the BM in a training process using a diagnostic manual written in Tseltal [47]. Subsequently, the *cargo* group was asked to train a new group. The intention was for both groups to coordinate the generation and dissemination of virtuous collective action strategies that the *cargos* conceptualized as “solution paths”, focused on improving the areas of life—family and community—that they prioritized. Their model considered: (1) observing concrete problems; (2) learning, through observation and practice, new ways of understanding the causes and constructing possible solutions; (3) applying and validating innovations in their daily lives; (4) socializing and

disseminating innovations in their immediate environment; (5) detecting new problems and (6) restarting the process. This conceptual proposal was a realization for MOVIT of the importance of understanding needs not only as a lack but also as a source of potential. We learned from the *cargos* that a “solution path” is a dialectical process in constant movement.

Although the LSES diagram had already been translated by BM staff, we asked ourselves different questions, such as: to what extent did the translation of the definitions of each of the categories of analysis reflect the notions and logic that guide collective action within the Tseltal territory? How does MOVIT conceive spirituality? How do *cargos* live equity? How does the BM understand collective action? Although sometimes *cargos* used different terms taken from LSES, we wondered what they understood when they spoke of foreign notions such as “capital”?

Thus, in 2013, all the *cargos*, the BM and MOVIT agreed to submit the analytical scheme in Figure 2 for a process of collective deliberation, in which the most experienced *cargos* participated. By doing so, the *cargos* broadened and redefined the conceptualization of LSES in terms of their tradition and particular ethos. We recorded most of the dialogues and took multiple photographs of all the diagrams made by local leaders. After a meticulous translation process made by a Tseltal-Spanish team, we made an initial coding process that allowed us to identify some in vivo categories [46]. After a constant comparative analysis (emic and etic), we selected some core categories and made an etymological analysis. We were looking forward to achieving an intercultural translation process [9]. This process goes beyond a semantic exercise. According to Limon [48] (p. 93), the ideal intercultural translation “contains meanings from a specific world view and a particular cultural heritage that contains a history and the seeds of a desired future”. After we concluded that stage, we placed those categories within a theoretical coding proposal that was validated by our Tseltal leaders and our counterpart. To give as a clear and complete as possible vision of our results, in the following subsections, we present the different moments of the referred workshops and the process of deliberation.

4. Results and Discussion

4.1. Aligning the Transdisciplinary Horizon

The first challenge we faced in the transdisciplinary research process was to align the participation interests of each group of actors (Tseltal community, civil organization and academia) within a general collaboration objective. The BM had a clear interest in integral sustainable development processes; the MOVIT group was interested in detonating and systematizing socio-environmental innovation processes, while the *cargos* had the task of participating in the process in order to solve the needs of their community.

Based on the interests expressed, we began by defining the main goal of the accompaniment, as well as a research hypothesis that would serve as a backdrop for systematizing and empirically contrasting the scope and challenges of the process. As a goal, we proposed to propitiate a community process that would allow the *cargos* to describe and evaluate their livelihoods and social organization schemes, reflect on the Tseltal value systems and consider possible changes in life strategies without transgressing their cultural essence. The hypothesis was that the above could be accomplished through an intercultural research methodology sensitive to the recognition, respect and integration of the values and principles that guide the practices of the participating cultural group.

The BM and the MOVIT group started by making our frameworks explicit to the *cargos* in a colloquial way. The BM took a position in favor of propitiating reflections and actions aimed at achieving integral sustainable development, a concept that goes far beyond the typical clientelist governmental approaches that simply provide economic or infrastructural support to the communities without any type of technical accompaniment or organizational process [49]. For the BM, integral sustainable development presupposes a holistic, comprehensive and encompassing vision of the intimate links that exist between the economic dimension and the cultural, environmental, ethical, educational, technical, spiritual, health, communication and organizational elements, as well as with broader political and

historical structural issues, which, when brought into play in a virtuous way, can enable the endogenous development of excluded and disadvantaged groups [50,51]. In order to ground its vision, the BM proposed the following strategic lines of action: the care and defense of natural resources and territory, the promotion of productive processes based on agroecological practices, integral community health, endogenous economic development, food sovereignty, as well as the empowerment of women [52].

The MOVIT group defines socio-environmental innovation as a process of research-action in specific territories, which involves a set of actors participating in coordination in specific activities according to their interests, assets and capacities to carry out niche transformations and collective benefit in the face of structural regimes that generate marginalization for subaltern groups [16]. To this end, we propose, as a basic unit of work, the domestic group to achieve innovations in LSES by generating positive changes in livelihoods, understood as the resources and capabilities used by families to live from day to day and achieve their future purposes (capitals). Thus, for our MOVIT group, achieving collective socio-environmental innovations requires, first of all, that the participants in the action-research process identify and dimension the contexts of vulnerability faced by social groups (scenarios), recognize the institutions that govern daily life (rules of the game), as well as consider the macro, meso and micro trends and conjunctures within which margins of change (thresholds) can be built through testing long-range solution paths (projects).

After listening to the approach frameworks of the BM and the MOVIT group, the *cargos* told us that their function as mediators was to seek balance in social and spiritual relations at all times, as well as the coexistence of the Tseltal community. For the *cargos*, the proposal of the BM and the MOVIT group made a lot of sense because the Tseltal culture enacts many of the analytical categories suggested by the accompanying groups, such as the territory represented by the ethos *lum k'inal*, the patrilineal domestic groups that have the same root (*ts'umbalil*), the community organization of the *Jun Pajal o'tanil* (harmony), as well as the philosophy of life of the *lekil kuxlejalil* (dignified life).

Once a shared transdisciplinary horizon was outlined, we proceeded to the general planning of the community accompaniment program. It was divided into six workshops in which we reflected on the Tseltal philosophy of life, its natural resources and the implications of the agrarian organization; the goods and services of the community and the domestic groups; the productive cycles, festivities and spirituality; the work activities, income and livelihoods strategies; the need for changes in the livelihoods strategies; and finally, the visualization of innovative projects that would offer better horizons of life (Figure 3). As can be seen, the frames of reference and participation interests of each stakeholder group were sequentially reflected in the program design.

Despite having previous knowledge of the Tseltal philosophy of life, the accompaniment process allowed us to deepen our understanding of the ethical and relational valuation systems that pragmatically govern the lives of Chilón and Sitalá, two Tseltal municipalities that, despite being subsumed in conditions of structural marginalization largely caused by their historical relationships with state policies and market dynamics, maintain the essence of their cultural matrix. Also, in this accompaniment, we were able to connect the interdependencies between the ethos *lum k'inal*, *ts'umbalil*, *Jun Pajal o'tanil* and finally, the *lekil kuxlejalil*.

The first interconnection we noticed was between the *lum k'inal* (territory) and the *ts'umbalil* (domestic groups). For the Tseltals, unlike Western instrumental economic rationality, the *lum k'inal*, beyond an object classified as property that must be ordered, planned and exploited to obtain the greatest material wealth, is a living and active subject that is not only appropriated by the *ts'umbalil* but is also appropriator of the *ts'umbalil* themselves. Within this relational or non-flat ontology [53], the *lum k'inal* represents an actant or non-human being [54] that is the root, spirit and life force of the *ts'umbalil* that correspond with the patrilineal kinship and inheritance systems of domestic groups widely documented for Mesoamerican cultures [55]. Following Santiz [43] (p.125), the *lum k'inal* symbolizes life: “the land and the cultivation of the family, the song of the birds, the breath

of the wind, the nest of the animals, the curves of the paths, the inspiration of the mountains, the silence of the *acahuales* (secondary forest in succession), the conversations with the *milpas* (polycrop), passing in turn through the history and the conflicts of the *ts'umbalil'*.

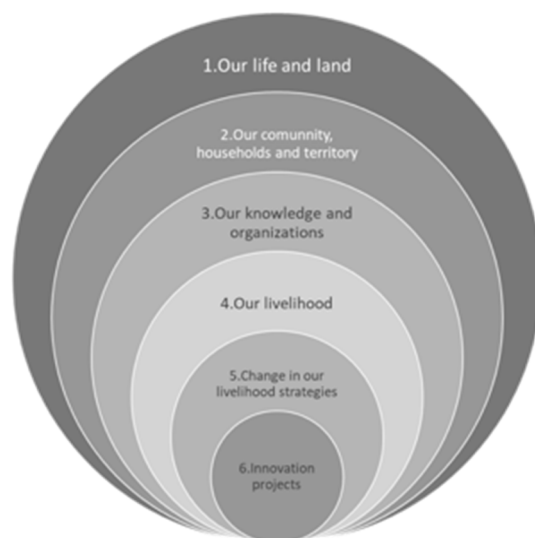


Figure 3. Thematic sequence developed in the community accompaniment program through participatory workshops.

In turn, within the Tseltal cosmovision, social and spiritual order have to do with the *Jun Pajal o'tanil* (harmony), which is achieved when all the *ts'umbalil* and *lum k'injal* are in order. The permanent maintenance of the *jun pajal o'tanil* results in the *lekil kuxlejalil* (dignified life). In the process of community accompaniment, we were able to ratify that, indeed, *lekil kuxlejalil* is a philosophy of life that has to do with the order and union of the individual, the family, the community and the territory, as well as with the harmony of being with others and with the other [42]. However, more than a predefined state as it is usually understood from the Western reasoning of wellbeing, for the Tseltal communities, the dignified life implies the *stalel lekil kuxlejal* (the way of being of the dignified life), that is, a constant work so that harmony is not destroyed and so that coexistence, the balance of social relations and the spiritual values of the community can be maintained [38].

As the following stories of a *jTatic* (wise elder of the community) and a *jColtaywanej* (community mediator) show, the *lekil kuxlejalil* is a principle of life that governs the coexistence of the community, anchored to the cultural legacy of the ancestors while facing the challenges posed by current social realities:

“Our Tseltal parents, from a very early age, learned to respect that which germinates and develops in the earth because their life depends on it, and they were the first to see the light. [. . .] The wise words of our ancestors are those that moderate family and community life. They were instruments of advice and exhortation to educate our children; thus, we received a gift to live what was truly a guide for life, what gives life to another life. [. . .] Full life is in the world, but we must discover it in our work by rationalizing our way of acting. Being in this life, there are things that seem good to us, but it is important to be careful every day. The fullness of life comes from tranquility within the family since this is where unity, respect and education strengthen our way of being and orient us to live our lives among our brothers, sisters and little brothers. When there is unity in the family, there is peace, there is serenity, and the children live in peace. When there is no harmony, it has repercussions on the animals and on what we sow”. [own translation].

jTatic Abelino

“Our ancestors were, at one point, advanced to another stage that has not been good, but we cannot go back to that, so there is another point which is the one we want to get to, the *Lekil Kuxlejalil*; for that, we are going to take a few steps with each concentration that will allow us to get closer to that point. [. . .] “The question would be: where are we now, and how can we untie ourselves?” [own translation].

jColtaywanej Mariana

As we have previously mentioned, the Tselal cosmovision, as in other Mesoamerican ones, manifests its own ethos that governs and guides a philosophy of *Buen Vivir* [53,54]. Studies that analyze the enactment of *Buen Vivir* in other geographies have so far focused mainly on breaking down the cosmological elements and nomenclatures behind such philosophies of life [56–59]. Likewise, such philosophies are beginning to be used to accompany strategic litigation and legal pluralisms [60]—from so-called cosmopolitics [61]—against extractivism and dispossession faced by indigenous peoples in Latin America. However, until now and beyond the grandiloquence, little attention has been paid to the implications of these philosophies in the daily spheres of cultural groups, such as the *lekil kuxlejalil*, from which the territory is organized, kinship relations are defined, community life is governed, relations with nature are harmonized, and now, surprisingly, from the process of community accompaniment, from where innovation projects are agreed upon and developed.

4.2. The Tselal Appropriation of Analytical Categories

Within the community workshops, one of the concepts that gained greater relevance was the notion of “capitals” since, from our methodological proposal, social, human, natural, financial and physical capitals are fundamental to be able to generate changes in life strategies. However, an interesting process was the reinterpretation and cultural appropriation of our initial approaches to the definition of capital by the *cargos*. In Tables 1–3, we present the deliberative process and how we intended to base it on a dialogue of knowledge.

Table 1. Re-significance of “Capital” during the accompaniment process.

CAPITAL
BM: Capital means something that bears fruit and is viable. That is something that works. If it is not viable or does not bear fruit, it is not “capital”. For example, money, if I have it and I know how to manage it, it is capital. If I don’t know how to manage it, it is not capital. Here it tells us very clearly; it tells us, “Wealth”. We can say in Tselal, “Wealth of the earth”. The wealth of the earth is a natural capital. For me, it is hard to get the idea because the word “capital” does not exist in Tselal.
MOVIT: Capital is when something has been put to work. For example, when money is invested. If it is kept in a mattress, it is not capital. It is like a chayote (<i>Sechium edule</i>) net built on your plots. But if they are not giving you fruit, it would not be capital; instead, it would be just another “white elephant”.
Cargo 1: I believe that capital is what the land has. For example, there was a lot of wealth in the land; there were lots of mahogany trees along with other species such as <i>Isan</i> (<i>Inga spuria</i>), <i>ts’elel</i> (<i>Inga puctata</i>), <i>pata</i> (<i>Psidium guajava</i>), <i>pulemal té</i> (<i>Dracaena fragrans</i>), <i>jijte</i> (<i>Quercus robur</i>) and <i>taj</i> (<i>Pinus sylvestris</i>). There were very beautiful trees. And now the land no longer has much wealth. There are only <i>nalax</i> (<i>Citrus sinensis</i>), <i>kapeltik</i> (<i>Coffea cenephora</i>), <i>lemux</i> (<i>Citrus lime</i>) and <i>wale</i> (<i>Saccharum officinarum</i>). But before, there was a lot. I think that is the wealth that we have lost.
Cargo 3: Well, what I think is that we have to know how to use what we have. If we use, for example, an axe, and we hurt someone, it is not the same as if we use it to cut cane. If the use does not give us benefits, then I think it is not capital. What happens? Some people come and cheat people. They say: “Give me your ID credentials to bring you your “support”. Then that person does not come and steals the money. This is affecting all of us. The money is not worth the same if it was collected with lies.
Cargo 2: Wealth means everything that is around us, that which bears fruit. Capital is the wealth, our work and our knowledge that we can use for a good life.

Table 2. Re-significance of “Natural Capital”.

<p>BM: According to the definitions, there are two ways to say it. It could be: “Knowing how to use what is in the earth” or “Working the wealth of the earth” Which one is more important?</p> <p>Cargo 1: I can say that both are important.</p> <p>BM: All capitals are connected. That is why we get confused. It says: “to know how to use what exists on earth”. And it says, “to know how to use”. To know how to do, what we have, for example, we talked earlier about water, to know how to use it and not damage it. And here it says “to work”. Is it only to work? Does it matter if we are improving it or damaging it?</p> <p>Cargo 1: To know how to use something is to handle it well without damaging it.</p> <p>Cargo 2: For me, the most important thing is to know how to use what is on the earth, and the other is not very important.</p> <p>Cargo 3: To know how to use and work the richness of nature.</p>
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Table 3. Re-significance of “Financial Capital”.

<p>Movit 1: If you have a cow and you sell it, it becomes money. That way, it becomes “financial capital”.</p> <p>Cargo 1: It makes things more confusing for me.</p> <p>BM: It is “getting and using money”.</p> <p>Cargo 2: So, it has to do with money management?</p> <p>BM: What do you think, or what do the others think?</p> <p>Cargo 2: I think knowing how to get money and knowing how to manage it.</p> <p>BM: I agree with you. It has to do with management and how to get the money.</p> <p>Movit 2: It is what we have and what we can turn into money. It is how to produce chickens and cows and then turn them into money. As we already said, it is about getting and managing money. It has to do with production.</p> <p>Cargo 1: Yes, that is right.</p> <p>Cargo 2: Financial capital is something we already have.</p> <p>Cargo 3: What we have, and then finding a way to convert it into money. It is clear that if we do not have production, there is no money.</p> <p>Movit 1: We should not only think about animals but there are many things that we can use to obtain money.</p> <p>BM: Yes, and we must see how to turn it into money. I think we are repeating how to use things many times. But remember, it is about knowing how to use things. As we said, knowing how to think and, as you say, knowing how to produce are both very important.</p> <p>Cargo 1: I also think both are very important.</p> <p>BM: And how can we use our thinking in a wise way?</p> <p>Movit 2: For example, if you have a lot of money, what do you plan to use it on?</p> <p>BM: Yes, it is very important to act wisely when we are dealing with money management.</p> <p>Cargo 4: The truth is that money makes me crazy! I do not know what to do if I have a lot of it.</p> <p>Cargo 1: That is what happens when we do not think with our heart (<i>jol o'tanil</i>). That is why we must know how to use it. I think that if we use it to buy products that are not good, that means we do not know how to use it.</p> <p>Cargo 3: We have seen it before. With the money they give us, we buy agrochemicals, but we know they are not good for the land because they cause disease. That could not be considered “capital” because it harms us.</p> <p>BM: It has to do with what we receive and how we use it, the way we get the money out and the way we convert our production into money.</p> <p>Cargo 2: Then let it remain “knowing how to use our thinking to manage money”.</p>

Our previous definition of “capital” was taken from Bourdieu’s [11,12]. He has established that “capital” refers to the accumulated labor, social relations and knowledge that can be reconverted and/or mobilized to activate social reproduction strategies. Bourdieu [13] conceives it as a social energy that produces material and symbolic goods in certain conditions within a specific “field” where it is put into circulation, accumulating, devaluing or transforming itself over time. In synthesis: he proposes “capital” as a regulating principle of the social world.

Each “field” is characterized by what Bourdieu [13] calls habitus: specific social structures internalized by individuals—given their participation in primary (family) and

secondary (school, work, church, etc.) socialization spaces—which led them to reproduce values, perceptions, behaviors, thoughts, feelings and actions rooted within a certain field.

For Bourdieu [11], there is social, cultural, economic and symbolic capital, interconnected in different ways and with the possibility of becoming another type of capital. Bourdieu frames all of the above within power relationships and domination schemes in which the hegemonic vision is predominantly transmitted in the form of symbolic capital [26], leading it to be internalized and accepted by the subaltern classes. Within this relationship, power is not being monopolized; subaltern classes also have mechanisms of resistance to “defend” their own habitus.

Through linguistic analysis of the transcripts, we identified that the *cargos* were not performing a purely mental process. Their deliberation was based on *jol’o’tanil* (thinking with the heart). This alludes to the process where thoughts and emotions are connected when analyzing and discerning; for them, that is the base of wisdom. For the *cargos*, “knowing how to do an activity” implies the search for excellence. In terms of MacIntyre’s proposal [33,34], it is the search for a virtuous life. This vision goes beyond the instrumental operation; for the *cargos*, a person “knows how” to do something when: “he/she seeks to make everyone happy and does not harm others and Mother Earth”.

With this reflection, the *cargos* suggest that “capital” is not only a “good” to be mobilized for any purpose defined by an individual. Its value is given to the extent that it becomes social flourishing. Otherwise, it should not be considered. The contrast is clear. Previously during this same workshop, one *cargo* gave an example of a person who mobilized social and financial capital in collective actions to solve the water shortage. That is a real “capital”. In contrast, they referred to some people who obtained money through the manipulation of others during political elections. That could not be considered “capital” because those actions harmed or divided the community.

At this moment, our rationality was enriched with the perspective of the *cargos*: knowledge is something more than data or the handling of techniques. We also broadened our understanding of the enormous relevance of assembly spaces and how, through collective deliberation, we can discern between that which leads to social flourishing and that which divides groups. Also, it showed us how *cargos* consider, in practical terms, notions such as power relations and power asymmetries. For the *cargos*, if someone uses his contacts abroad to benefit himself to the detriment of the rest of the community, it cannot be considered capital either. The *cargos* recognize that this has affected many coffee organizations all over the region and that it is the result of the Mexican State’s clientelism [25].

Those of us writing still remember that an outside consultant stood up, opened his eyes wider and told us: “The *cargos* have surpassed Bourdieu on his head!” To continue understanding, we brought the term “natural capital” into the discussion (Table 2).

The *cargos* endorse that there can be no “know-how” that threatens life. “Knowing how to work” implies deep respect. It is some kind of “applied wisdom”. In the case of agriculture, they stated that the land should be prayed to and honored before cultivating it; it is not a commercial issue. We later [44] related this to the application of a “solution path” for sweet chayote (*Sechium edule*) production, made by one of the *cargos*, who expressed that the purpose was to obtain food for his family, share with other people and encourage them to do the same. He also emphasized that the animals also need food. This idea is consistent with the practice of making offerings to Mother Earth through organic fertilizers so that the rest of the animals and plants “are happy”, as they expressed regarding water.

The *cargos* acknowledged that this social norm is being lost. They recognized the internal contradiction in their communities, such as the use of agrochemicals and the forgetfulness of prayer. This oblivion is largely due to the presence of money as a means of exchange in the hegemonic economic system. They consider that, although there may be some strategies that mobilize capital and give apparent good results, they are not coherent with the care of life. For them, those are not true solutions. In capacity-building workshops carried out at another time, *cargos* mentioned that this would be the case with

transgenic seeds, pesticides and synthetic fertilizers. Therefore, remembering, revitalizing and disseminating “tradition” and values from the “solution paths” is part of their function.

As far as we are concerned, it confirmed the contrast that exists between the vision of “natural capital” (predominant within the schemes of “payments for environmental services” imposed by global finance mechanisms [62]), with the conception of Mother Earth among a large part of the Tzeltal people [41,42]. The *cargos* teach us that nature is not a set of elements that will be valued to the extent that an economic benefit can be obtained through exploitation or exchange with other actors (such as the case of open-pit mining, extensive oil-palm plantations, mass tourism development, etc.).

This notion of “solution path” contrasts with the SL Framework proposed by DFID [63], in which the ethical and teleological dimension is absent. SL positions external institutions and policies as the key actors and makes emphasis on their technical role. For the *cargos*, the ethical dimension is the most relevant aspect; this is what determines any project’s integral success—in terms of social flourishing—in the long term. For them, technical aspects are important, but always as a complementary element.

It was difficult for the *cargos* to understand Bourdieu’s notion of equivalence or conversion between capitals; for them, an alien term such as “financial capital” could only represent money (Table 3). It was also evident that for Tzeltal rationality, the nouns represented by “capital” cannot be understood except within an intersubjective relationship [64]. There cannot exist “money”, “a house” or “an axe” if it does not belong to someone who, in turn, uses it (e.g., my money or my house) in a virtuous or non-virtuous way. This relationship makes sense according to the person’s values, which we can associate with the *habitus*, from which the actors generate their ways of seeing, feeling and acting.

The *cargos* made their analysis from the teleological level one more time: what do we use the money for, and what will this conversion leave us with? The question was: “Can there be another way of conceiving money?” The *cargos* were aware of the risk (“It makes me crazy”), so they prioritized “knowing how to think”, “knowing how to produce” and “knowing how to get”.

These questions and conclusions highlight how the utilitarian rationality present in the concepts of “producing” or “using” is questioned from the intersubjective logic contained in the personal experiences of the *cargos*. They identify and criticize the tendency to become consumerist entities or one more link in what we recognize as the Neoliberal Market, the circulation of money and the logic of capital. With simple but profound ideas, the *cargos* warn us that this instrumental logic causes them illnesses and divides communities. Therefore, the resignification they make of “financial capital” allows them to specify that money that is not well generated and mobilized (without affecting others) cannot be capital.

This was another transcendental lesson for us, and we believe this is the *cargos* contribution to discussions about how to define what “capital” is. For liberal economic thought—which trusts the free market—capital is good in essence, so its accumulation only brings benefits to society. It is suggested that the distribution of utility is always fair, and this will depend on the contribution made by each link to the financial product; equity and justice are the results only of having clear rules of the game [65]. That is the case of those economic policies in Chiapas (like in the rest of Mexico), guided by notions such as “trickle-down economics” that favor major investors in sectors such as coffee, livestock and oil palms. After decades of Neoliberal policies, it was more than clear that the prosperity in the upper classes never transferred down to the lower classes [25]. In 2018, 78% of the population lived in poverty and increased their dependence on subsidies and remittances (Chiapas received, in 2021, about 1.892 million USD from remittances. The same year, the GNP for this entity was 3.989 million USD).

In their reflections in this and other workshops, the *cargos* warn us: the risk is that this “greater contribution of capital” will come from both the dispossession of value from those in other parts of the production chain (they questioned the low prices imposed on their coffee from outside), and from increasing the volume of production at all costs (see

deforestation or depletion of springs). Thus, the so-called “externalities” are unacceptable for the *cargos*, as they affect life and/or the community.

As for the Marxist current, for which the problem lies in the accumulation of capital by the few. For the *cargos*, there is something beyond just distributing money equitably. When we suggested that equity meant for us “equal distribution of resources” and for BM “equal opportunities between men and women”, the *cargos* replied, “Equity should encompass all people, not only men and women, because it is also between children and the elderly”. So, their definition was: “When all the members of the community love and respect each other and live well as one heart (*Jun Pajal O’tanil*)”. In this expression, the term “*C’uxultayelbatic*” (to take care of others) stands out. It contains a notion of care for the other. So, instead of being a matter of “sharing equally”, *cargos* say it will be reached when each person has what is necessary for a dignified life. The term *C’uxultayelbatic* suggests that “equity” can only be achieved when we are aware and compromised with the fulfillment of other people’s needs.

At the end of the workshop, we recognized our weaknesses. We thought that a single translation process, made by one single tselal person, was enough. After this workshop, we recognized the need to refine the translation in the manual and diagrams in order to move as close as possible to a full translation. Thus, the notion of “knowledge” implicit in the Tselal definitions led us to make an adaptation of the analytic categories with which we started the process of community accompaniment (see Table 4).

Table 4. Resignification of the notions of capital proposed in the community accompaniment process.

Category/MOVIT Definition	Intercultural Translation
Human capital: our cultural knowledge, level of literacy, health condition, size of population, traditions and beliefs.	Know how to use our wisdom, emotions and our body.
Financial capital: sources of economic income.	Know how to get and how to use money.
Physical capital: physical infrastructure (roads, electrification, water services, etc.).	Know how to use constructions available in the community.
Natural capital: the riches of nature.	Know how to use and work the riches of nature.
Social capital: our internal and external social relations.	Know how to solve and achieve agreements between people in the community.

One of the contributions of the LSES to the BM and *cargos* was that the analysis of the available “capitals” allowed them to: (1) reflect on the families’ capacity for collective action; (2) recognize potential resources that could be mobilized in terms of their social values; (3) identify the resources that are not available and would have to be obtained through negotiation with other actors—internal and external; (4) reaffirm harmony and communitarian wealth as elemental principles when making those negotiations; (5) in negotiations with external actors, take the influence of the regime into account in order to prevent manipulation and the effects of hidden agendas.

As for our notion of strategy, it was expanded by the *cargos* with their subjective and spiritual dimension. We observed how important it is that any strategy includes a change of *habitus*. By this change, we mean the non-internalization/reproduction of the liberal economic logic and the overcoming of historical relations of domination in order to redefine objectives, redesign activities through technical-productive innovations and strengthen their capital among families and at a community level. This type of change, consistent with the teleological level, will allow the construction of new forms of social reproduction [38,39,44,47]. To this end, collective deliberation is essential to address the sources of internal contradiction implicit in every human community and thus discern what will lead to social flourishing [33].

The analysis of this type of application made by the *cargos* on “solution paths” [44,66] led us to make a new conceptualization, more circular and dynamic, which in turn has had practical implications in the way our collaborators work. An example of this is the case of Micaela, president of a hermitage. Her concern was: “Harmony with people from different communities is important. So how am I going to attend to the pilgrims who come to my hermitage? They require water, firewood, toilets”. She designed different activities with other *cargos* and convinced the community that water could be collected from the roofs. This required the construction of a 20,000 liter cistern with a rope pump. It was also necessary to build dry latrines and collective dining rooms, and a kitchen to prepare the food for the pilgrims. The purpose of all this work was not simply to build infrastructure: it was to build harmony among the different communities.

The relevance of this case is that the method that Micaela learned months before, when we did the exercise of building composts, served to solve a totally different problem. When we saw how Micaela led the collective action process, we considered that she had appropriated the method since she had applied it to solve other kinds of problems. Like that case, we identified many other examples that helped us to confirm the limitations and even risks associated with the SL approach.

Since SL became popular in the 90’s, a capabilities approach based on Sen’s ideas was globally embraced. While there were some valuable communitarian attempts to create the so-called social capital in Mexico, the tendency within several initiatives was to place individual empowerment and entitlement at the center of almost every kind of improvement. So, in many cases, it was a predominant individualistic methodology consistent with neoliberal development policy [23,67]. If someone is poor, it is because of his/her lack of resources that must be obtained through strategies and negotiations—such as state subsidies or environmental services schemes—that could overlook the consequences or trade-offs. In line with the institutional economic orientation, those strategies give external actors a central role. Whenever the livelihood has to be reshaped, it will only be in technical terms, overlooking other political aspects. This means that the SL “does not directly challenge the basic lines of macroeconomic policies recommended by the international financial institutions” [68] (p. 387).

In our case study, the LSES helped every participant to have a wider understanding of those policies inherent to the regime. By doing so, LSES places families and their relationship with the immediate community at the center of the analysis. During the whole collaborative process referred to in the present document, MOVIT explained in abstract terms and offered theoretical concepts and models (such as Max-Neef’s or the LSES itself); BM showed how the international regime conditioned socioeconomic practices on the regional scale; and *cargos* made evident the impacts of state programs and subsidies within communities and families.

To a greater extent, we consider this analytic model gave more elements to every actor to pay attention to the intersections between macro forces and micro processes or molecular social relationships [69]. We discussed the consequences and impacts (positive and negative) of different projects promoted by the government: a highway intended to pass through their territory, the use of genetically modified organisms or the risks of migration. We offered information that helped the *cargos* to understand those initiatives, and the *cargos* shared their point of view about those same situations but from different perspectives, such as the spiritual one.

This type of analysis brought to the surface the dilemma that the *cargos* had. The exclusion conditions in which they live have pushed them toward receiving money from the government. But at the same time, they are pursuing their autonomy (due to the influence of the Zapatista Army of National Liberation, EZLN). On our side, we recognized that we did not have all the agroecological knowledge to promote the necessary changes to make the crops resilient, as it happened with the coffee plantations affected by pest epidemics (*hemileia vastatrix*). We also knew that our limited resources made it difficult to generate alternatives for families to increase their economic income in the way they

expected and needed. The challenge was that remittances and government subsidies were a much more immediate source of income, despite the greater risks associated with the violence and insecurity caused by organized crime, which is endangering immigrants.

In spite of all this, we can establish that from the point of view of LSES, the change in the *cargos'* attitude occurred when they moved from a situation of conformity to a proactive attitude based on the certainty that they had a series of knowledge, resources and relationships with which they could plan changes and strategies consistent with their values.

In the end, we were able to look beyond and achieve what Scoones [18] (p. 188) urges about SL: "Ask how particular forms of globalization and associated processes of production and exchange—historically from colonialism to contemporary neoliberal economics—create both processes of marginalization and opportunity". In terms of the "ecology of wisdom" [9], both sides assumed their incompleteness and reached a wider kind of knowledge.

That incompleteness was evident when we did not have any idea how to solve or give alternatives to certain problems. For example, one day, the *cargos* established that one of the main obstacles within their territory was the division caused by different political parties and different religious beliefs. After they had described the situation, MOVIT and the *cargos* agreed to look for an answer. In the next session, one of the *cargos* came up with a proposal: he presented a drawing and told us how he got reunited with all the pastors from other Christian temples and used the Bible to encourage them to look for an alternative based on their common values. During that meeting, he told them: "Here we are, with our wisdom, with our religious services, because we had ancestors that taught us how to live, whether we are Catholic or from other religions. The important thing is that we have the same God". Then he propitiated a deliberative process about how to take care of their river and how to avoid pollution. He also offered his assistance in order to implement "Solution Paths" with members of those Christian temples. By doing so, he showed us how the ethics of *Jun Pajal O'tanil* was above any religious differences: he was looking forward to having harmony.

In terms of an "ecology of wisdom", this example showed us that our kind of scientific rationality was incomplete. Actually, a member of MOVIT said that very session: "The problem that I just could not think of a solution, *jTatic jXel* (the referred *cargo*) solved it with one drawing, reading the Bible, and beyond it all, thinking with his heart (*jol o'tanil*)".

On the other side, our transdisciplinary analysis made evident how important it is to make "good choices" in terms of traditions and values. To do so, MOVIT offered the *cargos* and BM a scheme based on the "Cultural Change Theory" [70], which helped them to analyze the origin and impacts of different cultural elements that are being mobilized or could be appropriated (by their own decision or through imposition) by a certain group. Its purpose is to recognize the elements that have been imposed over time as well as their own elements that have been maintained and whether the decisions about those elements are made by local people or outsiders. In general, it is encouraged to keep cultural control, balancing local and outside elements, as long as the decisions over the latter are made by the people themselves [44].

Nowadays, this kind of analysis takes more relevance. Rural areas are no longer pure agrarian societies; they are more differentiated than ever, with more sectors working in non-farm activities located in different cultural regions—mostly urban [71]. This has fomented: (1) the acquisition of new ways of life and aspirations that are being brought into rural communities; (2) increasing dependence on remittances; and (3) the modification of power relations within communities [72,73].

In terms of ST, these complex realities highlight one relevant aspect of LSES: socio-environmental systems change with time [74]; it is the result of interactions between subsystems that have been shaped by the policies imposed by the regime [16]. MOVIT-BM-Cargos recognized that livelihoods of the past might not foreshadow the ways of living in the present or future. In order not to overlook these changes, as time passed, different

diagnoses were made. In the community accompaniment processes, we discussed those changes and formulated different solution paths.

Throughout the participatory process, in order to analyze any kind of decision, Max-Neef's model [31], reinforced with Macintyre's [33] philosophical perspective, helped us to solve ethical dilemmas by asking: to what extent will this element/activity lead the community to social flourishing (*Lekil Kuxlejalil/Jun Panal O'tanil*)? Is this element/activity helping them to accomplish the Tseltal definition of a "good human being?" In terms of LSES, we found out that these practices help groups to avoid extremisms of either imposed domination or absolute isolation of a culture.

In terms of the limitations of the research, we are aware that a single process of collective action will not be enough to reach decolonization. So, since we finished this collaborative process in 2015, we have been sharing these ideas and methodologies in other latitudes within Mexico and Latin America. We think that in order to connect different specific *telos* and ethics to a wider system, those *telos* must be recognized, shared and contrasted in order to reach a more complete kind of knowledge. That is what we have been looking for within our recent and actual collaborations with other indigenous and peasant groups in Oaxaca, Chiapas, Yucatan, Quintana Roo and Veracruz (Mexico). In a forthcoming paper, we will share how a group of Mayan leaders—similar to the *cargos*—learned from notions such as the Tseltal's *Jun Pajal O'tanil*, the Quechua's *Sumak Kawsay* and the Aristotelian notion of *eudaimonia*, all of them are categories that refer to a state of fulfillment or human flourishing.

5. Conclusions

In this work, we tested the hypothesis that a transdisciplinary methodological approach based on the intercultural recognition of values and spirituality would lead to positive and non-transgressive changes in the livelihoods of Tseltal communities. In fact, the accompaniment process revealed that within the Tseltal culture itself there exists the notion of *Cha'chahp talel k'ahyinel te yomol ya x'ayinik ta skuxlejal sok talel k'axel ya snopbey sbahik* (the coexistence of two cultures to learn from each other). This notion is fully consistent with the dialogue of knowledge promoted by the "Southern Epistemologies" [9].

In the dialogue of knowledge that we established with the Tseltal communities, we learned about the depth of reinterpreting the analytical categories that social subjects can achieve, as well as the fact that for many communities, the improvement of their material and social subsistence conditions (capitals) does not make sense if it is not in the light of ethical and philosophical bases that govern their own models of life. Thus, within the process of community accompaniment, the Tseltal ethos of territory (*lum k'injal*), family lineages (*ts'umbalil*), social harmony (*Jun Pajal o'tanil*) and dignified life (*lekil kuxlejalil*)—with its multiple and complex relationalities between humans, non-humans and the biophysical world—became central. In turn, Tseltal communities appropriated many second-order social learnings from the accompaniment process and put them into practice through innovation projects in their productive and organizational systems.

In 2017, as a result of the community accompaniment and other collaborative relationships that the Tseltal community has established in recent decades, the municipalities of Chilón and Sitalá, in the highlands of Chiapas, initiated a request to the Mexican federal government to exercise their constitutional right to self-determination in the election of their municipal authorities. In spite of their lack of success, this initiative is quite relevant and has been studied within our group [36].

In this research, we also noted the scope of ST as an epistemological device to address problems by examining the social, cultural and ecological dimensions in a holistic manner and from their due complexity. Thus, we proposed the theoretical-methodological framework of Local Socio-Environmental Systems (LSES), which draws from soft systems approaches, social reproduction, sustainable livelihoods and participatory action research.

By opening ourselves to the transdisciplinary domain and allowing the different levels of reality to flourish, mainly the teleological, an alternative Tseltal worldview to the

inherent colonial legacy of our academic culture emerged. The Tselal mode of thought and action contributed significantly to greater cognitive emancipation from the Westernized socio-ecological systems approach that we established as a starting point within the accompaniment process. We accompanied, but above all, we were accompanied in an initial but complex process of academic decolonization.

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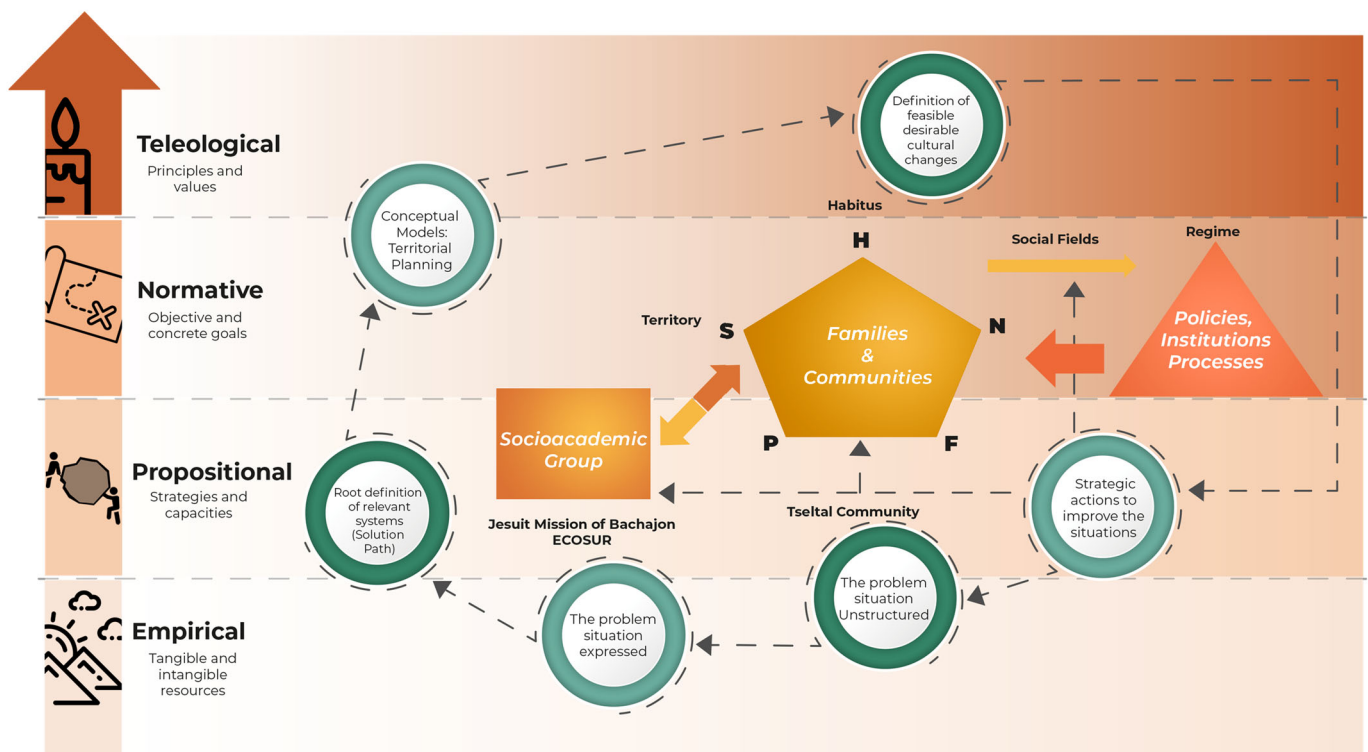
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Appendix A



Scheme A1. Soft system model of the local socio-environmental system.



Figure A1. Participatory workshop: “Natural Capital Change Analysis”.



Figure A2. Mother Land Ritual.



Figure A3. Transdisciplinary analysis made by the Bachajon Mission.



Figure A4. Deliberative process (Cargos–Movit–Bachajon Mission).



Figure A5. Transdisciplinary analysis made by one cargo (Micaela).



Figure A6. The teleological orientation given by one elder during a participatory workshop.

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