

# Article Yeknemilis: Social Learning and Intercultural Transdisciplinary Collaboration for Sustainable Life

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Abstract: Intercultural transdisciplinary research reinforces sustainable social-ecological systems in Latin America. Social learning (SL) is a crucial process within this type of research as it fosters collaboration among diverse groups of people, communities of practice, and cultures. Buen vivir ('well living'), of the popular movements in America, promotes collective responsibility and respect for life. Yeknemilis ('a good life') is a value framework of the Masewal people of the Sierra Madre Oriental, Mexico. Members of Tosepan, an organization of the Masewal and other indigenous peoples of this region, reflected on their cultural roots, ways of life, and relations with the territory to strengthen their alternative and self-determined lifeway. Involvement in participatory research within the transdisciplinary process allowed us to focus on the learnings and conditions that foster values and strategies for yeknemilis. Through participant observation, semi-structured interviews, and participatory activities, we identified five key social learning areas that foster conditions for yeknemilis and life-sustaining relationships in intercultural transdisciplinarity, creative reflexivity, and a relational ontology horizon. Finally, we show how the collaborative construction of yeknemilis and social learning practices can be crucial in scaling up collective action toward sustainability.

**Keywords:** collective action; territory; interculturality; transdisciplinary collaborative research; community development; self-determination; relational ontology; communities of practice

# 1. Introduction

Our grandfathers and grandmothers have said that the land isn't ours; we are part of the Earth. She allows us to live here, where dawn rises and night falls equally on everyone. This is where we live; since many years. We are a harmonious people (pueblo), and community life is our main strength. The Masewal people is a joyful, fearless, and great-spirited people [1] (Fragment from *Códice Masewal*, own translation from Spanish).

Global biodiversity loss, ecosystem depletion, social conflict, and cultural extinction are associated phenomena that pose significant challenges to our times. The relationships that many indigenous and peasant communities cultivate with the environment are a global common good [2] because their lifeways contribute to the sustainability of territories and the diversity of life, offering significant stewardship examples for other groups across the planet [3–6]. In a highly interconnected world, where local practices can affect and be affected by social-ecological dynamics occurring in other regions of the planet, such culture-based sustainable practices benefit all humans and inspire alternative ways of being.

Despite the crucial role played by indigenous peoples and peasant communities in global sustainability [7], their knowledge, practices, and values are systematically marginalized [8–10]. These processes of discrimination and exclusion often lead to the rupture



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**Copyright:** © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). of essential co-evolutionary interrelations between cultural groups and their land [11], constituting neocolonial exploitation and situations of social-environmental injustice [12].

In this scenario, indigenous movements and communities have spoken out to be recognized as custodians, exercise their rights to self-determination and look after their territory for themselves and future generations [13,14]. These claims are grounded in numerous experiences across the globe that account for other paradigms and pathways toward more just and sustainable futures [7,15]. The collaboration between people from different sectors and communities of practice is at the heart of many of these experiences, showing that the alliance between indigenous and non-indigenous people can be strategic to achieve collective goals. In many cases, this type of cross-cultural alliance constitutes what we denominate intercultural transdisciplinary collaboration (ITC), that is, a collaborative process through which different kinds of knowledge, practices, values, and worldviews converge to create novel ways of thinking, doing, and being.

Escobar [16] raises attention to dynamics within and between communities to coconstruct experiences as a relational path. These matters affect community life and collaborative processes in responding to global and local issues that sustain life. Transdisciplinarity addresses socially relevant issues through the participation of people or groups involved in a complex environmental problem [17–21]. Scholz and Steiner [22] propose that the collaboration of the various communities involved in an environmental situation guides a path of social construction based on principles of democratic sustainability. Mutual learning among diverse groups of people, communities of practice, and cultures configures social learning (SL) processes [23,24].

In this research, we focus on SL as a process of participation and integrated decisionmaking in learning relationships between different communities of practice for collective transformation [25,26]. From various approaches and a broad framework of applications, SL has been a relevant focus for sustainability processes [27,28]. SL promotes capacity acquisition and bridging to deal with the uncertainty of natural resource management systems [25]. Learning processes influence the interactions and conditions that sustain the commons [2]. Agency fostered through SL can then contribute to the construction of collectivity and co-responsibility with the reality in which the community of practice is immersed [29]. Thus, it can strengthen social institutions [30] and contribute to the construction of policies for sustainability [27].

In the 1970s, Paulo Freire—a Brazilian popular educator—proposed learning as a situated, relational, and political process and a basis for transforming human communities [31]. This perspective is congruent with the notion of SL, which refers to how people and groups influence and create their sense of change, strengthen their ability to face new challenges, and propose to configure new futures [32]. Complementarily, learning within a traditional cultural context is based on individual and collective participation in the construction of a community. People develop this intersubjectivity in the dynamics of tradition and innovation as local processes of appropriation of social and communal realities [33,34].

When integrating an SL approach, conscientious interaction between individuals, groups, and the environment potentiates new levels or influences spaces to transform practices [35,36]. Groups who act reflexively on their reality through social learning [37] can influence social norms or institutions [38], discourses, and power relations [26].

SL literature includes various objectives and approaches, but in many cases, it is represented as a tangential tool [27,39], or it is unspecified how SL is approached [28]. However, underestimating the learning processes and agency of the people involved in sustainable projects can make relationships and challenges relevant to collaborative processes invisible, especially in contexts with epistemic and ontological differences. According to Rodela [28], social learning studies have mostly been from Europe and North America and focused on resource management, planning, and monitoring. We argue that a culturally critical approach to learning can significantly benefit social learning experiences in biocultural regions and similar contexts. In this regard, we consider SL as a process that integrates different forms of participation in networks that affect the perspectives and dynamics of people involved in social-ecological systems. SL links people to the environment through reflexivity, intersubjective relationships, and practices. Communities are part of a situated transition or social transformation that favors appropriative social participation and sustainability [37,40–42].

Moreover, in transformation systems that aim toward the sustainability of life, epistemic and ontological efforts that address power imbalances should be considered [13,14]. Sustainability transitions in neocolonial and inequitable contexts require transgressive social learning to favor new relationships and understanding of local groups' culture, organization, and autonomy [29]. Strengthening people and groups at the local level is essential to sustain life [43,44]. Accordingly, the Mexican case studies presented by Del Amo and Vergara-Tenorio [41] propose SL as a way to revitalize indigenous, peasant, and community knowledge based on dialogue between local and academic groups that contribute to understanding and influencing the complexity of ecological systems. We integrate their approach in this research, focusing on local knowledge of natural resource management systems as part of community lifeways and endogenous development.

In this respect, worldviews from indigenous and other populations recognize the values and forms of relationships between communities of people and other life forms [45]. Buen vivir (well living) from peoples and communities in South America and other global 'Souths' perspectives reclaim reciprocity and a plurality of values between human populations, other beings, and Mother Earth [46]. Proof of this is that it is expressed in several indigenous concepts, including sumak kawsay in Kichwa, suma qamaña in Aymara, yeknemilis in Masewal, lekil kuxlejal in Mayan Tzeltal, and sesi irekani in Purépecha [47,48]. Complementarity and intersubjectivity are also present in *comunalidad* and Mayan Tojolabal philosophies and lifeways that comprise peoples' living utopias [49,50]. Buen vivir represents a new horizon of historical meaning arising from social movements and ancestral trajectories to re-create the necessary conditions to make life possible and viable, also pointing to the decoloniality of power [45].

We realized this research in a culturally and biologically diverse region where indigenous lifeways shape socio-ecological relations. The Sierra Norte of Puebla is a biocultural region inhabited by the Masewal (Nahuas in most literature; Masewalmeh pl.) and Tutunaku peoples, as well as mestizos [51]. Within a context of social organization, endogenous development, and interculturality, diverse experiences have favored the conservation of cultural values and recognition leading to the self-affirmation of indigenous and peasant lifeways. The trajectory of Tosepan Titataniske (Tosepan), a 45-year-old cooperative, constitutes one of these experiences. The present study focuses on a collaborative process between Tosepan and actors with academic backgrounds who were previously engaged in strengthening territorial strategies that later resulted in the Masewal Life Plan or Codex [1]. This work approaches this experience from a collaborative research perspective to learn from the transdisciplinary process. This was possible as a joint agreement with the actors involved to accompany the transdisciplinary experience from a participatory and qualitative research approach.

The general question of this article is: How are intercultural transdisciplinary collaboration and SL related in the horizon of sustainability of life and buen vivir (yeknemilis) in the Sierra Norte de Puebla, Mexico? We intend to understand the SL process in the construction of yeknemilis in the context of ITC [1]. We explore the learning processes people identify as related to their lifeways and the conditions for yeknemilis and address attributes and enabling conditions from the SL process that make buen vivir possible. In the following sections, we share stories and perspectives of the participants of the intercultural transdisciplinary process to propose key SL dimensions within ITC processes that consider peoples' lifeways and situated efforts for sustainable transitions.

# 2. Research Context, Methodology, and Methods

The framework for this research derives from participating in a series of 19 workshops during the intercultural transdisciplinary process—between 2016 and 2017—which gave rise to the Masewal Life Plan or Codex [1]. In this section, we will describe the context of the study and some key elements of the transdisciplinary process, followed by the approach and methods used.

# 2.1. Context of the Intercultural Transdisciplinary Collaboration to Construct from and for Yeknemilis

Cuetzalan del Progreso is a Municipality in the Sierra Norte de Puebla region, at the crossing of the Sierra Madre Oriental and the Trans-Mexican Volcanic Belt (Figure 1). The high precipitation and humidity (average of 1500–3000 mm with areas that reach 6000 mm) in the Sierra Norte characterize the cloud forest and tropical rainforest [52]. Variations in altitude (1500–2500 mamsl) are cause to a diversified landscape, home to great biodiversity.

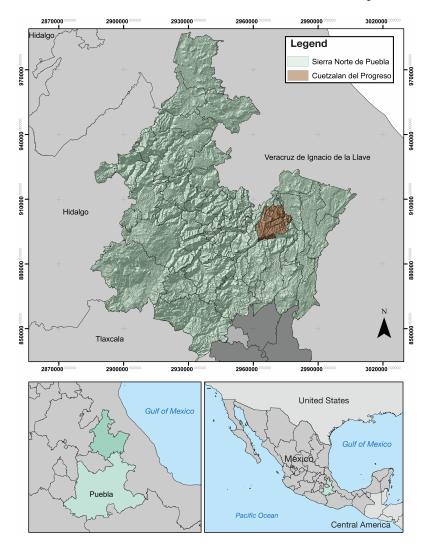


Figure 1. Localization of Cuetzalan del Progreso in the Sierra Norte de Puebla region, Mexico.

Masewal and Tutunaku people represent more than 60% of the population in 68 municipalities. Cuetzalan's population is mainly (80%) constituted by Masewalmeh. Indigenous peoples have developed their activities in close relation with the *altepet* (territory) as part of their biocultural heritage [51,53] (Figure 2). Several studies have documented the relevance of this process for resilient and adaptive social-ecological systems; for example, *koujtakiloyan* agroforestry coffee systems foster biodiversity and a diversified economy for indigenous and peasant families [53–55]. Although land tenure is private, social institutions encourage community governance in water, forest systems, and value-centered social-ecological practices [54,56,57].



**Figure 2.** Activities and social learning environment for yeknemilis in Cuetzalan, Sierra Norte de Puebla. Cloud forest conservation areas, sacred water springs, a Totonac archeologic site, a shadow coffee agroforestry system, organic cinnamon production, traditional corn-based food, discussion groups and collective mural painting to build the Masewal Life Plan, and a youth and children's chorus celebrating Tosepan's 40th anniversary are examples of activities and conditions involved in SL and the sustainability of life in the biocultural region.

Conditions of socioeconomic marginalization exist along with discrimination and racism towards the indigenous and peasant population [51]. In this complexity, Mase-walmeh have been historically involved in collective action to defend their autonomy and territory [54,58]. More recently, a community territorial planning process based on local social institutions made it possible to recognize relations and values towards the *altepet* [56], and *altepetltajpianij*—territory custodians—have represented the 'movement for life' to defend water resources and springs from imposed 'economic development' mega-projects [59]. Concerted efforts have fostered recognition of indigenous lifeways—*Masewalnemilis*—and yeknemilis as the good life, representing Masewal values in reciprocity with *taltikpak* (Mother Earth) [60].

Inter-ethnic relations between diverse indigenous groups and mestizos are part of everyday activities. Masewal people also identify Tutunaku people as Masewal but differentiate them from *koyome* (mainly white and mestizo people). Intercultural projects engaging indigenous peoples and *mestizos* have fostered endogenous educational, environmental, and productive initiatives [51,61].

Originating in 1977, Tosepan (Unión de Cooperativas Tosepan) has become a referent of peasant and indigenous organizations along with other collectives and cooperatives in the region [62]. The cooperative organization integrates approximately 48,000 families (37% of the population) in more than 400 local cooperatives. Each local cooperative forms an assembly represented by the local cooperative Chair. Altogether, they form the regional general assembly. Members of each local cooperative assembly and the regional assembly meet monthly. The mission of the cooperative centers is promoting yeknemilis and local values [60,63]. In its history, Tosepan has diversified its actions comprising nine regional thematic cooperatives for organic production, education, savings and credit, health, tourism, women's projects, housing, native honey production, and media [64].

A core strategy of the organization lies in education to build situated capacities for intergenerational work and Masewal liberating pedagogic practices, thus strengthening the cooperative movement and the promotion of yeknemilis in Masewal territory [63]. The Kaltaixpetaniloyan ('where the spirit opens') educational center is home to everyday assemblies, workshops, and a vast network of interactions within the organization's dynamic. Community promoters accompany local cooperatives on issues of savings and credit, organic production, and health. Their responsibilities consist of follow-up and technical support for each local cooperative, entailing various activities.

This research was part of a collaboration process between members of Tosepan and an engaged academic team from the Biocultural Heritage Network (Red de Patrimonio Biocultural in Spanish). Both groups agreed to integrate the first author of this paper as a Ph.D. student and collaborator.

# 2.2. A Collective Experience as Platform for Research Collaboration: Dreaming for the Next 40 Years

In August 2016, members of the General Chair from Tosepan and collaborators agreed to develop a series of workshops to reflect upon the trajectory of Tosepan, present issues and challenges for cooperative members and their families, and discuss a viable future for the cooperative and the intercultural region. The collaborating academic group would facilitate the participatory exercises from a biocultural and territorial perspective. The dialogical process occurred in the Kaltaixpetaniloyan facilities. As a starting point, all present were invited by the Tosepan Chair to 'feel and think' upon the trajectory of 40 years of Tosepan to envision or 'dream' for the 40 years to come: 'el sueño de los siguientes 40 años'. In accordance, participants from diverse areas of the cooperative engaged in periodical sessions (every fortnight), and the incoming Chair played a role in co-facilitating participatory activities.

Dialogues functioned as a participatory platform for reflecting upon questions and central themes (historical memory, traditional knowledge, values, practices, threats to sustainability of life, etc.). These would build the critical methodological route of the intercultural transdisciplinary process entailing various participatory tools: working groups, plenaries, focus groups or dialogues with wise elders—abuelas and abuelos—and other guests, and participatory guided trails with local peasants. This first stage of workshops (11 sessions of 5–7 h each) led to a collectively woven narrative of the Maseual lifeway for yeknemilis and concordant strategies. A second collaborative stage (7 sessions) continued to promote tools and capacities for cooperative promoters. They were given the task to facilitate dialogues within local community assemblies further to revise and discuss the described content. After thorough reviewing, facilitators and Masewalmeh collectives presented the Masewal Codex or Life Plan [1] to the new generations and the assembly.

We will further refer to this experience as the ITC process.

#### 2.3. Participatory and Qualitative Research Approach

Research practice was based on principles of Participatory Action Research [65] and Systematization of Experiences [66–68]. We situated the study from a position of learning and co-participation. The objectives and focus of the collaborative research were discussed with the Tosepan Chair and the academic team facilitating the workshops. Our research group proposed an approach and methods consistent with the transdisciplinary experience, fostering flexibility and adjusting to guidelines from the collective process [69]. We followed a 'learning-by-doing' spirit of research. A transductive [70] attitude gives the research an open-ended character and allows for meta-learning and new emerging questions from situated experiences, as illustrated by Tomás Villasante: "to open a space to think about the experience in another way, not as something we have lost or as something we cannot have, but as something that perhaps now occurs in another way, in a way for which perhaps we still have no words." [71] (p. 11) (own translation). A participatory and collaborative view of research go beyond analytical strategies to include ethical and political views as central dimensions [72]. We write as collaborators, in solidarity with the Masewal people, while maintaining analytical practices to construct upon a SL approach.

Intercultural transdisciplinary research entails multiple challenges. As non-indigenous researchers, approaching matters of indigenous lifeways can be, for example, a sensible matter. In this case, authority to address indigenous issues is exercised from the standpoint of intercultural collaboration through a learning journey dedicated to reflexive dialogue around the common good [73]. Lifeways and cosmogonies are incommensurable and in continuous change. The shared content shows a partial perspective from broad, complex, and multilayered realities within sociocultural processes. Recognized partiality can contribute to the intersubjective construction of knowledge and view of social realities and intercultural transdisciplinarity [74]. Collaborative and qualitative methodologies stress the relevance of recognizing that realities are shaped socially, revealing the ethical-political dimensions of cognitive processes [42,72,73,75–77].

Accompaniment and engagement in the intercultural transdisciplinary process comprised workshop systematization (synthesis material and reports from the 19 sessions). The concepts and categories that emerged from this systematization were the basis for designing open semi-structured interviews with workshop participants and further providing inductive categories for coding and analysis [78].

Qualitative research helped to contextualize and understand relations and meanings within participants narratives [79–81]. Open semi-structured interviews [82,83] focused on personal experiences about the collective process during the workshops and other learning experiences concerning the collective trajectory for yeknemilis. Interviews were conducted with members of the General Chair, advisors, promoters, and locality Chairs. From the 37 transcribed interviews, we differentiate three subgroups in areas of action: (1) directive members or General Chair and internal advisors, (2) cooperative community promoters (N = 13), and (3) Chairs in one local cooperative (N = 7). The approach was abductive [60,81]: we built a narrative that recovered peoples' concepts and memories, introducing our perspectives for collective analysis and discussion.

The first coding cycle with QDA software (ATLAS.ti v9) led to identifying learning dimensions across diverse levels or types of experience in people's trajectories. Key learning areas were schematized. Further sub-coding was applied to the promoter subgroup for in-depth description and analysis of the learning areas (Table 1). Considering their role in linking community cooperatives and the central organization, their narratives can bring a perspective on learning experiences and challenges that bridges the view of authorities and leaders with the complexity at the local level. Our research group based the resulting analytical narrative on the group of promoters. We translated quotes from interviews from Spanish to English.

Additionally, we used participant observation [84] to accompany daily activities in Tosepan's educational Kaltaixpetaniloyan center and local cooperative assemblies for four months. Observations spanned learning activities in central dynamics of the cooperative and in cooperative locality assemblies and activities, as well as in community activities such as celebrations or gatherings, rituals, and everyday life. Auto-reflexive journaling [79] was a tool to analyze the collaborator and researcher position, gather ideas for follow-up and analysis, and register own personal experience within the participatory process.

| Categories   | Codes  |
|--|--|
| Collective action agenda and<br>transformation processes | Learning trajectories                                      |
|  | Meaning making   |
|  | Collective action  |
|  | Dreaming the next 40 years                                 |
|  | Challenges and societal context                            |
|  | Participation dynamics                                     |
|  | Common views and objectives                                |
|  | Experiences characteristics                                |
| Intercultural transdisciplinarity                        | Masewal language and transmission                          |
|  | Masewal meanings and ways                                  |
|  | Dialogue and activities methodology                        |
|  | Strategy building  |
|  | Locality cooperatives dynamics                             |
|  | Communicating and translation of knowledge and experiences |
|  | Family and community dynamics                              |
|  | Intercultural collaboration                                |
|  | Interculturality and memory                                |
| Community capacity building                              | Learning by participating                                  |
|  | Technical capacities                                       |
|  | Collective action values                                   |
|  | Learning in lifeway and socio-ecological activities        |
| Creative reflexivity 'thinking from the heart'           | Kaltaixpetaniloyan and 'thinking from the heart'           |
|  | Collective reflection activities                           |
|  | Self-recognition and self-valuation                        |
|  | Assembly dynamics  |
|  | Dreaming within collective action                          |
|  | Feelings and meanings in collective dreaming               |
| Relational ontology horizon                              | Lifeway horizon  |
|  | Shared life-meanings                                       |

Table 1. Categories and codes for qualitative analysis of interviews.

# 3. Results and Discussions

The stories allowed bridging the reflections upon learning, lifeway experiences, and perspectives concerning yeknemilis. This approach allowed us to consider the SL process for yeknemilis during the intercultural transdisciplinary process articulated to community life and cooperative collective action. The broad landscape of the learning processes can help envision strategies to strengthen collective efforts and can help to relate to other similar contexts.

The following sections present the identified SL attributes and enabling conditions. Participants' perspectives link (present and past) community and organization activities with the transdisciplinary undertaking to plan for a future oriented toward yeknemilis (Section 3.1). Section 3.2 discusses the implications of attributes and enabling conditions for sustainability of life and ITC to consider a broader framework that can relate to future strategies in this and similar experiences.

#### 3.1. Social Learning Attributes for Yeknemilis

The collective narrative woven in the workshops portrayed the axis of yeknemilis related to three main ontological dimensions: lifeway and values, way of inhabiting and being in the world, and territory of the Masewal, which we elaborate in previous work [78] (Figure 3). Here, we relate to the participatory process with participants' perspectives focusing on their learning experiences, focusing our analysis on the community promoters' perspective. SL processes influence relations within the territory, the Masewal way of inhabiting and being in the world, and practiced lifeways and values. We portray that the ITC process is correspondingly interconnected with efforts for yeknemilis (Figure 3).

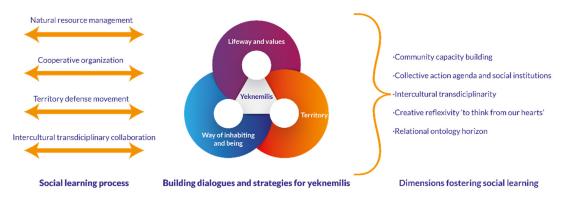


Figure 3. Social learning processes and for yeknemilis. Extended from Bueno et al. [78].

Interviewees mentioned learnings situated in: local natural resource management systems, cooperative action and organization, inter-community activities, collective action to defend life and the territory (from neocolonialist projects), and transdisciplinary collaboration focused on yeknemilis. These processes are interrelated at different scales (personal, interpersonal, community, intercommunity, regional). For instance, dialogues included sharing traditional knowledge of natural resource management practices within families. It linked efforts and learnings from peoples' lifeways with strategies in diverse areas related to the territory and 'dreaming for the next 40 years'.

Stories and learnings displayed a network of knowledge, practices, values, affections, etc., that we integrated into five general attributes. We regard these as key SL dimensions for building yeknemilis collectively: building community capacities, collective action agenda, creative reflexivity, intercultural transdisciplinarity, and a relational ontology horizon.

# 3.1.1. Community Capacity Building

The capacities for yeknemilis include various skills integrated into how people participate and contribute to common issues through community relations, values, and norms. These are fostered through multiple types of learning: sociocultural apprenticeship and 'learning by observing and pitching in' (LOPI), cooperative education, exchange of experiences and vicarious learning, and regional organizational strategies.

Learnings are associated with growing up in their communities, family, and community spaces where diverse capacities are acquired, e.g., participating in farming and silviculture, cultural traditions and festivities, daily activities, gatherings, and conviviality. Community members practice reciprocity through, for example, lending a hand to other families when in a complex health situation. People recognize this value from their cultural relations.

Festivities, communal work (*tequio*), and land sowing are socio(bio)cultural apprenticeship spaces. A diversity of techniques and knowledge in agroforestry *koujtakiloyan* and *milah* (*milpa*) systems depend on family activities. Children learn because they accompany their parents or grandparents at practice.

May our children, who were not aware of the life of our ancestors, now be acquainted. But by observing and growing up with the idea that [making a living from] working the land and diversifying crops is possible, so they will not be discouraged [to continue with the tradition] (Rosalinda Heredia, Organic Production Promoter).

People shared that they need not be taught or mentored; they learn through attending or having a role in the activity. This was mentioned about abilities and knowledge for sustainable resource management, for example, learning how to harvest wood or manage a plague.

No one will tell you, 'I am going to give you a cooking lesson, or 'This is how you should do it.' According to the need, you must learn. Before, we used to learn more because we helped at home, me and my brothers. We would go to harvest wood or coffee when we were little (Guadalupe García, Community Health Promoter).

However, there are capacities that persons did not learn within their community context or at school. Through participating and sharing information within the cooperatives, people learned social and organizational capacities (e.g., to talk in public), along with different strategies for everyday activities, i.e., novel organic farming techniques. Monthly or periodic assemblies are crucial organizational and educational activities since they promote collective information, dialogue, consensus, and decision-making. Additionally, capacitation relates to common objectives through community projects.

The cooperative is there to assess people. This is not necessarily on economic matters; there is another way to be happy. We look for ways to happiness in every community, like *yeknemilis*, a 'good living' in harmony with all (Federico Matias, Community Economy Promoter).

The promoters' participation focuses on facilitating strengthening actions in over 400 local community cooperatives. Promoters are capacitated with technical, social, and participatory skills. They translate these skills to the assembly and productive arena in the interaction between technicians and peasants. Additionally, they link sociocultural learning with technical assistance.

As promoters, we do social work for people to be interested in our actions [in the cooperative]. We adapt to peoples' needs, [...] for example, in housing or health aspects. Social work can't be measured (Adelaida Guerra, Community Health Promoter).

Most 'community promoters' are young adults who learned through their parents' participation and became cooperative members. As children and youth, they accompanied their parents in the assemblies and participated in some activities, later deciding to become members. Then, to become a promoter, an assembly proposes that the person be capacitated and undergoes a selective process. A young promoter said he learned to face the fear of speaking in public through participating in meetings and assemblies. Now he is used to participating and taking community service roles in his village.

ITC was based in dialogues, where people paid careful attention to listening to others. Learning through observing was also provoked via visiting people in their lands or during agroecological activities. People recalled various activities within the territory in which they used to participate as a child.

Intergenerational and community learning situates most of the knowledge and experiences people relate to their lifeways and sustainable practices. Participation is central to capacity building. Rogoff refers to the importance of apprenticeship through participating in sociocultural activities [33,85]. Children play while adults work, and, depending on their age, they can contribute and learn while they develop their participation. 'Learning by observing and pitching in' (LOPI) responds to a holistic paradigm incorporating change as part of life. In addition, it relies on intergenerational continuity and innovation in cultural activities [86]. Learning values and attitudes are a part of SL for yeknemilis. Chamoux refers to education through participation in Sierra Norte de Puebla:

Close attention involves responsibility and trust. During the first ten years, increasing participation in the family's activities provides a social and affective frame for the child, and the parents promote attention and responsibility step by step. For the parents, the "help" that results is limited. But for the child, it is an active way to become mature and to feel pride. Over 10, a child's participation is more effective, more intense, and educational practices are more directive [87] (p. 266).

According to the author, Masewal people's LOPI is dated centuries behind. Although various conditions have changed, children are encouraged to observe, stay attentive, and gain responsibility through gradually contributing to everyday tasks. This is a way to foster community continuity [87]. Descriptions of learning through participating in the interviews coincide with Chamoux. The fact that activities in the cooperative resemble how children learn within the familiar context implies that these activities are viewed to continue and foster community-organized dynamics.

People identify values and ways of relating to everyday life and activities connected to a sense of belonging and responsibility to the community. Learning occurs in life processes, where emotions and meanings situate personal and collective efforts to improve living conditions and to exert rights to lifeways according to their worldviews.

Different authors, some of them members of Tosepan, have documented the learning process in Tosepan [64,88]. Cooperative organization is founded on education [89]. Tosepan, similar to other rural-indigenous cooperatives, centers its action on promoting social participation and building organization, resulting in relevant learning processes in local action regarding values and principles and gaining skills to manage and improve local lifeways collectively [63,90].

Collective learning represents a strategy to gain agency and construct other societal paths for groups and communities; as one Tosepan member shared:

A lot has to do with the fact that they teach us education in Spanish when our language is Nahuat. [...] For this reason, I believe that we are in what is called 'delay'. Although, for me, it is not a delay. At the same time, a people's power is being lost due to this different education. I understood that very well here [in Tosepan, our organization]. [...] In those dreams, what has been done in the workshops during 2016 and part of 2017 so far has to do with tomorrow having our own education, ours, in our region. It has to do with us having the technology in our hands with all the knowledge and use of it, even free media. Because the media doesn't even reach, it's all the same (Bonifacio Palomo, Tosepan member in interview).

Collaboration in workshops was situated within the cooperative context, thus benefitting from participation and dialogue dynamics that helped to learn together. This links ITC with the cooperative learning arena within a network of actors that foster situated appropriation of knowledge co-production. Furthermore, the challenge to integrate dialogues at the community level speaks to continuity and innovative tools in collaboration for SL.

#### 3.1.2. Collective Agenda and Social Institutions

Capacity building is interrelated to involvement in a collective agenda. Throughout various activities and pursuits, stories include participation and collaborative organization processes that sustain 'being part of the community and the territory'. Activities are part of collective strategies. It could be contributing to a feast within a community celebration or a *tequio* (communal work) to clean the community roads or water springs. More recently, people are integrating assemblies and initiatives to defend the territory and life.

I learned that by being organized, we do have results [...] I have learned how to work together; we get organized like when working the land. We have also learned

many things about defending our territory from the [attempt to establish an] electric station. We analyzed and defended. It cost us a bit, but we did the work with joint [action] and saw results (Gilberto Mateo, Organic Production Promoter).

People relate these activities to social values, communication, organization, and caring for others and nature, thus giving meaning to their goals and achievements.

At the end of the day, when we go through our activities, we realize it is not a chore but a joint accomplishment (Pastora Luna, Community Health Promoter).

A particular type of organization and community-based strategy comes from the legacy of Tosepan, with actions at local village assemblies and regional activities in cooperatives according to areas of action that influence families' lifeways with orientation for yeknemilis: organic production, community economy, health, and others.

Our partners didn't believe that coffee could be produced without agrochemicals, though they were convinced that it can be done throughout the work. I would explain that organic production entails preserving our environment, microorganisms in the soil, and flora and fauna; if we cut down trees, we harm the birds, squirrels, and opossums (Marta Hernández, Organic Production Promoter).

The actions at the community and regional levels include monthly community assemblies fostering open information and consensus and inter-cooperative relations in line with the areas of action in Tosepan. Weekly meetings and workshops between promoters and the Tosepan Chair foster follow-up of activities at the community level. Proposals are discussed and shared with the regional assembly involving local communities' cooperative chairs.

For Tosepan's 20th anniversary, members did an exercise to 'dream for the next 20 years'. This is remembered as a foreground to the present process of dreaming for the next 40 years (onto Tosepan's 80th anniversary). Members talked about the confidence they feel in the organization that previous and current generations have built. They recognize a great value in being part of the cooperative movement, for they see a possibility in collective action to influence their lifeways and futures. Purposes are related to improving local livelihood opportunities and building strategies through recognizing the value of their efforts and further possibilities for the organization to transform social-ecological problems in the region.

For some, being cooperative members and participating in local activities is a way to strengthen collective action and organization to build new strategies and opportunities regarding their lifeways. The cooperative organization has brought a different perspective of participation and engagement to the tendencies of exogenous development mainly promoted in schools and government programs, realizing that planning and strategies can be community-led and locally defined.

The legacy of the cooperative, organizations, and regional social movements has built a sense of effectiveness in collective action and organization. The cooperative members are grateful for being part of change; they acknowledge what the previous generation achieved and the possibilities to contribute to their families' lives.

When you look at pictures from the origins of the cooperative, you realize its indigenous people; you do not see an external assessing enterprise. People organized themselves [...] and, look at where we are! (Federico Matias, Community Economy Promoter)

The interviews revolved around a common view of effective positive change in people's lifeways in contrast to projects and lifeway conditions that have been imposed upon them. Collective action in the community and the cooperative is identified as a means to generate changes in local institutions, access to rights, and other possibilities that affect their lifeways, such as building a school for their children. Trust has been created within the cooperative to promote organizing, knowing they will get benefits and essential learnings from the collective journey. People reflect on the better living conditions that recent generations can access and acknowledge in joint actions. Thus, self-determination and autonomy in local decisions are at the heart of peoples' actions to build new possibilities.

Awareness in regard to caring for our land, caring for water, and not permitting mining transnationals to come to our lands and take what our ancestors have achieved (Ortencia Salgado, Community Economy Promoter).

Bandura mentions how a sense of efficacy in collective action builds against social marginalization and individualistic action fostered through globalization, enabling SL [32]. Notions of belonging and being part of the organization, the community, the Masewal culture, and the territory cut across learning stories told by promoters. Building capacities that contribute to a collective process and community building and strengthening add up to the motivation to share a common view or story that portrays a lifeway that people look forward to but also have a share in contributing to [91]. Responsibility is exercised through building a common lifeway. An orientation for projects where learning processes are being fostered at the community level responds to the question, 'How do learning and participation processes contribute to activities and objectives related to the lifeways and worldviews of communities involved in sustainable paths?'

Building a "Masewal life Plan" and participating in the territory defense movement involves people recognizing their identification with their culture and community life. This implies taking responsibility for how peoples' lifeway is shaped. Local organizing has encountered different types of collaboration with people from other regions and communities of practice, oriented to improving local efforts and building common strategies. In this way, collaboration is part of how the cooperative has constructed an educational platform. Cooperative action is strengthened at the local and regional level, and due to exchange and learning from other experiences that face similar challenges, should not be understood as an isolated experience but as part of a social transformation process [89,90]. The situated learning that the cooperative promotes is base for collective action that engages with other actors and sectors in solidarity, as within the ITC process for yeknemilis [64,92,93].

## 3.1.3. Intercultural Transdisciplinarity

Communication and inclusive participation between all involved were most relevant to bring together various life meanings and challenges into a common arena. We saw that the objective to reflect and construct upon yeknemilis for the next 40 years involves cultivating trust, dialogue, self-reflection, and co-participation between diverse groups or communities (Figure 4). Leaders contributed through activating questions and critical thinking, the engaged academics guided dialogical facilitation, and all were encouraged to participate and be heard. Furthermore, these dialogues were conceived to promote further dialogue and reflection within families, local cooperatives, and other spaces in the community. The Life Plan was decided to be revised and built within each local cooperative. This presented communication and methodological challenges. Figure 4 shows the interaction between communities or groups of actors involved in collectively building yeknemilis as a learning process.

Masewaltahtol, the Masewal language, was recognized during the workshops and interviews to express peoples' way of 'feeling' and viewing the world. It is considered a way to share practices and knowledges. People prefer to express themselves in Masewaltahtol, in coherence with their way of thinking and feeling. They favor trust and listening within the community better than in Spanish. In some villages, though, young people no longer speak the language, or have not learned it. This concern implied that local activities and organization could benefit more from using the Masewal language.

Many people see you arrive and feel self-conscious; they don't give you an opinion. But the moment you start to speak to them in their mother tongue, they feel more confident; because they start to talk, they begin to give their points of view because they realize that you are part of them (Federico Matias, Community Economy Promoter).

Language is not the only ground, but a vastity of knowledges, practices, feelings, and affections are shared through orality. Emotions and sense-making are linked to orality in how Masewal people share their feelings and meanings integrated into organizational and learning activities. Reflections on the sustainability of life included recovering practices and knowledge, building feasible strategies in local contexts, and recognizing their relationship with nature. Comments referred to recognizing their culture's intrinsic value and sharing respect. Recovering memory and reflecting on intergenerational heritage was relevant for people regarding how they form relations with nature and their community. Masewalmeh especially value dialogues with elders. They recognize them as knowledgeable, their voice being most relevant for sharing about their lifeways and worldviews.

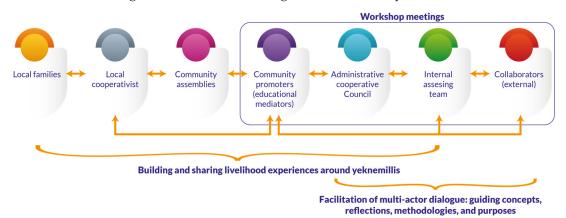


Figure 4. Learning community: building from and for yeknemilis.

In the everyday actions of the cooperative, promoters practice translating between a more generalized and regional level, in dialogue with Western and hegemonic practices and worldviews, and the practices and Masewal ways in the local communities. This relates interculturality with other peoples, local cultures, and collaborators.

During the workshops, specific sessions were facilitated by a group from the Chair and other areas of Tosepan. They promoted discussions in Masewaltahtol and constructed upon Masewal concepts: *poujkaitalis* (taking everyone into account), *to-masewalyot* (being masewal), and *to-altepetl* (territory). Constant translation between Masewal and Spanish was necessary for non-Masewal speakers in the cooperative and collaborators, including the Tutunakú people. It was said that dialogues in the Tutunakú language should follow.

Co-facilitation was a process that fostered mutual learning across cultures of knowledge and paradigms or worldviews. It was promoted by the team of collaborators to favor a 'decolonial critical intercultural platform' for dialogue, as expressed by one of the collaborators [93]. The methodology of the workshops was experiential and adaptative to the collective reflexive dynamic. Joint reflections were fostered in small groups and plenaries through thematic areas and activating questions.

I am talking about a cooperative that has fought for our people's well-being, the region's well-being, and our well-being without it coming from the outside and people telling us how to live or what to do and what not to do. To see for ourselves how to be more autonomous in this sense, we also receive the support of several people who are not from here but who have the good intention of helping us in some way (Ortencia Salgado, Community Economy Promoter).

Scholz and Steiner [22] stress how multistakeholder dialogue happens within a common arena for co-construction. Collaboration has been pragmatic through promoting interaction between different communities of practice. Thus, strategies contribute to escalating efforts at the community and cooperative level, focusing on situated action and knowledge co-production centered on Masewal knowledge and oriented towards yeknemilis.

The intercultural exchange and co-production process implies spaces and methodologies sensitive to power dynamics and acculturation processes to promote other platforms for respectful and creative collaboration and co-construction. Translation thus involves not only spoken languages but methods and ways of listening and understanding the other, especially if it is the case of a non-hegemonic way of being and living.

Lenkersdorf [94] recognizes with Tojolabal people that an attitude change is needed to learn from indigenous peoples in America. Considering worldviews that are 'we' or community-centered and that shape a different way of living than that from the West, questioning and knowing are also different, and views from the West have much to learn to build complementarity and to learn to view other elements more horizontally. He argues that language portrays a way of inhabiting the world, a pedagogy based on listening to Others, and a mutual construction of 'we'.

Between Masewalmeh, the mean is the message [54]. Local efforts refer to having tried to divulge systematized Masewal knowledge in books in their language but recognizing that people engage mostly through spoken language, both through traditional intergenerational exchange and through recent forms of activating and recovering knowledge through workshops and interviews [54].

Interethnic exchange in local communities and between Masewalmeh, Tutunaku, mestizos, and others is part of everyday dynamics for Tosepan's promoters and collective action. Many challenges remain fundamental to promoting self-affirmation and recognition of Masewal culture [61]. Discrimination and coloniality represent a menace of acculturation in the region. Thus, interculturality tools are crucial to propose sustainability paths through learning and knowledge co-production.

ITC promotes critical ways of collaborating that transcend and create pathways beyond the mechanics of project-based and technical solution-oriented transdisciplinarity to societal-focused methods for co-creating and co-designing new historical lifeway horizons embedded in sustainable resource management experiences/processes.

### 3.1.4. Creativity Reflexivity: 'Thinking from the Heart'

This dimension refers to practices and values that foster reflexivity within a collective appropriation process. Reflexivity and sense-making integrated into daily and organizational activities may happen in many strategies, such as workshops and participatory activities. Assembly meetings and community gatherings were portrayed as spaces based on listening, participation, and self-reflexivity through dialogue.

Regarding cultural dimensions, reflexivity is valued for learning and building orientation for actions. The Kaltaixpetaniloyan center is an example of the relevance for Tosepan to foster education within the cooperative and in exchange with others. Additionally, during the workshops, the initiative to dream for the next 40 years required reflexive dialogues: 'thinking from the heart' about the history of the communities and Tosepan to generate novel views and objectives for the future.

In the workshops and interviews, people refer to challenges threatening their lifeway and worldviews. Examples of a perceived loss of traditional practices and knowledge were shared, as regarding language. This appears as a primary concern and a strong reason for people to get involved to find ways to resist and construct alternative ways since expressions of acculturation are identified as result of Western pervasive political-economic culture.

It is useless to us as a cooperative to have many specialists [collaborating with us] if we do not change our lifeway. [...] It is useless for us to have all the training of traditional healers if new diseases or diseases that are not from the region keep appearing. [...] Well, it's a different lifeway. So, we pointed at the base: we know how to feed ourselves, and we can rescue our grandparents' way (Pastora Luna, Community Health Promoter).

Rist et al. [40] show that reflexivity around threatening scenarios and social conflicts made it possible for Aymara people to recover values and social institutions based in Andean worldviews. Thus, SL can lead to changes that require people to understand and adjust to a way of viewing the world. This means constructing strategies related to ethical values and epistemological or ontological dimensions beyond normative actions,

creating new possibilities for reinterpreting experiences related to people's worldviews, and building viable strategies in new relational horizons.

Yeknemilis represents a horizon from and for which to construct collectively. However, people pose dilemmas or situations that show catastrophic and utopic scenarios. Villasante [70] introduces a way to look at social 'multi-lemmas', recognizing diverse or alternative positionings that favor social creativity in participatory processes. He argues that social creativity promotes participation towards acquiring responsibility and agency in people's reality and how they can shape it.

We used this framework to identify situations that people consider possible, given the problems they are going through (Figure 5). We synthesize a complex reflective process with illustrative phrases from the interviews with community promoters that help describe schematic scenarios. A multi-lemma is portrayed considering people identify: (A) shared difficulties and pains regarding conflicts and situations that imply challenges related to their well-being in the present and possible futures (origin in the graph), which on the one hand, (B) can represent a golden past or future based on idealized traditional values and harmonic relations with Mother Earth (vertical axis), and on an another (C) can lead to assimilation or acculturation processes related to neocolonial projects such as mega-mining and representing Western ontology (horizontal axis). These two scenarios are contrary, and between these tensions, people consider their viability and new possibilities. An emergent situation (D) is where people decide upon a lifeway that is made their own and evaluate strategies that can add to a better life where they do not idealize their culture but re-create it in diverse current ways of action (diagonal). These scenarios were framed to schematize questioning people posed considering challenges and possibilities for action and change.

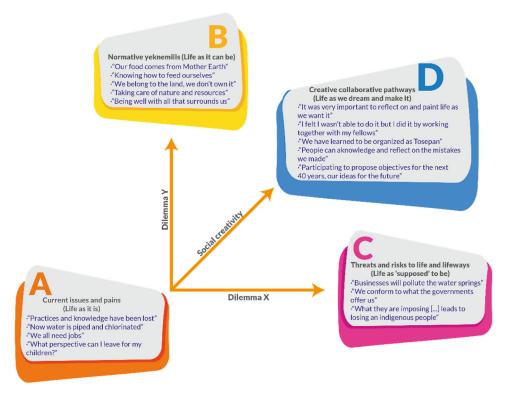


Figure 5. Multi-lemma of peoples' lifeways in the face of conflicts and possibilities in Masewal territory.

Through social creativity, people promote viable ways of participating and shaping strategies. As Lotz-Sisitka [42] points out, SL is an empowerment process not because learning is enlightening but because people contribute to their lives and become aware of the consequences for themselves, their community, and future generations. This relates to continuity as part of cultural dynamics, where people can act creatively in continuously changing conditions and processes. As Rogoff points out: "The relation between indi-

viduals and cultural communities is mutual, holistic, and emergent—people participate in practices available from prior generations, and in the process, they and their generation contribute to the maintenance, transformation, and abandonment of the practices of cultural communities" [86] (p.183). We consider that sociocultural activities and intercultural transdisciplinary collaboration can foster reflexivity that strengthens intercultural creative paths.

## 3.1.5. Relational Ontology

Interviewees coincide in a purpose to shape a self-determined lifeway and development. Diverse concepts and imaginaries add to yeknemilis as a horizon of values and relations that strengthen Masewal's lifeways and relations with the territory.

Yeknemilis is constructed upon the following conditions:

- It is a part of the trajectory of change throughout intergenerational participation. Organizing within generations has improved people's lifeways, but strategies and objectives are contingent on different challenges in recent history.
- Changes are oriented to constructing yeknemilis as a lifeway and to maintaining values that empower the community and Masewal self-determination.

"And that is yeknemilis: feeling good with everyone, with myself, with my family, with society, with the world around me, with nature." (Federico Matias)

- People identify contrasting lifeways and cultural meanings in contrast to Western ways.
- Situations of threat risk sociocultural activities and peasant and indigenous lifeways.
- Yeknemilis is a trajectory of recovering and appropriating memory and activities that contribute to a horizon of a self-determined lifeway.

We consider the values and relationships shown by the actors to be relevant, not only as collective mutual learning processes but also embedded in alternative ways of living and being in the world that promote principles of reciprocity and stewardship in natural resource management.

When indigenous people bring to light their knowledge about their territory, its flora, its fauna, its topography, integrated with that of the human body, its internal and external anatomy, and its physiological processes, they reveal their actual appropriation of this territory, that supports their claims of legal and political appropriation [54] (p. 301) (own translation).

Yeknemilis brings a normative narrative horizon to learn from sustainable life relations and practices while constructing collective action situated in the Masewal people's lifeway, worldview, and way of inhabiting their territory. This perspective simultaneously shows a foundation for cultural innovation and self-determination, portraying strategies for engaging with other sectors in collaboration projects.

Throughout the key learning areas, people mentioned feelings, senses of identification, and motivation. We consider that these characteristics construct meaning in a common ontological horizon as yeknemilis. We borrow the term horizon of historical significance from Quijano [45] to highlight how even in hegemonic power control that has resulted in the widespread degradation of ecosystems around the globe, the actions of Masewal people and other communities have survived as new pathways, and thus represent the decolonization of power. These experiences are the fruit of the historical heritage of people acting in favor of community organization and sustainable life.

As Poma [95] points out, people get involved in social movements to defend their lifeways and territory because there is an underlying survival meaning linked to the feeling they act upon, for example, 'acting by their feelings and not the money' or 'raising their voice' to show what the place they inhabit means to them. She says mobilization does not come from leaders or activism but from people recognizing and responding in a more meaningful sense than that of economic rationality, in which these projects are mostly justified. She also clarifies that transformation does not come from success in their

fight. Instead, people act according to their emotions and the symbolic meaning [96]. In our case, promoters' perspective is related to the community, although they are in contact with discourses from activists. Additionally, a study of three case studies in Ecuadorian communities concluded that people are willing to defend their territory against neoliberal project attempts through understanding the territory as their patrimony [97]. Other studies show that solidarity-founded organizations and coalitions are examples of creative strategies against neocolonial power [98].

Our research was focused on a window within a process of decades of collective action. The dimensions of sociocultural construction in these narratives show that these activities are part of transformational or empowering processes. In this sense, the motivations and values mentioned relate to a sense of identification, of fighting for their lifeways and territory. This may show that the learning process for yeknemilis is part of social transformation guided by peoples' connection to their lifeways and the places they live in.

We argue that the relatedness people refer to while participating in dreaming and planning for yeknemilis is part of a transformation process integrated into sociocultural activities and dynamics that invoke social creativity and reflexivity. Even if actions and plans change, people's agency and notion of being part of future generations' lifeways have been strengthened, considering they see they can have effective actions influencing them. Intergenerational dynamics are activated and can be supported through recognizing a self-determined pathway and recovering and re-creating memories relevant to today's necessities and values, which participants resonated with. When combined with the ontological dimensions of yeknemilis, creative sociocultural dynamics can foster building strategies in a horizon that favors the community relations and reflexive continuity needed to face new challenges (Figure 6). Thus, a sociocultural approach of SL regards how people act and learn from everyday and other activities to shape their lifeway, territory, and way of inhabiting the world.



Figure 6. Relational ontology horizon: Building social learning for yeknemilis and sustainable life.

In this way, the questions participants raised on the threats and challenges of their culture still need to be answered. Chandler [99] expresses that the circumstances and the peoples' recognition of their worldviews are of great importance for the continuity of their cultures in an ever-adaptive process. They recognize and keep alive what makes them different in experiencing the world: "Distinctive cultures are made distinctive, not just by their different material circumstances, but because they process the experience differently" [99] (p. 89). Empowerment should then consider the conditions and processes people reproduce and create according to their way of experiencing reality. This can lead to further reflections within the Life Plan collective dialogues and to exchange with peoples and communities from other regions. Of central importance for dialogues and Life Plan continuities is "to consider how they might work together collectively to create

local environments in which they are free to exercise and promote their indigenous ways of knowing and being." [99] (p. 94).

#### 3.2. An Intercultural Transdisciplinary Collaboration Paradigm

Results have shown a focus in relations fostering sociocultural dynamics and innovative strategies and methodologies. Accordingly, ITC relates to building experiences in a mutual and, thus, respectful platform, recognizing ontological and epistemological differences as a common ground. While collaboration stresses the need to favor localized approaches, strengthening agency, and a dialogical arena, interculturality is based on the relevance of auto-reflexivity within communities of practice and the capacity to communicate across cultures while looking for mutual understanding, and transdisciplinarity is a guide to the co-construction of strategies toward epistemic justice.

SL, described in this paper, reflects that community dynamics, cooperative actions, and institutions weave learning and participation processes. ITC integrates such processes and can strengthen collective action.

The interrelation in peoples' narratives of their worldviews and ways of learning shows that these should be understood holistically and that creativity in finding solutions relies on weaving together values, actions, and knowledge. The resilience of socioecosystems in the Masewal region in Northern Puebla shows that they are reliant on people enacting their lifeways and dynamic culture as well as the possibility to upscale actions from the local family or community systems to a regional network of action.

When considering buen vivir or yeknemilis, communities' relational experiences embedded in complex local contexts can strengthen the creation of new alternatives expressed locally but with global relevance regarding self-empowered lifeways. Besides, there is an emphasis on local relations and processes, which are embedded in broader regional and global contexts. As argued by Bianchi and Vieta [100], the embeddedness of cooperative organizations in situated contexts enables solidarity relations with other sectors. Thus, activating intercultural transdisciplinary dialogues in collaboration shows a dimension of managing local and regional commons. The co-production of knowledge can enable strategies to recognize values, build networks, and weave historical horizons. As Pastudillo argues in relation to community-based alternatives: "Their importance lies in the capacity to influence individual, family, collective and national life so that we can all be consistent with the construction of Buen Vivir" [101] (p. 291) (own translation).

Critical interculturality and decolonial processes stress how localized actions can foster the emancipation of communities and cultures as stewards of nature. Ayala-Orozco et al. [102] suggest scaling-out networks as a way to strengthen transdisciplinary projects. In this case, collective organization and collaboration can promote bridging or networking with other experiences or communities of practice, introducing, for example, strategic ways to deal with how to view cultures (dynamically and creatively) and contextualize local processes. Academic collaborators promoted a translating approach, where people could co-construct strategies that were culturally and ontologically appropriate as an open and creative changing process. The dialogues advanced provocative questions and unresolved tensions but pretended to be integrated into a reflexive dialogical process.

In the history of the Sierra Norte de Puebla, indigenous peoples have mobilized to exert their right to cultural differences and a healthy environment. They formed alliances and collaborations with other communities of practice: jurists, biologists, anthropologists, churches, ecologists, etc. [54]. People have been open to exchanging with other cultures as long as this does not imply being defined by others, as colonization has insisted for over 500 years [54]. As such, Beaucage and the Taller de Tradición Oral del CEPEC argue:

Without real control of their lifeway, the indigenous people will continue to be mere executors in elaborating an 'ethnoecology' and an 'ethnodevelopment' designed far away from their communities [54] (p. 303) (own translation).

New generations are integrating their knowledge, making them part of new imaginaries. This includes using diverse terms from Western and modern societies and appropriating them into their conceptions and objectives while taking control of their territory.

Discourse is the articulation of knowledge and power, statements, and visibilities, and the visible and the expressible. Discourse is the process through which social reality inevitably comes into being [16] (p. 326).

It goes without saying that power dynamics are crucial and were not explicitly addressed during the dialogues, which can hinder or make certain relations invisible. As an ongoing process, we consider it is yet relevant to integrate a reflexive exercise to bring more into the open and make focused discussions on such sensible matters: power and inclusion (gender-oriented and culture-oriented), as well as sociocultural dynamics that can be contradictory or in tension within the process of building agreements and strategies towards yeknemilis as a lifeway and ontological ground for human–nature relations.

Rist et al. [40] describe how SL in Andean ayllu involves a process of recognition and reinterpretation of the nature–human relation to foster 'correct' action, meaning not only normative-oriented actions but that it is part of a worldview that is being reincorporated o reenacted in how communities manage their land and connect to it. Ethical values are deeply related to management practices and everyday life, as well as to how relationships with Mother Earth are nurtured.

In a complementarian or intersubjective way of constructing knowledge and responding to real-life challenges, people learn together as a community where everyone has a role and knowledge is not centered or dependent on a group with abilities or expertise [94]. There can be different activities, but decisions and actions always relate to and build upon the collective. We saw that capacity building was associated with an interactive and dynamic community or communities in the SL processes.

Ontology is always a part of sustainability projects and processes. Academics and other sectors that are not used to realizing this in day-to-day activities can learn to consciously understand the ontological dimension we are contributing to and the challenges and mistakes we must work on to contribute to life-sustaining pathways and futures. Political ontologies show that knowledge and action relate to worldviews considering alternative routes [103]. Although it has been argued that other types of knowledge are necessary, there is much to learn, and we as scientists can learn from we-centered or intersubjective worldviews for knowledge co-production. "The current dominant paradigm and its perspectives on culture and learning could benefit greatly from a perspective of indigenous holism and relationalism" [104] (p. 110).

### 4. (In)Conclusive Situated Reflections and Learnings

In this research, we explored the relations of SL and ITC with yeknemilis. We view the construction of yeknemilis as a common ground for collective action and dialogue, as remarked within the intercultural transdisciplinary process to build the Masewal Life Plan. This resonated as a meaning horizon throughout the interviews. Yeknemilis brings forward values, practices, and a lifeway that people relate to from their life experiences and learning stories. People relate these characteristics to diverse learning experiences in socio(bio)cultural activities and collaboration.

Gathering five key learning dimensions from experiences within the family, community, organization, region, and collaborating levels helped to visualize practices, values, affectivities, and knowledges that are part of peoples' strategies for life sustainability. These are closely related to sociocultural dynamics and cooperative organization actions oriented toward improving life conditions in health, agroecology, home economy, etc. Additionally, characteristics and methodology from the ITC process were related to key learning areas. Dialogues addressed agency construction and collective action, capacity building within the community, practices for interculturality and co-production of knowledge, creative reflexivity practicing 'thinking from the heart', and building meaning within a relational ontology horizon. SL within and beyond the intercultural transdisciplinary process helped to visualize a creative dynamic with continuity within the community that collaborative projects can foster. This requires ITC that is critical to the present problematics indigenous and peasant communities face within their territory, lifeway, and ways of inhabiting and being in the world.

In the social learning process within Masewal communities, self-determination gives meaning and orientation to dreaming and planning a sustainable lifeway and natural resource management. SL is linked to how people enact and propose relational ontologies in their lifeways. This can be explored as a decolonial and self-reflexive path for transdisciplinary research. Further analysis of linkages with other experiences and transdisciplinary processes could explicitly reflect on knowledge co-production in a political ontology dimension.

SL initiatives benefit from articulating with localized 'everyday' ways of learning and participation. This approach relates to culture itself as dynamic and vivid in everyday activities (learning from previous generations in local parcels, organizing water committees, etc.). Key learnings are viewed as critical points for further analysis and discussions. SL for yeknemilis relies on peoples' collective reflexivity and creativity, promoted by ITC in the shared experience and other activities actors are involved in. Reflexivity and participation (of all involved) can be fostered within the community and people can exercise their recognition and value as well as the effects of their actions concerning their environment and other people as part of a new historical ontological horizon.

Capacity building through SL is related to connecting local actions and processes (agency) through ITC, broadening sociocultural activities' continuity into alternative dynamic pathways as yeknemilis. SL that fosters making cultural values and practices visible facilitates co-constructing from epistemological and ontological differences, leading to transformative and empowering processes for yeknemilis and buen vivir.

Research in collaborative projects can be promoted to learn from people's participatory processes. Systematizing and reflecting on this experience relied on a participatory approach to enhance continuities in discussing yeknemilis within Tosepan and local villages. Questions and attributes from this process may further promote exchange and complementarity; for example, in a theme relevant to most participants—the loss of practices and knowledge—how would Masewal communities understand and co-create strategies for this problem?

The potentiality of SL linked to ITC suggests that agency and actions can be upscaled to other areas or projects as situated multi-stakeholder strategies for yeknemilis. Further discussion and analysis are needed to identify challenges and strategic actions that can problematize and strengthen methodologies and critical routes in continuity with SL processes linked to building yeknemilis as a self-determined lifeway.

This study has required a translation effort that may result in inaccurate terms and ways of expression. SL and sustainable natural resource management are not commonly addressed in direct conversations with Masewal people. Such concepts are borrowed from literature and research in sustainable sciences and may not directly reflect peoples' worldviews. We, as authors, use them to communicate our learnings to a broader community, though we also acknowledge that the use of academic terminology could be critically questioned. How do local and alternative worldviews portray sustainability and natural resources? In this sense, yeknemilis and other Masewal concepts contribute to broadening and diversifying cultural views on sustainability. How we name phenomena relates to how we view reality and reflect on solutions.

This research is not conclusive nor result driven but has opened questions and new areas of inquiry for SL and collaborative processes that promote sustainable resource management and life, especially in intercultural contexts.

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