THE FUTURE OF PEASANTS: A MULTIDISCIPLINARY REVIEW OF CULTURE, SYSTEMS, AND MOVEMENTS

Marcos Sebastián KARLIN^{A*}

Received: May 22, 2025 | Revised: July 9, 2025 | Accepted: July 14, 2025 Paper No. 25-67/2-758

A* National University of Córdoba, Department of Natural Resources, Argentina

https://orcid.org/000-0002-8642-4677, mkarlin@agro.unc.edu.ar (corresponding author)

Citation: Karlin, M.S. 2025. The Future of Peasants: A Multidisciplinary Review of Culture, Systems, and Movements. *Folia Geographica*, 67(2), 5-26.

Abstract

Globalisation, climate change, and agricultural industrialisation, as part of a broader polycrisis, are increasingly influencing the future of the peasantry. Currently, depeasantisation and rural ageing are realities in most countries. However, these social processes are not linear and, under specific contexts, re-peasantisation also occurs, modifying the peasant culture, systems and movements. This review aims to analyse these three dimensions of the peasant world, reflecting on the possible futures of the peasantry in a globalised world, subject to constant changes and pressures on the rural environment. Understanding peasant culture, systems, and movements provides critical insights into sustainable agriculture, resource sovereignty, and the resilience of rural livelihoods. This study explores how peasants actively forge their futures by looking into how they adopt diverse social reproduction strategies. Traditional narratives of the de-peasantisation process are analysed, identifying pathways to empowerment, resilience, and sustainable livelihoods, to understand the adaptation of peasants' life systems as expressions of a metamodern sensitivity. The future of the peasantry lies in a delicate balance between tradition and innovation. The first plays a crucial role in protecting local knowledge gained through decades of trial and error; the second is essential to cope with the growing climate and economic uncertainties. Peasant systems can become important frameworks for adapting agricultural and pastoralist processes into a present and future fast-changing world. This review provides a multidisciplinary overview of social-environmental impacts on peasant socioecosystems by analysing territorial de-peasantisation, re-peasantisation, and rural ageing, exploring social, ecological, and ethical dimensions of peasant systems. Traditional ecological knowledge, coupled with agroecology and circular economy, may play a crucial role in the future, enhancing food sovereignty, rural sustainability, affecting agrarian change, and improving peasants' systems of life.

Key words

Agroecology, circular economy, globalisation, metamodernism, polycrisis, social reproduction, traditional ecological knowledge



INTRODUCTION

External pressures such as globalisation, climate change, and agricultural industrialisation increasingly determine the future of the peasantry. These forces do not occur in isolation but are conceptualised collectively as a "polycrisis," understood as an intertwined and overlapping system of several crises mutually reinforcing one another (Matlovič and Matlovičová, 2024). Within this polycrisis context, theoretical debates centre around de-peasantisation and rural poverty, framing peasants as victims of the social structure. This study reveals how peasants actively construct their futures by applying diverse social reproduction strategies to maintain part of their culture and defend their life systems.

Such a constructed future, and despite the compounded pressures of the polycrisis, reveals peasants' oscillations between hope and despair, tradition and innovation, into a flexible "structure of feeling" defined as "metamodernism," between the modernist idealism and postmodern scepticism (Matlovič and Matlovičová, 2025).

This manuscript delves into the complex and evolving world of peasants, who are often regarded not only as the primary food producers today but also for the future. Altieri and Nicholls (2020) assert that small farmers, predominantly peasants, control 30% of the arable land globally and produce between 50 and 70% of the food consumed in many countries. This claim is debated in several academic circles (Ricciardi et al., 2018; Lowder et al., 2021; Ritchie, 2021).

As international development agencies warn of the need to double food production in the coming decades, they often recommend a combination of trade liberalisation, investment, and new technologies. However, this approach may increase inequality and migration for rural people. Returning control and resources to peasants and indigenous peoples and enacting agricultural policies to support them (GRAIN, 2014) should be prioritised. Peasants are more than just food producers; they embody complex socio-ecological systems that adapt, resist, and innovate in response to global pressures.

Drawing on the vivid portrayal of peasant life in Selma Lagerlöf's magnum opus, "The Wonderful Adventures of Nils Holgersson Across Sweden," in the chapter "The Old Peasant Woman" (1908), most of the realities and destinies of the peasantry from the twentieth century in Sweden have also manifested in other parts of the world. The cited chapter presents a raw fictional narrative that typifies a social phenomenon in the peasant world, where the countryside is ageing, and young people are seeking more comfortable and easier lives in cities. Migration is leaving niches open for the emergence of new social actors, such as entrepreneurs who see an opportunity for capital investment. This phenomenon is deteriorating the cultural wealth that may have existed in the past; the elderly remain with their knowledge but find no recipients to whom to transmit it.



Currently, de-peasantisation and rural ageing are realities in most countries. However, these social processes are not linear and, under specific contexts, repeasantisation also occurs, modifying the peasant culture, systems and movements. This paper aims to analyse these three dimensions of the peasant world, reflecting on the possible futures of the peasantry in a globalised world, subject to constant changes and pressures on the rural environment. Understanding peasant culture, systems, and movements provides critical insights into sustainable agriculture, resource sovereignty, and the resilience of rural livelihoods.

This review is divided into three sections: 1) Peasant culture, which explores identity shifts and knowledge transmission amid globalisation; 2) Peasant systems, which examines production models, agroecology, and circular economies; and 3) Peasant movements and achievements, which highlights political agency, resistance, and the fight for land rights and territorialisation. Each section delves deeper into the complexities and challenges experienced by peasants and proposes ways to support and empower them in the face of global changes. This analysis examines future challenges and opportunities that peasants may face in an increasingly dynamic and rapidly evolving world.

METHODOLOGICAL NOTE: LITERATURE REVIEW STRATEGY

A targeted, multidisciplinary literature review was carried out to include debates on peasant futures. Bibliographical sources included physical and digital books, international datasets, Google Scholar and SciELO (1997-2025), in English, Spanish, Portuguese, and Swedish. Search strings combined terms such as "Peasantry," "De-peasantisation," "Re-peasantisation," "Integral Ecology," "Cultural Metabolism," "Ethnobiology," "Ecosemiotics," "Traditional Ecological Knowledge," "Polycrisis," and "Metamodernism." Peer-reviewed articles, books, book chapters, and reports were included addressing socio-ecological systems or cultural transformations of rural communities. After a thorough reading of nearly 300 sources, 56 works were selected for this review, including Selma Lagerlöf's 1908 classic. Drawing on the author's field experiences in Argentina, Chile, and Japan, selected case studies help illustrate the global complexity of peasant systems. All these references were structured into three thematic sections (culture, systems, movements) and assessed for conceptual rigour, geographic balance, and theoretical innovation.

PEASANT CULTURE

The world's diverse cultures, understood as subsystems within a global cultural system, interact through cultural exchange. As each subsystem possesses unique information, different from another cultural subsystem with which it exchanges information, the global cultural system remains far from equilibrium, i.e., with low entropy. This means that if a subsystem has "gaps" in information not covered



by external information from another cultural subsystem, its users will activate creative mechanisms to reduce entropy (Gabora, 2016; Fernández Velazco, 2023) and generate information on their own, enriching their cultural heritage and indirectly the global heritage. Part of such cultural enrichment is constructed through the perception of the natural (and ever-changing) context, represented by the Ecosemiosphere (Maran, 2021). In recent decades, globalisation, through the acceleration of access to information (often of poor quality, unsifted), has accelerated cultural exchange flows, weakening and eroding the processes of cultural self-production and semiotisation. In the peasant world, this is reflected in a culture increasingly nourished by external information (e.g., from the "western" culture), weakening their members' perceptive and creative ability.

Cultural exchanges are inevitable and, to some extent, necessary as catalysts for local cultural productions. Each culture has a threshold of cultural filtration below which foreign ideas favour its contents as seeds that foster its productions and above which exogenous cultures may assimilate its members.

The urban world begins to filter into the rural, but the rural also filters into the urban; the boundaries between the "urban" and the "rural" begin to blur (Chen, 2023). This is producing a series of social phenomena that will undoubtedly have repercussions for the future of peasant culture as metamodern tensions:

- (1) Advancement of the residential frontier and development of agrotourism: It is increasingly common for urban workers to reside in the countryside, and tourist flows are destined for rural areas to have contact with "nature" and thus escape from the whirlwind of cities. This leads to the appearance of goods and services that used to be eminently urban, such as electricity, sanitary infrastructure, routes and access roads, internet, supply goods, etc. The introduction of new amenities in rural areas has, in some instances, improved the livelihoods of the local farmers and fostered the growth of rural tourism. On the other hand, more intimate relationships are being established between rural and urban actors, which inevitably leads to hybrid and bourgeois cultures (Kühne 2016).
- (2) Interventionism and consumerism: In recent decades, with the advent of a welfare state and increasingly strong state interventionism in some countries, the level of subsidies has escalated to dramatic levels, destroying the culture of work, and altering power relationships within and outside peasant communities. E.g., Argentina has had intense swings in terms of interventionism; almost all democratically elected governments, "populists" or "liberals," have applied public policies to co-opt voters through subsidies. Also, with modernisation policies in European peasant farming systems, subsidies, consumerism, and technical upgrades have often led to increased cultural entropy by influencing peasant subjectivities (Kovacs, 2019).



- (3) Rural migration and population ageing: The countryside is experiencing demographic changes and ageing due to the migration of young people to large cities. Despite global rural population has experienced growth of 1.4 billion from 1960 to 2022, growth rates in the rural world have decreased to less than +0.1% annually, reducing the percentage of the rural population (relative to the total world population) from 66% to a global average of 43% during the same period. Employment related to agricultural activity declined from 44 to 26% between 1991 and 2022 due to migration (World Bank Group, n.d.). The young population (under 10 years old) in Asia, sub-Saharan Africa, and Latin America has decreased at rates of 9.6, 8.2, and 3.4%, respectively, between 1990 and 2015, while the older population (>65 years in the first two, >55 years in the last) increased by 2.2, 2.7, and 0.5%, respectively during the same period (Heide-Ottosen, 2015). In most Asian countries, for example, the average age of farmers is over 50 years old (Rigg et al., 2019).
- (4) De-ethnicisation and re-ethnicisation: Some peasants may change part of their beliefs and traditions as strategies of social reproduction, adapting to an increasingly globalised society. Cultural filtration into the peasantry occurs not only through demographic restructuring (migration to or from the rural area), consumerism, or interventionism, but also through the appearance of new actors participating in other cults or with different cultures that are beginning to have a significant influence on communities. These communities are often neglected by institutions such as the local states or the Churches representing the official local religion. E.g., in many parts of South America, some peasant communities are turning to evangelicalism as a form of rebellion to gain visibility and power. They want to break free from society's labels and resist being categorised as "cheap labour," "ignorants," or "progress negationists." Most of these new religious movements oppose the school system and the Catholic Church, countering the assimilation process (Segato 2005). This phenomenon of re-identification involves seeking new identities that rejuvenate the power dynamics within a specific community through de-ethnicisation. An opposing phenomenon, yet with similar underlying causes as de-ethnicisation, is re-ethnicisation. The Mapuche case is paradigmatic and has gained significance recently in Chile and Argentina. The Mapuche people are reclaiming their identity in response to land privatisation, cultural appropriation, and political persecution, promoting the emergence of new movements with different degrees of radicalisation (Foerster and Vergara 2000). Despite influences from evangelical and Catholic traditions, the Mapuche religion focuses on respecting ancestors and natural resources. In some European countries, re-ethnicisation, linked to a return to traditional ways of life, promotes the re-peasantisation process, supported by rural development programs and economic incentives that encourage the diversification of peasant activities, such as agrotourism (Granberg et al., 2017).



(5) Bio-piracy: A negative aspect of the urban-rural exchange is the theft of intellectual property related to the ancestral uses of biological organisms and the privatisation of genetics, which affects peasant and aboriginal communities and can be seen as a new form of colonialism. The collection of germplasm from natural and rural environments (sometimes germplasm improved by farmers over centuries) for breeding programs or biotechnological purposes is often justified by arguing that this germplasm constitutes a common natural heritage that any human being can utilise. The resulting improved crops or the extraction and purification of biochemical compounds are often subsequently claimed as private property for commercialisation, without corresponding compensation to the indigenous or rural communities from which the genetic materials or botanical knowledge originated. A notable instance of biopiracy occurred in 2010 when Nestlé tried to patent the use of two South African species (Natural Justice-Berne Declaration, 2010): rooibos (Aspalathus linearis) and honeybush (Cyclopia spp.). These plants had been traditionally used by the Khoekhoe and San peoples and cultivated by local farmers for different industrial and food purposes. In 2019, the dispute was resolved with an agreement requiring Nestlé to pay royalties to these tribes. However, the payments were allegedly delayed due to bureaucratic obstacles related to COVID-19 (Jansen and Sutherland, 2022). This phenomenon is likely to worsen over time, plundering genetic resources from indigenous peoples and peasant communities, depriving them of the right and the possibility of making use of these resources.

The phenomenon of de-peasantisation will persist as long as economic, social or cultural incentives are not provided, and investment in public services in rural sectors remains lacking. Governments should aim to promote acceptable living standards in rural areas to prevent migration to large cities and reduce the marginal urban population. This can only be achieved through locally adapted socio-cultural diagnoses, providing high-quality formal and informal education (Camacho et al., 2016), creating more opportunities for peasants, revaluing agricultural and pastoralism activity, and promoting the sustainable use of local resources, including political citizenship education (Cunha de Araujo, 2020), while avoiding political indoctrination (Edelman, 2022). Children, in particular, should be a special educational focus, carefully selecting the learning contents that will be taught, since they can pass part of this education to their families. In this way, why not envision a rural society with an improved quality of life, preserving traditional knowledge, re-adapted to the context of the place and time?

Another key aspect is the promotion of fair trade of local products and services, along with the recognition of natural heritage and the development of local traditional knowledge. As a complementary activity to local agricultural production



and associated with specific natural resource uses, agrotourism can have a significant economic and socio-cultural impact on peasant communities (Gascón, 2023). This can be the engine by which peasants revalue their natural resources, a revaluation that can be replicated with the help of eco-responsible tourists. If farmers can provide high-quality artisanal products and services while respecting ethical principles such as land conservation, diversification, safety, and minimal ecological impact, customers may be willing to pay their actual value. However, if the production processes are not traceable or sustained over time, in addition to being self-sustaining, artisan work and agrotourism will fail. Development programs should aim at this last point, applying them pragmatically and avoiding useless romanticisms such as forcing communitarianism. The latter may naturally occur on demand from the program's recipients. Within the programs, collectivism and associativism are concepts that should be distinguished. Collectivism may result in a higher level of organisation, while associativism refers to synergies between associates, benefiting them while maintaining individual freedom and responsibility. Both strategies could enable members to empower themselves in the face of global contexts and pressures from the prevailing capitalist system, enforcing self-governance, territorial defence, rehabilitation and conservation of their natural endowments, and life quality (Barkin, 2022). Additionally, programs must be applied with an explicit expiration date, promoting self-financing mechanisms and avoiding the dependence on subsidies that occurs nowadays. The peasant or the community must be fully informed of the conditions of the projects, being aware not only of their rights but also of their obligations. It must be instilled (not only in the peasant but also in the technician and the politician) that programs and projects are tools for development, not gifts that come from the "pot at the end of the rainbow."

The phenomena of de-ethnicisation and re-ethnicization could, in the future, become peasant strategies that would contribute, to some extent, to reducing the rates of de-peasantisation. By adapting or reclaiming their identities, peasants may find new ways to sustain their communities and livelihoods. However, this will inevitably involve significant changes at the cultural level and in ethical values, affecting the production of traditional peasant knowledge, its transmission, and therefore the structure and functioning of the peasant systems as we know them and as we will see in the next section.

Most of these tensions result in a metamodern sensibility where peasants oscillate between traditional ties and the encounter of new cultures and knowledge (Matlovič and Matlovičová, 2025), adapting their systems of life into the polycrisis context.



PEASANT SYSTEMS

Industrialisation and the Green Revolution have profoundly impacted peasant systems. The introduction of technological packages, alternative inputs, and new production methods has significantly altered the application of traditional knowledge in peasant productive systems (Ludwig and Poliseli, 2018). Genetic pollution from genetically modified organisms has changed the diversity of plant species populations, which peasant and indigenous communities have used for centuries (Quist and Chapela, 2001). These shifts have led to heavy dependence on purchased inputs and unequal legal disputes over the right to reseed and sell seeds of species with patented genes.

As is often the case in the "westernised" working world, peasant activities have tended to specialise in one or two farm activities, leading to the erosion of traditional knowledge passed down through generations. Nowadays, diversified peasant systems are more of an exception than the norm, relying heavily on the system's biodiversity and the availability of productive capital (Karlin et al., 2014). This loss of diversification, a crucial value for peasant social reproduction (Scoones, 2021), also translates into a loss of traditional ecological knowledge. These aspects will inevitably lead to several phenomena: 1) overexploitation of specific resources (and therefore, deregulation of the agroecosystem); 2) weakening of exchange flows between peasants due to lack of supply of inputs and exchange products, and 3) exclusive dependence on consumer demand for one or few specific products, tying families to economic ups and downs and the possibility of placing their products on the market. The latter will be aggravated when peasants rely on intermediaries who impose their commercial conditions (Soper, 2016).

Both input dependence and specialisation may lead to deteriorated, ecologically and economically unsustainable peasant systems, which will inevitably tend to disappear or be assimilated into industrial-oriented mega-production systems.

Fortunately, this dark horizon could be replaced by an alternative reality, but it implies strong commitments from local, national, regional, and global policies of both an economic and educational nature. Nevertheless, it also means commitment and responsibility at the individual and community level, both from the peasant and technical sectors. This alternative is based on three fundamental concepts that, fortunately, are being reconsidered in the academic world. These are traditional ecological knowledge (TEK), agroecology, and circular economy. The first (TEK) is a set of knowledge developed by native people about their own natural environment (Whyte, 2013), which is the subject of study of anthropological, historical, and agricultural sciences. The second, agroecology, is a scientific discipline that bases most of its corpus on peasant and indigenous productive systems, and which was developed as an alternative to industrial agricultural production (Soper, 2020; van der Ploeg, 2021). The last, the circular economy, is a production and consumption model that seeks to reduce waste to the maximum



possible extent, recycle and reuse inputs for new chained productive cycles, and recover products, by-products, or energy for their use in the productive cycle (the "4R strategies"). The circular economy is a method originally thought to be applied within the framework of industrial production and pursues three basic objectives, which are 1) designing pollution and waste control systems, 2) keeping products and materials in permanent use, and 3) regenerating natural systems (Liaros, 2021).

The combination of these three bodies of knowledge may be redundant since each one relates to or incorporates part of the foundations of the others (Fig. 1). Thus, for example, agroecology takes advantage of TEK; the circular economy is applied to some extent by agroecology. Analysed in systemic terms, it could be said that agroecology is a subsystem resulting from the combination of scientific and traditional ecological knowledge, in addition to scientific-technical and socioeconomic knowledge; in turn, the circular economy represents a subsystem of agroecology, being the result of scientific-ecological, technical, and socioeconomic knowledge. On the other hand, both scientific and traditional ecological knowledge "dialogue" through the Cultural Metabolism (Senkowski, 2006) and Integral Ecology (Esbjörn-Hargens and Zimmerman, 2009) scopes as a metamodern synthesis.

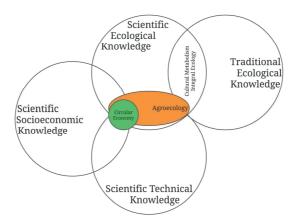


Fig. 1 Diagram of the relation between knowledge systems, agroecology and circular economy.

Source: Own elaboration. Created in Lucidchart (lucid.co)

Both agroecology and the circular economy are production alternatives that arise as a consequence of the socio-environmental polycrisis context resulting from the 20th and 21st centuries, in which natural resources reached critical levels of extraction, the cost of energy is high, and the climatic context is unstable for maintaining current industrial agricultural production systems (Marchetti et al., 2020).



Agroecological production plays a fundamental role in food production, not only in sustained quantity over time but also (and perhaps even more importantly) in the amount of nutrients (proteins, minerals) produced for quality nutrition. A study conducted in Ethiopia (Wood et al., 2018) proves that peasant agroecological practices aimed at conserving soil organic matter (both particulate and associated with the mineral fraction) are related to higher-yielding wheat crops, increased protein content, and higher levels of zinc and iron. A 1% increase in soil organic carbon content can provide 20% more zinc and 10% more protein to consumers who consume this wheat, relative to their nutritional requirements.

Therefore, a healthy production system is essential for producing nutritious food. Agroecology appears to be the right path, as it produces food in environmentally respectful settings, maintaining feedback loops that regulate ecological systems and promoting food sovereignty.

Healthy productive systems can sustain multiple productions in parallel and transversely, increasing biological and genetic diversity, and easing the flows and cycles of matter and energy. Through healthy systems, it is possible not only to increase the quantity of agricultural products but also the quality, covering basic needs, and combating hunger and malnutrition of its users and the recipients of these products.

Peasant systems can be constituted as spaces where quality agricultural products can be obtained, supplying various ecosystem services, especially in complex contexts. Pandemics, climate change, and economic crises make us reflect on the importance of these peasant systems:

- (1) These systems allow peasant families containment and social reproduction, providing them access to fundamental products and services for their lives, economic income, and bonding spaces. The pandemic has taught us that isolation makes societies more vulnerable to the lack of inputs, consumer products, and basic services, which are suspended or reduced due to decreased activity. In this sense, peasant systems can ensure self-sufficiency and food sovereignty, cushioning the effects of future isolation situations for their families (Altieri and Nicholls, 2020).
- (2) Diversified peasant systems can be a source of a wide variety of products, providing greater flexibility in the face of economic and environmental fluctuations (Kremen et al., 2012). Smaller and more diversified productive systems could be an alternative supply (especially local) of agricultural products against oligopolies. However, this potential role will depend on the possibility of concentrating products in supply centres to form profitable tradable volumes, reducing the influence of price-forming intermediaries, and increasing the scale of the peasant-consumer exchange networks. In this sense, the creation and promotion of cooperatives and free fairs must be state policies.



(3) Well-managed peasant systems have the potential to face climate change and irrational state policies. Many peasants' socio-ecological systems have persisted today from immemorial times precisely because they have managed to survive the junctures of different eras and spaces (Karlin, 2024), e.g. the chinampas system in Mexico (Jiménez et al., 2020). From these systems, it is possible to learn about the functioning of biogeochemical cycles, the management of coupled ecological spaces, the benefits of high biodiversity, the ways of managing and controlling water and soil, and the resilience of socioeconomic subsystems. Understanding these aspects, with the help of scientific knowledge, could contribute to creating new classes of systems, adapting to new contexts, and fighting rural poverty. However, it is critical to keep peasants as managers of their systems since they are the ones who will keep traditions alive and drive the necessary innovations. The maintenance of traditional agricultural landscapes without peasants will shape spaces more like "museums" than productive systems, as is the case with many productive systems in Japan (e.g. some Satoyama systems) and several European countries (e.g. Inmark/Utmark systems in Sweden) (Berglund et al., 2014).

Regarding the above, some key aspects may be considered when designing (or re-designing) peasant productive systems, depending on each situation's technical, economic, and cultural possibilities (Tab. 1).

Tab. 1 Key aspects to consider when designing or re-designing peasant productive systems

KEY ASPECT	MEANS FOR ACHIEVEMENT
Increased bits of knowledge per area unit	Enhancing biodiversity and productive diversity Promoting peasant permanence in rural areas Facilitating peasant-to-peasant and technician-to- peasant information exchange flows
Greater biodiversity and biological redundancy	Designing systems with multiple vegetation strata Coupling spatial diversity Implementing stepped production Exchanging germplasm and animal genetics (ensuring adequate phytosanitary and veterinary conditions) Controlling invasive alien species
Soil fertility, biodiversity, plant and animal health maintenance or improvement	Designing crop and grazing rotation systems Identifying fallow areas and closures (if necessary) Designing multiple-use systems for nutrient recycling, increased water efficiency, light availability, and promotion of beneficial biological organisms Facilitating genetic exchange under proper sanitary conditions



KEY ASPECT	MEANS FOR ACHIEVEMENT
Efficient matter and energy flows; inflows reduction	Designing coupled productive subsystems Recycling and producing bio-inputs from multiple subsystems Designing self-sufficient productive subsystems that are interconnected yet maintain autonomy, efficiently integrated with input, product, and information exchange networks Implementing efficient water management for irrigation and livestock watering
Grazing potential optimisation	Designing grazing subsystems with adequate stocking rates, adjusting frequency, intensity, and duration depending on grassland recovery potential
Sustainable use of hunting- gathering resources	Designing hunting-gathering subsystems that respect biological cycles and species phenology
Higher resilience and stability	Identifying ecologically and productively homogeneous areas Allocating areas for restoration, rehabilitation, and remediation Developing monitoring systems with multi-scaled indicators
Innovation niches and capacity building	Designing areas for experimentation, demonstrative learning, and peasant-to-peasant information exchange Creating germplasm multiplication and conservation spaces Setting up facilities for processing production inputs Establishing spaces for value-added product creation
Safe, healthy, and sustainable production spaces	Designing basin protection spaces and applying erosion/runoff control techniques Designing domestic and peri-domestic spaces shielded from environmental threats and potential disease sources Reducing or suppressing synthetic phytosanitary products Implementing efficient sanitary management, including proper vaccination schedules, the use of natural medicines, optimal livestock nutrition, and reduced livestock overcrowding Designing, constructing, and managing innocuous water sources

For peasant systems to achieve the key aspects mentioned in Tab. 1, it is a fundamental requirement to manage complex, biodiverse, and healthy systems that likewise allow the peasant family to link in fair commercial and exchange



circuits. All this can happen within an increasingly complicated, complex, and dizzying global context. This management must be addressed at different scales: plot, farm, basin, and territory. Therein lies the challenge for all actors involved in the peasant world.

Beyond production, peasants mobilise for political agency, land rights, and policy advocacy. Understanding their movements is key to analysing their resilience and long-term survival.

PEASANT MOVEMENTS AND ACHIEVEMENTS

Socio-historical contexts have always positioned the peasant in situations of vulnerability, conditioning their capacity for opinion and decision-making within frameworks of unequal power relations. History shows how peasant masses have managed to empower themselves, relatively and eventually, after deep institutional crises that have affected their capacity for social reproduction, threatening to alter their position in the social field. This relativisation of peasant empowerment rests on the fact that mobilisations, peasant revolts, and agrarian reforms have almost always been catalysed by leaders from outside their social class (Karlin, 2024). Something similar occurs today, where large peasant movements often arise thanks to characters from different social spheres, who have acquired high degrees of empowerment that make them leaders, sometimes positive, sometimes negative. Peasants, generally of a peaceful nature, have been and are used as instruments to forge ideologies that are usually alien to them; for example, the MST (Movimento dos trabalhadores rurais Sem Terra) arose from the Peasant Leagues (Ligas Camponesas), promoted by the Brazilian Communist Party, with pro-Marxist-Leninist ideology (McGeoch, 2018). Historically, this ideology has been forced into the peasant sphere, even though its theoretical developments were created for industrial proletarians. Likewise, the MST was one of the founding members of Via Campesina, a global reference for the peasant movement, so the ideological germ of this movement comes from these left-wing thoughts.

Without criticising these movements or their ideology, it must be recognised that they have managed to amalgamate the interests of this sector to protect their basic rights, while adapting some aspects of their original ideology. An example is the recognition of the rights of gender minorities in a hostile environment to their cause, such as the rural one. They have also constituted containment spaces against pressure and violence (both physical and symbolic), empowering the peasant in the process of fighting for their rights to land, the use of resources, and food and productive sovereignty.

An important aspect that makes peasant movements strong is how they put into practice the group's ideology in the political struggles of their territories. The ideological identification allows for public opinion to show the position of the



peasant movements, which evidences the forms of relationship with political power, on the one hand, and the modes of action, on the other. Likewise, the ideological assimilation of the peasants who choose to belong to a particular movement will be more or less profound depending on the individual conveniences of each peasant in a specific socio-political context. As an example drawn from personal ethnographic work, it is worth mentioning the comment of a livestock producer from the north-central part of Argentina; when told that the peasant movement to which he belonged claimed that "all" the livestock producers of the territory were transhumant and made use of the lands in a community way, he replied: "A lot of bullshit is spoken. They are describing something that is not." The pigeonholing of the peasant under certain "traditional" forms of production and in the community use of resources, seeks to defend him from exogenous interests, as a strategy of defence of the territory, resorting to "romantic" figures that position him as an actor who defends traditions and cares about the environment (McMichael, 2008). This empowers the peasant differently in the face of the decision-makers' gaze. Peasants tolerate these strategies because they understand the specific weight that they can have in the defence of their lands and ways of life; however, to the extent that the pigeonholing persists and no longer has its utility, it can lead to essential changes in the social structure that they make up. Some peasants, even though they may never have made use of resources in a community way, may be left with the idea (derived from an ideology that may be imposed from outside) that the land or some resource, was, is and will be of community use, even though it has never been so (Fontana, 2014). The use of resources without implicit or explicit agreements between parties can ultimately motivate severe internal disputes and end up fragmenting communities. Based on personal field observations, conflicts have often led to divisions of grazing fields without defined limits, altering the ancestral dynamics of the productive system (Karlin, 2024).

The present indicates that the future of peasants will become increasingly complex regarding social conflicts over land and resources within a polycrisis context. While they currently have a broad legal corpus to rely on, the gap between legislation and its practical application remains significant in many developing countries. Enforcement of specific laws is often inconsistent, frequently favouring those with greater lobbying power. These inequalities are expected to be addressed through public pressure, but, above all, by the growing, diverse, and ever-present peasant movements advocating for change. Peasant movements bear the responsibility of defining the technical and socio-cultural aspects of rural life for those tasked with defending their interests, particularly the executive, legislative, and judicial branches of each State. Policies, programs, and projects accessible to peasants should be formulated more effectively, ensuring that ideologies do not merely "mimic" the proper functioning of peasant life systems. This approach would reduce the risk of cultural disarticulation. However, these



policies will still be insufficient if the needed agrarian reforms are not carried out with the full participation of the bases and under a framework of disinterested political and technical support (Borras Jr., 2007). If agrarian reforms are built "top-down," without adequate agreements, they will not achieve an actual social and economic impact on peasant communities, as history has shown in most countries.

The future is not very promising in terms of the environment and climate. The pressure for natural resources is increasing, and productive systems are subject to greater climatic uncertainties that can end up decoupling current peasant practices. Here, peasant movements will have to fulfil a double role: 1) alert decision-makers about the maladaptation of certain practices and development policies; 2) develop participatory localised diagnoses and apply, accordingly, productive and management alternatives that adapt to the new conditions. The strategies that peasants apply are usually developed through trial-and-error practices (Bernal et al., 2023). However, these practices could become catastrophic in current times of higher climatic volatility since the correction times could significantly exceed the environmental alteration times. Therefore, adapting practices that merge sustained production with conservation could arrive too late. Exogenous technical assistance will then be increasingly necessary to collaborate in these adaptations. Here, great care must be taken, as the protagonism of the peasants must continue to be principal to avoid forcing practices that ultimately do not prove effective.

Peasant movements are already warning about this decoupling between practices, resource availability and climate change. Via Campesina, for example, has expressed itself about the negative impacts of continuing with an industrial agricultural model and advocates for a strategy to combat climate change from the discourse of food sovereignty and the application of agroecological practices, as flags that can help to achieve climate justice (La Vía Campesina, 2018). They also denounce the false solutions of the green economy, where technological patches are included, which only seek to continue promoting the current financial system, the establishment and a deepening of inequalities between the rich and the poor. One of the fallacies of this green economy is constituted by the REDD mechanisms or other programs for the reduction and replacement of gas emissions, through which ecosystem functions are monetised and commercialised (GRAIN, 2015). In this way, companies from developed countries can sustain their production levels and, consequently, rich countries increase their consumption levels and their carbon footprints. In contrast, indigenous peoples and peasants are conditioned by their traditional practices, especially on the governance of their energy resources and domestic practices, tying peasant economies to market rules and, to some extent, fostering dependence on inputs that can only be obtained outside of peasant systems.



The impacts of globalisation will be increasingly intense, forcing peasants to either remain under the umbrella of their own rules or to fall out of the system and remain marginalised from global society.

CHALLENGES AND OPPORTUNITIES FOR THE PEASANTRY

Some parallels can be drawn between the current situations of peasantry across different regions worldwide, which may offer insights into their future trajectories. As shown in this review, similarities can be identified for peasants in Latin America, Asia, Africa, and Europe. As previously noted, in Latin America and Africa, but also southern Asia, land grabbing and biopiracy might become major problems in the future due to the struggle for natural resources against economic powers. Resistance may depend on how well policies, especially agrarian reforms, defend local peasant interests, and on the empowerment of local movements. Resistance through promoting agroecology, as Wood et al. (2018) suggest, might be a vital strategy to secure resources and food sovereignty in the Global South. Rural migration and ageing are widespread challenges among peasants worldwide, particularly in countries such as Europe, Japan, Australia, the US, and even in rapidly industrialising Southeast Asia nations (Rigg et al., 2019). This issue is transforming rural landscapes into museum-like spaces, such as Satoyama in Japan or the Inmark/Utmark systems in Sweden (Berglund et al., 2014). Rural/ urban hybridisation (Kühne, 2016) is also a common phenomenon globally. However, linked to the ageing discussed earlier, this hybridisation is relatively recent in the Global South and is accelerating cultural exchange between the two "worlds." It also presents new opportunities for diversification among peasants through agrotourism (Granberg et al., 2017; Gascón, 2023). Rural modernisation, dependency on subsidies and inputs (Kovacs, 2019), production specialisation, land grabbing, rural migration and acculturation are some of the causes of deethnicisation, a phenomenon occurring worldwide, but mostly accelerated in industrialised countries (e.g., in the Japanese Satoyama systems or rural Europe). In contrast, re-ethnicisation is becoming a relatively new social trend, where people re-link with family identities and with the land traditions, as illustrated previously with the Mapuche case (Foerster and Vergara, 2000) and the European incentives' case (Granberg et al., 2017). These parallels suggest that metamodern shifts are occurring in peasant systems worldwide, oscillating between tradition and innovation, driven by polycrisis pressures.

It is a fact that the future of peasants will still be shaped by economic, political, and environmental forces that will increasingly affect their ways of life. Globalisation, climate change, and industrial agriculture have significantly contributed to the erosion of peasant culture (McMichael, 1997) and the dismantling of their socio-ecological systems (Rotz and Fraser, 2015), contributing to migration, de-peasantisation, and acculturation as symptoms of the polycrisis.



Such phenomena often lead to dismantling peasant systems, tending to insert peasants into a market logic that usually affects cultural heritage and ecological balance. Despite such effects, the peasantry remains a key actor in global food production, supplying millions of consumers and making a great effort to sustain traditional ecological knowledge that promotes biodiversity, environmental and social resilience, and sustainable farming practices.

Peasants seek to empower themselves by participating in peasant movements, fighting against the pressures of the dominant agricultural paradigms that favour corporate interests at the expense of local or indigenous farmers and herders. By recognising agroecology, food sovereignty, local exchange flows, and environmental and cultural diversity, these movements can build niches where peasants can reclaim or defend their lands and knowledge, and pass them to new generations, assuring their future as a social class. Therefore, peasant systems often turn out to be more resilient, environmentally and economically better adapted, autonomous, and even more productive (Altieri et al., 2012; Santiago-Vera et al., 2021).

However, for these movements to be effective in helping to shape the future of peasants, their representatives should try to avoid imposing ideological agendas, giving them freedom of action serving only as technical and legal support, and carefully discussing the strategies that may assure their social reproduction without affecting their capacity for innovation and own desires. In this regard, movements might synthesise idealism with pragmatism, romanticism with realism, echoing the sensibility of the metamodernist approach.

Agrarian reforms and local or territorial development policies should be constructed, if possible, "bottom-up," applying participatory tools promoting peasants' perceptions of the context according to their needs (Esteva, 2010). History shows that policies built without caring for the peasants' desires and without considering proper contextual realities tend to fail, often severely affecting their ways of life and redefining peasant systems greatly dependent on external inputs.

Agroecology, biodiversity improvement, soil regeneration and circular economies will become consistently important as a metamodern synthesis, while polycrisis exacerbates with time. If such practices can be applied considering local context, they may contribute to food sovereignty and economic independence, helping to mitigate such uncertainties. Also, they might contribute to maintaining and enriching traditional ecological knowledge, but only if new generations agree to remain in the territory and be knowledge recipients. New scientific-technical knowledge can boost such knowledge if it is properly situated within local contexts. In contrast, applying "market-driven" mechanisms, such as REDD+ or biopiracy, could contribute to the peasants' marginalisation and disempowerment.

The future of the peasantry lies in a delicate balance between tradition and innovation. The first plays a crucial role in protecting local knowledge gained



through decades of trial and error; the second is essential to cope with the growing climate and economic uncertainties. Governments, civil society, technicians and peasant movements should promote an adequate fusion and adaptation of these two knowledge dimensions. For this, several disciplines are adapting their theoretical basis for its application into real peasant systems, through better-suited integral diagnoses, technological adaptation, and technical appropriation. Some of these disciplines are Ethnobiology, Ecosemiotics, and Integral Ecology (Karlin, 2016), which can help study and understand peasant systems under rapidly changing climatic and economic contexts.

Society should understand that the peasantry is not a relic from the past. Peasant systems can become important frameworks for adapting agricultural and pastoralist processes into a present and future fast-changing world.

REFERENCES

- ALTIERI, M.A., FUNES-MONZOTE, F.R., PETERSEN, P. (2012). Agroecologically efficient agricultural systems for smallholder farmers: contributions to food sovereignty. *Agronomy for Sustainable Development, 32* (1), 1-13. https://doi.org/10.1007/s13593-011-0065-6.
- ALTIERI, M.A., NICHOLLS, C.I. (2020). Agroecology and the emergence of post COVID-19 agriculture. *Agriculture and Human Values, 37*, 525-526. https://doi.org/10.1007/s10460-020-10043-7.
- BARKIN, D. (2022). Shaping a communitarian ethos in an era of ecological crisis. *Frontiers in Sustainability, 3*, 944252. https://doi.org/10.3389/frsus.2022.944252.
- BERNAL, D., GIRALDO, O.F., ROSSET, P.M., LÓPEZ-CORONA, O., PEREZ-CASSARINO, J. (2023). Campesino a Campesino (peasant to peasant) processes versus conventional extension: a comparative model to examine agroecological scaling. *Agroecology and Sustainable Food Systems, 47*(4), 520-547. https://doi.org/10.10 80/21683565.2023.2164882.
- BERGLUND, B.E., KITAGAWA, J., LAGERÅS, P., NAKAMURA K., SASAKI, N., YOSHINORI, Y. (2014). Traditional farming landscapes for sustainable living in Scandinavia and Japan: Global revival through the Satoyama Initiative. *Ambio, 43*, 559-578. https://doi.org/10.1007/s13280-014-0499-6.
- BORRAS JR., S. (2007). *Pro-poor land reform: a critique*. Ottawa: University of Ottawa Press.
- CAMACHO, R.S., SOBREIRO FILHO, J., SOBREIRO, V.A., MARIANO, E.B. (2016). Evaluation of the relationship between education and sustainability in peasant movements: the experience of the national education program in agrarian reform. *Evaluation and Program Planning*, *54*, 152-161. https://doi.org/10.1016/j. evalprogplan.2015.07.009.



- CHEN, N. (2023). Geographical articulations of rurality at the rural-ur ban interface. *Geography Compass, 17*(9), e12721. https://doi.org/10.1111/gec3.12721.
- CUNHA DE ARAUJO, G. (2020). Education and lifelong learning for young and adult peasants. *European Journal of Training and Development*, 45(6/7), 512-525. https://doi.org/10.1108/EJTD-02-2020-0038.
- EDELMAN, M. (2022). From 'populist moment' to authoritarian era: challenges, dangers, possibilities. In Scoones, I., Edelman, M., Borras Jr., M., Forero, L.F., Hall, R., Wolford, W., White, B. (eds.). *Authoritarian populism and the rural world*. London, UK: Routledge, 465-491.
- ESBJÖRN-HARGENS, S., ZIMMERMAN, M. E. (2009). *Integral ecology: Uniting multiple perspectives on the natural world*. Boulder: Shambhala Publications.
- ESTEVA, G. (2010). From the bottom-up: new institutional arrangements in Latin America. *Development*, *53*(1), 64-69. https://doi.org/10.1057/dev.2009.80.
- FERNÁNDEZ VELASCO, P. (2023). Entropy, prediction and the cultural ecosystem of human cognition: A challenge to the union of distributed cognition and predictive processing. *Synthese*, 201(3), 94. https://doi.org/10.1007/s11229-023-04089-3.
- FOERSTER, R.G., VERGARA, J.I. (2000). Los mapuches y la lucha por el reconocimiento en la sociedad chilena. In *XII Congreso Internacional. Derecho consuetudinario y pluralismo legal: desafíos en el tercer milenio*. Chillán, Chile: Centro de Estudios Miguel Enriquez, 191-206.
- FONTANA, L.B. (2014). Indigenous peoples vs. peasant unions: land conflicts and rural movements in plurinational Bolivia. *The Journal of Peasant Studies, 41*(3), 297-319. https://doi.org/10.1080/03066150.2014.906404.
- GABORA, L. (2016). A possible role for entropy in creative cognition. In *Proceedings* of the 3rd International Electronic Conference on Entropy and its Applications, Sciforum Electronic Conference Series, 3: E001. https://doi.org/10.3390/ecea-3-E001.
- GASCÓN, J. (2023). Understanding agritourism: a Chayanovian analysis. *Annals of Tourism Research*, *103*: 103674. https://doi.org/10.1016/j.annals.2023.103674.
- GRAIN. (2014). Hungry for land: Small farmers feed the world with less than a quarter of all farmland. Barcelona: GRAIN.org.
- GRAIN. (2015). Los proyectos REDD+ y cómo debilitan a la agricultura campesina y a las soluciones reales para enfrentar el cambio climático. Barcelona: GRAIN.org.
- GRANBERG, L., KOVÁCH, I., TOVEY, H. (2017). *Europe's Green Ring*. New York: Taylor & Francis.
- HEIDE-OTTOSEN, S. (2015). *The ageing of rural populations: evidence on older farmers in low and middle-income countries*. London: HelpAge International.
- JANSEN, L., SUTHERLAND, R. (2022). The Khoikhoi community's biocultural rights journey with Rooibos. In Girard, F., Hall, I., Frison, C. (Eds.) *Biocultural rights, indigenous peoples and local communities*. London: Routledge, pp. 221-240.



- JIMÉNEZ, M., PÉREZ-BELMONT, P., SCHEWENIUS, M., LERNER, A.M, MAZARI-HIRIART, M. (2020). Assessing the historical adaptive cycles of an urban social-ecological system and its potential future resilience: the case of Xochimilco, Mexico City. Regional Environmental Change, 20, 1-14. https://doi.org/10.1007/s10113-020-01587-9.
- KARLIN, M.S., RUIZ POSSE, E., CONTRERAS, A.M., COIRINI, R.O. (2014). Diversificación económica y diversidad ecológica en sistemas de uso múltiple de Salinas Grandes, Catamarca (Argentina). *Multequina*, 23(1): 5-15. http://www.scielo.org.ar/pdf/multeq/v23n1/v23n1a01.pdf.
- KARLIN, M.S. (2016). Ethnoecology, ecosemiosis and integral ecology in Salinas Grandes (Argentina). *Etnobiología*, *14*(1), 23-38. https://revistaetnobiologia.mx/index.php/etno/article/view/150/149.
- KARLIN, M.S. (2024). Campesinos. Córdoba, Argentina: Ecoval Ediciones.
- KOVACS, E.K. (2019). Seeing subsidies like a farmer: emerging subsidy cultures in Hungary. *The Journal of Peasant Studies, 48*(2), 387-410. https://doi.org/10.1080/03066150.2019.1657842.
- KREMEN, C., ILES, A., BACON, C. (2012). Diversified farming systems: an agroecological, systems-based alternative to modern industrial agriculture. *Ecology and Society, 17*(4), 44. https://www.jstor.org/stable/26269193.
- KÜHNE, O. (2016). Urban/rural hybrids: The urbanisation of former suburbs (URFSURBS). *Quaestiones Geographicae*, *35*(4), 23-34. https://doi.org/10.1515/guageo-2016-0032.
- LA VÍA CAMPESINA. (2018). *La Via Campesina in action for climate justice*. Berlin: Henrich Böll Stiftung Volume 44.6. Publication Series Ecology.
- LAGERLÖF, S. (1908). *Nils Holgerssons underbara resa genom Sverige*. Stockholm: Albert Boniers Förlag.
- LIAROS, S. (2021). Circular food futures: what will they look like? *Circular Economy and Sustainability*, *1*(4), 1193-1206. https://doi.org/10.1007/s43615-021-00082-5.
- LOWDER, S., SÁNCHEZ, M., BERTINI, R. (2021). Which farms feed the world and has farmland become more concentrated? *World Development, 142,* 105455. https://doi.org/10.1016/j.worlddev.2021.105455.
- LUDWIG, D., POLISELI, L. (2018). Relating traditional and academic ecological knowledge: mechanistic and holistic epistemologies across cultures. *Biology & Philosophy*, *33*, 1-19. https://doi.org/10.1007/s10539-018-9655-x.
- MARAN, T. (2021). The ecosemiosphere is a grounded semiosphere. A Lotmanian conceptualization of cultural-ecological systems. *Biosemiotics*, *14*(2), 519-530. https://doi.org/10.1007/s12304-021-09428-w.
- MARCHETTI, L., CATTIVELLI, V., COCOZZA, C., SALBITANO, F., MARCHETTI, M. (2020). Beyond sustainability in food systems: Perspectives from agroecology and social innovation. *Sustainability*, *12*(18), 7524. https://doi.org/10.3390/su12187524.



- MATLOVIČ, R., MATLOVIČOVÁ, K. (2024). Polycrisis in the Anthropocene as a key research agenda for geography: ontological delineation and the shift to a postdisciplinary approach. *Folia Geographica*, *66*(1), 5-33. https://www.foliageographica.sk/unipo/journals/2024-66-1/700/.
- MATLOVIČ, R., MATLOVIČOVÁ, K. (2025). The metamodern shift in geographical thought: Oscillatory ontology and epistemology, post-disciplinary and post-paradigmatic perspectives. *Folia Geographica*, *67*(1), 22-69. https://www.foliageographica.sk/unipo/journals/2025-67-1/737/.
- MCGEOCH, G.G. (2018). Marxismo, mística e o MST: qual é o segredo do MST na luta pela reforma agrária no Brasil? *Debates do NER, 1*(33), 174-196. https://doi.org/10.22456/1982-8136.88044.
- MCMICHAEL, P. (1997). Rethinking globalization: the agrarian question revisited. *Review of International Political Economy, 4*(4), 30-662. https://doi.org/10.1080/09672299708565786.
- MCMICHAEL, P. (2008). Peasants make their own history, but not just as they please... *Journal of Agrarian Change*, 8(2-3), 205-228. https://doi.org/10.1111/j.1471-0366.2008.00168.x.
- NATURAL JUSTICE, BERNE DECLARATION. (2010). Dirty Business for Clean Skin: Nestlé's Rooibos Robbery in South Africa. Briefing paper. Retrieved from: https://www.cbd.int/abs/side-events/resumed-abs-9/id2114-berne-policybrief.pdf. Accessed 23 February 2024.
- QUIST, D., CHAPELA, I. (2001). Transgenic DNA introgressed into traditional maize landraces in Oaxaca, Mexico. *Nature*, 414 (6863), 541-543. https://doi.org/10.1038/35107068.
- RICCIARDI, V., RAMANKUTTY, N., MEHRABI, Z., JARVIS, L., CHOOKOLINGO, B. (2018). How much of the world's food do smallholders produce? *Global Food Security, 17*, 64-72. https://doi.org/10.1016/j.qfs.2018.05.002.
- RIGG, J., PHONGSIRI, M., PROMPHAKPING, B., SALAMANCA, A., SRIPUN, M. (2019). Who will tend the farm? Interrogating the ageing Asian farmer. *The Journal of Peasant Studies*, *47*(2), 306-325. https://doi.org/10.1080/03066150.2019.1572605.
- RITCHIE, H. (2021). *Smallholders produce one-third of the world's food, less than half of what many headlines claim*. Oxford: Our World in Data. https://ourworldindata.org/smallholder-food-production. Accessed 4 April 2025.
- ROTZ, S., FRASER, E.D. (2015). Resilience and the industrial food system: analyzing the impacts of agricultural industrialization on food system vulnerability. *Journal of Environmental Studies and Sciences*, *5*, 459-473. https://doi.org/10.1007/s13412-015-0277-1.
- SANTIAGO-VERA, T., ROSSET, P.M., SALDIVAR, A., FERGUSON, B.G., MÉNDEZ, V.E. (2021). Re-conceptualizing and decolonizing resilience from a peasant perspective. *Agroecology and Sustainable Food Systems*, *45*(10), 1422-1440. https://doi.org/10.1080/21683565.2021.1952362.



- SCOONES, I. (2021). Pastoralists and peasants: perspectives on agrarian change. *The Journal of Peasant Studies*, 48(1), 1-47. https://doi.org/10.1080/03066150.2020.1 802249.
- SEGATO, R. (2005). Cambio religioso y desetnificación: la expansión evangélica en los Andes Centrales de Argentina. In Guerrero Jiménez, B. (Ed.). *De indio a hermano. Pentecostalismo indígena en América Latina*. Iquique: Editorial Campus, 171-229.
- SENKOWSKI, R. (2006). Concepto de metabolismo cultural para evitar la monocultura en el tren del monoglobalismo. *Cuicuilco, 13*(38), 225-245. https://www.redalyc.org/pdf/351/35103812.pdf.
- SOPER, R. (2016). Local is not fair: indigenous peasant farmer preference for export markets. *Agriculture and Human Values, 33,* 537-548. https://doi.org/10.1007/s10460-015-9620-0.
- SOPER, R. (2020). From protecting peasant livelihoods to essentializing peasant agriculture: problematic trends in food sovereignty discourse. *The Journal of Peasant Studies*, *47*(2), 265-285. https://doi.org/10.1080/03066150.2018.1543274.
- VAN DER PLOEG, J.D. (2021). The political economy of agroecology. *The Journal of Peasant Studies*, 48(2), 274-297. https://doi.org/10.1080/03066150.2020.1725489.
- WOOD, S.A., TIRFESSA, D., BAUDRON, F. (2018). Soil organic matter underlies crop nutritional quality and productivity in smallholder agriculture. *Agriculture, Ecosystems & Environment, 266*, 100-108. https://doi.org/10.1016/j. agee.2018.07.025.
- WORLD BANK GROUP. n.d. World Bank Open Data. [dataset]. World Bank. https://data.worldbank.org/. Accessed 7 June 2024.
- WHYTE, K.P. (2013). On the role of traditional ecological knowledge as a collaborative concept: a philosophical study. *Ecological Processes*, *2*, 7. https://doi.org/10.1186/2192-1709-2-7.