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Disastri lenti agroalimentari e divenire dei mondi rurali. Un'introduzione alla special issue

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Slow agri-food disasters and the becoming of rural worlds

An Introduction to the Special Issue

Abstract
The article introduces the concept of slow agri-food disasters as a critical lens to investigate contemporary forms of ecological and social vulnerability in rural worlds, with a focus on the Mediterranean area. Drawing on empirical cases from Morocco, Italy, and France, the special issue shows how the productivist and industrial organization of agri-food systems not only fails to prevent disasters but often constitutes one of their main direct or indirect causes. The concept of slow disaster enables the analysis of these processes across multiple scales and over extended temporalities, revealing how the accumulation of ecological, health, and social damages is often normalized. Within this framework, the notion of rural becomings shifts the focus away from static representations of rurality toward an understanding of rural worlds as dynamic realities, shaped by socio-ecological tensions, multispecies relationships, and conflicts between divergent agricultural models where disaster can – though rarely does – become an opportunity of transformation toward agroecology. The ethnographic and multispecies approaches adopted in the articles of the special issue highlight the complex relations between agriculture, ecology, institutions, and social subjectivities, questioning technocratic and financial responses to risk. Finally, the dialogue between agri-food studies and disaster studies suggests new theoretical and methodological pathways for understanding and engaging with contemporary rural territories.
Keywords: slow disasters, agri-food systems, rural ethnography, risk governance, climate change, rural worlds

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1. Introduction

The relationship between agri-food systems and disasters is complex and ambiguous. For example, crop failure caused by drought, hail, or pests is usually what is referred to as an agricultural disaster: an external event that impacts production. However, agricultural practices organized around industrial and productivity-driven logics connected to the globalization of agri-food supply chains can contribute to the emergence or worsening of disaster risks with potentially catastrophic outcomes, such as the loss of biodiversity (Emmerson *et al.*, 2016). In other words, disasters can originate *within* agricultural systems. In Italy, for example, there is extensive literature highlighting the link between the decline of small-scale farming – especially in hilly and mountainous areas – and an increase in territorial risks, including hydrogeological instability (Bencardino, 2012; Tino, 2023). The good news is that evidence shows agricultural and food systems can be organized differently to meet production demands, reduce disaster risks, and promote social goals like justice, dignified work, and inclusion (Kerr *et al.*, 2023).

Now widespread globally, industrial and productivist agriculture relies on monocultures and intensive livestock farming. These practices exemplify «modular simplifications» of the landscape, modeled after plantation standards. They stem from «scalable» organizational logics in agriculture, meaning they are designed to be applied uniformly across different territories by forcing adaptation of the context, both ecologically and socially. According to Anna Tsing and colleagues (2019), these organizational logics cause radical ecosystem simplification and can lead to «feral proliferations». The authors use this term to describe the uncontrolled emergence of pathogens that become destructive because of the very «modular simplifications» that allowed them to proliferate. More broadly, these processes, as Anna Tsing (2015) would say, «ruin» ecological and social systems by depriving them of their potential to evolve and regenerate[1].

As early as 1962, in her global bestseller *Silent Spring*, biologist and writer Rachel Carson identified the risks associated with the industrial transformation of agriculture. In this book, she pointed out that the expansion of the monoculture model led to more pests damaging plants. She also highlighted the environmental and health dangers of excessive pesticide use to address this problem. One of these pesticides was DDT, which became the focus of public regulatory efforts in the United States and was banned in 1972[2]. In this case, a scalable agricultural practice (monoculture) contributed to a potential disaster: the spread of harmful insects and the subsequent risk to crops. The response involved using synthetic industrial chemicals, such as insecticides, to safeguard the monoculture. This approach led to widespread chronic pollution and posed serious health risks (see the essay by Centemeri and Agosta in this issue of *ERQ*).

[1] In her reflection on colonialism, Ann Laura Stoler (2008) defines ruination as the ongoing erosion of a territory's endogenous development potential. See Stecca's essay in this issue of *ERQ*.

[2] Paradoxically, however, the focus on DDT has overshadowed the dangers of other equally harmful chemicals, such as organophosphates (Davis, 2019).

Disaster researchers refer to «slow disasters» as ongoing processes where sector-specific interventions on risk areas favor economic and industrial growth but overlook the structural causes of problems and the social and ecological impacts of proposed solutions. In this essay, we introduce the concept of *slow agri-food disasters* to address the problematic situations discussed in the articles of this issue. We find this concept useful for understanding the challenges faced when trying to move towards an agroecological model of food production and consumption inspired by social and environmental justice values.

Slow agri-food disasters are low-level, «ruinous» processes driven by the industrial and production-centered logic of modern agri-food systems. They cause significant long-term harm to people and the environment, and they can potentially affect the entire living system. These disasters can appear as persistent, accumulating risks or sudden surges that cause catastrophic events with irreversible consequences. They occur in ways that do not immediately reveal the seriousness of the threat or the potential for irreversible damage. Warning signals are often deliberately managed to prevent the emergence of collective action to identify and address root causes. The methods and tools used to intervene in slow disasters are not focused on promoting systemic change to prevent risks or mitigate disaster impacts. Instead, they aim to make these ongoing, unmanageable issues controllable and «ride» them to extract value (Pellizzoni, 2015; 2024).

In this introductory essay, we first present the concept of slow agri-food disasters and explain how it differs from other frameworks connecting disaster studies with agri-food studies. Next, we explore how this perspective relates to the issue of the «becoming» of rural areas. The articles in this special issue all emphasize the importance of understanding the social, economic and ecological dynamics of modern rural areas in order to grasp the invisibility of agri-food disasters and the challenges of transforming agri-food systems. The articles emphasize that these challenges are especially noticeable in the Mediterranean region, particularly when examining initiatives that support multifunctional agriculture and a food system vision where food is more than just commodity.

2. The «slow disaster» approach and its relevance for the study of agri-food systems

Since 2008, there has been a revival of interest in the issue of food crises, prompted by the cycle of riots and protests (for example in Egypt, Cameroon, the Philippines, the Ivory Coast) triggered by rising agricultural commodity prices on a global scale (McMichael, 2009; van der Ploeg, 2010). The Covid-19 pandemic first (Roubík *et al.*, 2023) and then the Russian-Ukrainian conflict (Leal Filho *et al.*, 2023; Rabbi *et al.*, 2023) have contributed to make the topic of food crises more relevant, even in contexts such as the European Union where food security was no longer considered a priority issue for decades (Pellizzoni *et al.*, 2025). This has led to increasingly frequent encounters and comparisons between the fields of disaster studies and agri-food studies, which have rarely engaged in dialogue with each other (Ransom, 2025).

It is surprising that the dialogue between disaster studies and agri-food and rural studies has been so occasional: first, we must consider the complex relationship between agriculture and disasters, as previously mentioned; second, disasters have historically represented opportunities to accelerate transformations in agricultural systems and rural worlds. For example, the Polesine flood in Italy in the 1950s played a significant role in accelerating the industrial transformation of agriculture in the Po plain. According to historian Emanuele Bernardi (2014), the response to that disaster involved the initiation of «a complex infrastructure and assistance project, facilitating the transition to new forms of production» (p. 105). Another Italian example is the reconstruction following the 1980 Irpinia earthquake: it focused on heavy industrialization (metallurgy, chemicals) and property speculation, encouraging the abandonment of small-scale agriculture and crafts in a «fragile» rural context (Braucci, Laffi, 2009).

More recently, the food-related health disasters of the 1980s and 1990s – such as the adulterated wine scandal in Italy in 1986 and the so-called «mad cow» crisis at the European level, as well as concerns about the impact of the Chernobyl radioactive cloud – contributed to the emergence or strengthening of social movements for healthy eating. For example, we consider the organic farming movement, whose origins date back to the early decades of the twentieth century (Barton, 2018), and Slow Food in Italy (Siniscalchi, 2023). The action of these movements has been intertwined with the development of institutional food safety concerns, leading to the introduction of quality certification policies; this has contributed to the formation of what has been defined as a «corporate-environmental food regime» (Friedmann, 2005), with significant impacts on rural areas. The concept of corporate-environmental food regime points out that the introduction of standards and certifications for ecological products has not resulted in an ecological reconfiguration of production, distribution, and consumption processes; instead, it has led to large corporations and other market players instrumentalizing the demands of environmental and peasant movements. These demands have been stripped of their political content and translated into certifiable qualities, as with «organic» or «traditional» products[3]. Thus, the critique of the capitalist organisation of agri-food systems has become an opportunity for supply diversification and further market expansion.

If the dialogue between disaster studies and agri-food studies is now recognised as relevant, it is interesting to explore the basis of this dialogue. In this regard, it is useful to start with the contribution of Richards *et al.* (2025) who, in the introduction to a symposium on the journal *Agriculture and Human Values*, invite us to deepen our understanding of «food system shocks», understood as «unpredictable and unanticipated events that disrupt production, supply, distribution and access to food» (p. 10). We could define this approach as being interested in the problem of food *during and after* disasters, specifically studying how the food supply is organised in extraordinary situations (Paganizza, 2012; Spagnuolo, 2018; Innocenti, 2023).

[3] See Centemeri and Mozzana (2025) on the use of standards as a form of reduction of collective values to the properties of commodities.

This kind of dialogue between agri-food studies and disaster research is based on the idea that disasters are external shocks to a system that act «in combination with pre-existing stressors». Shocks create impacts by affecting the «deeper structures and processes that underlie food systems»: for example, by causing difficulties in accessing food for the most vulnerable parts of the population. The editors use extreme weather events and the Covid-19-related health crisis as examples to support the usefulness of this approach.

In an article included in the same symposium, Elisabeth Ransom (2025) attempts to address some of the limitations of this approach. The underlying hypothesis that guides her work is that shocks can provide an opportunity to transform the organisational logic of agri-food systems, which the author emphasises are currently unsustainable. Ransom's review focuses on disasters such as famine, nuclear accidents, Covid-19, hurricanes, and floods. Adopting a multi-level reading of the transition, she argues that catastrophic events could lend greater legitimacy and agency to the «niches» that propose more sustainable ways of organising agri-food systems as an alternative to the dominant models. From the perspective of transition studies, and in light of her interest in the role of crises as opportunities for systemic reconfiguration, Ransom (pp. 122-3) identifies three key ways in which disaster research has contributed to the advancement of this agenda: (1) the identification of different impacts on agri-food systems depending on the scale and type of disaster; (2) the analysis of the ways in which social groups emerge in disaster management; (3) the issue of inequalities that tend to worsen in disaster situations, increasing the vulnerability of territories and specific populations.

The analysis of this literature enables us to clarify the specificity of our approach. Critical studies on disasters (Fortun *et al.*, 2016; Gaillard, 2022) agree that disasters should not be approached as isolated events, and that *multiple scales and temporalities* must be considered. The articles in this issue are informed by this perspective, focusing on disasters that emerge *within* agri-food systems due to the productivist and capitalist logics that underpin their organisation. Rather than providing answers on how to manage crises effectively (to either return to normal quickly or sustain the transformative effect of niches), the articles in this special issue show how disasters emerge from a complex web of relationships involving different forms of agency (including that of non-human living beings) and different types of violence (direct, structural, cultural; see Galtung, 1996). In particular, they show how violence becomes entrenched in territories through configurations that vary depending on the context: the key factors are the relationships of domination, but also the universes of value (Stecca in this issue) and the «attachments» (symbolic-cultural, socio-technical, affective) to practices, habits, objects, places, symbols, etc. (Centemeri and Agosta in this issue).

In this sense, the contributions we present do not consider disasters as external shocks and isolated events, but adopt the long temporality and multi-scalar perspective that we have defined as «slow disaster», a notion that was introduced by disaster historian Scott Gabriel Knowles (2014).

The use of the term *slow* is taken from the work of Robert Nixon, who coined the notion of «slow violence», meaning «violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all» (2011, p. 2). While Nixon is interested in the invisibility of slow violence and the role of social movements in highlighting it, in disaster studies the perspective of slowness also emphasizes the issues of knowledge and public action in a context of growing complexity and uncertainty (see the contributions of Osti, Centemeri and Agosta, Olori and Alfano in this issue). Conditions of uncertainty lend themselves to the strategic interplay of the best-secured interests and, at the same time, pose decisive technical challenges that critical approaches, such as Nixon's work, tend to overlook.

Drawing on Baruah's (2022, p. 9) reflections, speaking of slow disasters means assuming a more complex causality than the linear victim-perpetrator relationship that is central to Nixon's reasoning and that leads to the importance of victims' political subjectivity being emphasized as the cornerstone of change. The slow disaster approach invites scholars to consider the complex and non-linear interaction of social, cultural, political, economic, and ecological factors that give rise to the problematic situation, an interaction that unfolds over long periods of time and in ways that are specific to contexts (Olori, 2024). Change requires not only the establishment of political representation for victims, but also a more complex set of factors. It includes the issues of technical choices and of the processes of defining knowledge that is useful for public action.

Indeed, a characteristic of slow disasters is that they are not necessarily unknown or ignored; however, attempts to manage them remain guided by the same logics of action that contributed to their emergence and that, consequently, fuels new variants of the disaster. Rather than being resolved, slow disasters are administered, which means they are managed without the appropriate tools to understand their true extent and address the structural roots of the phenomenon. Such an intervention would call into question the need for coordination between different scales of public action, from the local to the global, not to mention the need to modify the balance of power, which structurally favours the conservation of the status quo (Bifulco *et al.*, 2021; Pellizzoni *et al.*, 2025).

Furthermore, while it may be objectively complex to provide evidence of the slow disaster within the frameworks of legitimate knowledge production due to the implicit norms that organise them (Jouzel, 2019), it is also true that strategies for managing «uncomfortable knowledge» are put in place (Rayner, 2012; Hess, 2020), with the aim of defusing its warning potential.

From this reflection on the temporality of disasters and the relative opacity of the processes that «ruin» territories, we propose the concept of *slow agri-food disasters*. By this term, we do not refer to shocks that threaten food supplies or crises affecting the agricultural sector. We do not deny the relevance of this type of knowledge when it comes to managing crises. At the same time, we believe that it is problematic to focus research exclusively on specific shocks and disruptions and on the (closely related and consequential) need to improve the operational resilience of current agri-food systems. This perspective obscures

all the processes at work – at low intensity and on more micro scales – in the ordinary industrial and productivist logic of the organisation of agri-food systems, which create growing and widespread conditions of social and ecological vulnerability and, potentially, irreversible catastrophe, as in the case of the depletion of underground aquifers, evoked by Stecca in her contribution to this issue.

A similar criticism was proposed in a short article by Banerjee and Hysjulien (2018), who suggested thinking in terms of the «food disaster-food trauma» nexus. We agree with Banerjee and Hysjulien when they emphasize that «our current food regime has opened the door for unlimited, unperceived, and potentially unmanageable future food catastrophes». The authors argue that effective action on these disasters requires «a global shift towards sustainable agricultural practices, the reduction in meat consumption, and a renewed focus on the ethics of food sovereignty and food justice» (p. 158). However, we note two sets of problems. The first concerns the notion of trauma, which the authors use to challenge the focus of food regime theory on the «stability» of food systems. According to the authors, the food regime theory is useful for identifying crises that correspond to «pivotal moments» (p. 157), which explain changes at the macro level, but it is ineffective when applied to more ordinary crises, which are smaller in scope yet more widespread. The system is capable of reabsorbing these widespread critical situations which, however, due to their iterative and cumulative nature, constitute a trauma for specific social groups. We contend that this reading is inadequate to understand the systemic (albeit slow), socio-institutional and socio-ecological dimensions of disasters, as it flattens the analysis onto the social groups that experience a part of the effects of disasters in a «traumatic» way.

A second problem is that this approach provides limited insight into the concrete challenges that arise in disaster areas when attempting to rebuild in a way that incorporates a change toward food justice and sovereignty. In other words, Banerjee and Hysjulien's proposal seems overly programmatic and poorly grounded in in-depth empirical research. On the contrary, the perspective on *slow agri-food disasters* emerging from the articles collected in this special issue highlights the need for research that explores, through qualitative and ethnographic methodologies, the ways in which, at a territorial specific level, the organisation of agri-food systems produces and reproduces forms of exploitation, exclusion, and inequality (between subjects, between regions, between species, between types of knowledge). These conditions hinder the collective recognition of social and environmental risks, preventing them from being transformed into public problems, thus weakening their effective management and leading to the spread and chronicity of situations of vulnerability.

The approach of *slow agri-food disasters* therefore favours a case study methodology and, at the same time, requires the analysis of the different temporalities and scales of action involved in explaining the observed phenomena. In this sense, there is an affinity with the methodologies developed by the anthropology of globalization in relation to the way the relationship between the

local and the global is conceptualised (Ong, 2007; Tsing, 2012). Furthermore, this approach requires an ecological and multi-species perspective, because slow agri-food disasters are related to technical choices as well as production, distribution, and consumption practices that structure a society's relationship with its environment. In this sense, the dialogue is also open to political ecology approaches that are sensitive to the perspectives of new materialisms and the ontological turn in anthropology (Pellizzoni, 2023).

3. Slow disasters and the «becoming» of rural worlds

As the articles in this issue exemplify, adopting a slow-disaster perspective requires connecting the analysis of industrial and productivist logics within agri-food systems to sociocultural investigations of the «becoming» of rural worlds. This «becomings» shapes collective responses to agri-food crises.

As has been widely highlighted by rural sociology, transformations in the organization of agri-food systems historically had, and continue to have, a significant impact on the evolution of rural worlds. We take the notion of *becoming* from the works of anthropologist Tim Ingold (Ingold, 2000; Ingold, Palsson, 2013; Bihel, Locke, 2017), to indicate an approach to rural worlds from a socio-ecological perspective, attuned to the co-evolution between human communities and their environments. In other words, this perspective is interested in the singularity of rural trajectories and what this singularity owes to more-than-human entanglements. Talking about more-than-human entanglements means viewing rural territory as a web of life that is maintained through the coevolution of material, cultural, ecological, and social relationships. Agricultural practices and their organization have always been a determining factor in the evolution of rural worlds, both on the political-social and ecological levels. The «water socialization» approach proposed by Osti's contribution in this special issue exemplifies an approach to rural development that is attentive to the intertwining of environmental factors and the social processes aimed at regulating them.

The articles in this special issue take a multifaceted approach, combining political, social, and ecological perspectives to explore rural becomings. This approach enables a comprehensive understanding of the structural dynamics that fuel the proliferation of slow agri-food disasters. Starting with a critical analysis of disaster management in the agricultural sector (primarily insurance, the focus of Olori and Alfano's essay in this issue), and despite the diversity of cases and theoretical frameworks they draw upon, all the articles highlight the centrality of rural becomings in understanding agri-food disasters, their causes and the socio-ecological transformations that emerge in response to crisis situations.

We believe this perspective is original for two key reasons. Firstly, it contrasts with the common tendency to analyze agriculture solely as an isolated economic sector, often focusing on agri-food systems from a purely logistical standpoint, regarding the efficiency of food production and distribution. Instead, our approach considers agri-food systems as a collection of territorialized practices and infrastructures that are essential for understanding the «water-food-

energy nexus» (Giampietro *et al.*, 2014). From this perspective, the essays we have brought together in this issue share a focus on disasters as a potential opportunity for transforming agri-food systems. However, they address the issue from a different perspective than works that use the «niche» approach, which views disasters as an opportunity for reconfiguring the «regime» (Davidson *et al.*, 2016; for a summary see Ransom, 2025). The articles in this issue explore transformative scenarios, focusing on how rural areas are changing, particularly from the perspective of the intertwining of food production and the socialization of natural resources (see Osti's article). The perspective of rural becoming fosters closer dialogue between the sociology of disasters, rural anthropology, rural sociology and agri-food studies – a conversation that, in our view, is now more important than ever. This approach enables a better understanding of how disasters can serve as transformative «critical junctures» for agri-food systems. It also emphasizes the need for a comprehensive analysis of rural areas that addresses the social, cultural, economic, and ecological-metabolic aspects of the ongoing transformations.

Few studies have examined agri-food disasters from the perspective of rural becoming. Searching the titles and abstracts of journals such as *Sociologia Ruralis*, *The Journal of Peasant Studies*, *Journal of Agrarian Change*, and *Journal of Rural Studies* using keywords such as «disaster» and «catastrophe» confirms that very few essays address disaster-related issues. *Agriculture and Human Values* seems to have given the topic slightly more attention.

To summarize, three key insights emerge from these studies for understanding disasters through the lens of rural becoming. First, in contrast to approaches that focus on «external» shocks to agri-food systems, rural studies and agri-food studies demonstrate that certain agricultural models directly cause disasters. Agriculture is not only an indirect cause of disasters, as in its contribution to global warming and extreme weather events through greenhouse gas emissions; it is also a direct cause. In particular, agricultural models linked to the agri-business, its practices, and the power relationships within supply chains heighten vulnerability to disasters. For instance, literature on forest fires has emphasized that monoculture tree plantations cultivated for timber and other materials «are more subject to severe fire, compared to multi-aged and biodiverse forests» (González-Hidalgo, 2023, p. 730; see also González-Hidalgo *et al.*, 2014). In other words, climate change-related conditions increase the severity of fires, which pose a significant risk to populations in surrounding rural areas, but the intensive and extractive forestry development model is one of the main causes. Similarly, concerning windstorm impact, Storm Vaia in Italy showed that monoculture tree plantations represent a significant cause of ecosystem vulnerability in the context of climate change (Martellozzo, 2023).

Second, rural studies examine the causes and effects of disastrous events by developing an in-depth understanding of the social structures within rural areas, in terms of socio-economic relationships between actors in agri-food supply chains, as well as in terms of gender, ethnic, and cultural differences. For example, De la Cruz and Jansen (2018) analyzed the management of the disastrous impact of Fusarium wilt, also known as Panama disease, on banana

monoculture production in the Philippines[4], showing how the specific form of supply chain organization contributed to defining the practical and symbolic responsibilities for the spread and containment of the disease. To understand the consequences of the disaster, it is therefore necessary to take into account the specificities of contract farming, i.e., the agreement between small-scale farmers' cooperatives and large buyers, usually at predetermined prices, which guarantees the latter indirect control over the production process by integrating small-scale farmers into agricultural value chains in a dependent and subordinate position. In contract farming, large traders maintain control of production, but it is small-scale producers who must manage the risk and, from a cultural perspective, bear the burden of responsibility for the spread of the disease, often without having the technical and financial means to combat or mitigate it. With regard to the relevance of ethnic and cultural factors, in reconstructing the events surrounding the 2014 flood in a Malawian village, Harrison and Chiroro's (2016) analysis shows that the flood was caused by a bund that had been built to protect an irrigation scheme. However, for reasons of ethnicity and ultimately discrimination, the institution in charge of the programme had not listened to the criticisms of some of the area's inhabitants, who were subsequently affected by the flood. The authors therefore argue that, to understand the causes of the disaster, it is crucial to ask questions «around access to and control over resources, and of whose voices are heard – and why».

Thirdly, agri-food studies and rural sociology, particularly when combined with political ecology, environmental studies and agroecology, pay particular attention to multispecies relationships. This type of analysis is particularly relevant when the disaster is related to animal or plant diseases (see Keck and Van Aken in this issue). For example, in a recent special issue of *Sociologia Ruralis* on interspecies relationships in rural landscapes (Wadham *et al.*, 2024), Randell-Moon (2024) analyzed the mice plague (or mice and rat plague) that hit cereal monocultures in the New South Wales region of Australia in 2020 and 2021. As in the previously discussed case of banana Fusarium wilt, a monocultural and colonial agriculture, which has destroyed previous indigenous ecologies, creates the conditions (drought, vulnerability to climate change) for «feral proliferations», in this case rats. Randell-Moon's analysis focuses on how media and farmers' cultural response to this disease focuses on creating a symbolic distinction between native and invasive species (similar to what Keck and Van Aken found for African swine fever in their article in the special issue), while excluding the socio-ecological practices of indigenous peoples from this binary representation. Furthermore, the article shows how public debate has failed to consider monoculture as one of the causes of the plague and, in general, has sidelined socio-economic and socio-spatial issues.

[4] There is still no remedy for Panama disease, which is a fungal disease. When it emerged in the mid-20th century, it caused major problems for banana corporations exporting from Latin America, particularly the United Fruit Company. The situation changed when a cultivar resistant to Fusarium wilt was discovered: Cavendish. However, in the 2010s, a new variant of the pathogen threatened Cavendish plantations too (De la Cruz, Jansen, 2018).

Another instructive case is the one analyzed by Perfecto *et al.* (2019): the epidemic spread of coffee rust caused by the fungus *Hemileia vastatrix* in Latin America in 2012-2013. This fungus, already present in the ecosystem, became epidemic, with disastrous consequences, due to the increase in monoculture cultivation areas on large farms. The authors show how coffee plants respond better to the fungus when grown in biodiverse environments, typically on smaller farms, under the shade of forests with a high diversity of tree species, and with the presence of insects and fungi that are antagonistic to the disease-causing fungus. In contrast, where there are «landscape simplification», deforestation, and monoculture, the plants are more vulnerable and exposed, and the effects of the fungus are more disastrous. Similar conclusions have also emerged from studies on the role of *Ips typographus* (European fir bark beetle) in European forests (Grégoire *et al.*, 2015) and on Xylella.

The so-called «Xylella emergency» in Puglia has sparked debate and controversy in Italy in recent years. Not only has it brought issues related to multispecies relationships to the fore; it has also highlighted conflicts between different models of food production and the connection between agriculture and the landscape. It is one of the most devastating agri-food disasters, as it was a true «hecatomb» (Bandiera, Milazzo, 2021) of the centuries-old olive trees of Salento, destroying an entire agricultural landscape deeply connected to the imagery of Southern Italy, the Mediterranean, its typical products, and traditional farming, with about one million trees dying over ten years. Starting in 2008, olive trees in Salento were affected by a disease called olive quick decline syndrome (OQDS). The main cause of this epidemic was identified as *Xylella fastidiosa*, a bacterium that causes the disease and is transmitted by an insect called *Philaenus spumarius*. This insect is considered to be the vector of the epidemic. The debate over the other potential causes of the disaster, including the monocultural nature of olive production in the area, insecticide use, pruning patterns, and disease containment plans (Ciervo, 2016; Colella *et al.*, 2019), has engaged researchers, politicians and activists for many years. Today, these controversies intersect with discussions about an agricultural production model that could replace the olive industry (Vacirca, Milazzo, 2021; Salento, Ebbreo, 2025). The question is: should the production of olives be made even more intensive and the plants made more resistant to the bacterium, or should a biodiverse and multifunctional approach to agriculture be developed?

4. Slow disasters and agri-food systems: emerging research perspectives

The articles in the special issue discuss, through detailed empirical analyses and literature reviews, how the industrial-productivist agricultural model – centered on a global commodity market and the pursuit of profit – causes disasters both directly and indirectly.

Elena Stecca provides an ethnographic account of the Feija Plateau in southeastern Morocco, an arid region where intensive watermelon farming for

export has developed with the help of government subsidies for groundwater extraction. This process of intensification is lowering the water table and exacerbating drought conditions. The article explores the differing perspectives on this issue among the locals, some of whom view watermelons as a risky yet temporary alternative to migrating to the city or Europe, while others see them as a symbol of the impending disaster.

Giorgio Osti's essay, which again centers on water, discusses a recent disaster – the floods in the Italian region of Romagna in 2023 and 2024 – and explores the debate about using agricultural land for creating floodable areas in anticipation of future floods. Since Romagna's agriculture is primarily focused on intensive fruit production, the debate over «unproductive» land use – despite its importance in preventing future disasters – provokes significant controversy among public and private stakeholders, including organizations like cooperatives and farmers' associations, as well as among experts with varied technical backgrounds.

The article by Frédéric Keck and Mauro Van Aken takes us a bit farther west in northern Italy, to the border region between Liguria, Piedmont, Lombardy, and Emilia-Romagna, and between the Apennines and the Po Valley. Since 2021, an outbreak of African swine fever has been spreading. While this disease is not dangerous to humans, it is lethal to both farmed pigs and wild boars. It threatens large-scale farms and the industrial production of processed meat in Emilia and Lombardy. The origin of the ASF virus is still uncertain. While some peasants' organizations have blamed the international meat trade (the virus can spread through processed meat), Italian policies have focused on a «war on wild boars» and closing small farms to contain the epidemic. These small farms are considered more at risk due to presumed lower biosecurity levels. Through a multispecies ethnography, the authors highlight the existence of different breeding models and show how this epidemic and the related containment policies call into question the relationship between society and nature.

Olori and Alfano's qualitative research takes us from the fields where agriculture is practiced to the sites where agriculture risk management is developed and planned. They focus on insurance and discuss how this instrument changes in an era when extreme weather events are systemic problems. The authors analyze new insurance tools developed in Italy that align with European agricultural policies. These tools are socio-technical systems that accelerate the digitalization and financialization of agriculture rather than prevent disaster risk.

In their essay, which is informed by a comprehensive literature review, Centemeri and Agosta explore the use of pesticides in agriculture through the lens of the concept of «slow disaster». They emphasise the importance of ethnography and qualitative research for understanding the various social forms of «attachment» to this technology. The article draws a comparison between the Italian and French contexts, questioning the lack of social science involvement in pesticide research in Italy. It also reflects on the factors that encourage or discourage social science engagement with this issue.

Based on these essays, this concluding section highlights five main contributions the monographic issue provides to the literature on agriculture and disasters through the concept of *slow agri-food disasters*.

A first contribution concerns the specificity of the Mediterranean region, where the cases examined in the articles are situated (notably Morocco, Italy, and France). As Olori and Alfano highlight in their article, the effects of climate change seem especially alarming in this region. Many of the imbalances that heighten both disaster risks and the vulnerability of Mediterranean areas are directly linked to the capitalist framework governing the agri-food systems that appear to be expanding along the Mediterranean coast. Mediterranean agriculture is neither the highly industrialized, large-scale farming typical of the United States, Australia, or Germany, nor merely traditional, peasant farming. Instead, various forms of agriculture and different trajectories of change coexist – and, to some degree, conflict. On one side, there is a longstanding trend toward land concentration, characterized by a productivist, intensive, and monocultural approach; on the other side, there is a partial move toward «post-productivism», especially in Italy, emphasizing multifunctional agriculture and positive externalities for the landscape, environment, biodiversity, and social cohesion. These two models are not necessarily mutually exclusive (De Filippis, Henke, 2014; Corrado *et al.*, 2018), and both are supported by European agricultural policies.

It is precisely the coexistence of different agricultural models that makes researching agricultural disasters in the Mediterranean region so interesting. This is true in two ways. Firstly, the Mediterranean context sheds light on how these models may contribute to either exacerbating or mitigating slow agri-food disasters. Secondly, by studying disasters in this region, we can explore whether and how they could provide an opportunity to move away from the industrial model.

As both Keck and Van Aken and Osti's articles demonstrate in the case of Italy, disasters can impact intensive and industrial agricultural production. This is evident in fruit growing in Romagna and the pork industry in Emilia and Lombardy. These products, however, are marketed as representations of local «typicality» (such as PGI pears from Romagna and PDO *salumi* from Parma). This certified local typicality reflects the logic of the corporate-environmental food regime while claiming a connection to traditional production methods, presenting itself as environment- and labor-friendly. It creates a form of cognitive distortion that hides the root causes of disasters. The productions at risk are portrayed as symbols of virtuous traditional farming that need protection simply because they are typical. This obscures the fact that the industrial and intensive nature of this standardized typicality actually increases vulnerability to disasters.

Second, the articles in this special issue make it clear that the link between the organization of agri-food systems and disasters becomes evident when adopting a slow disaster perspective. This perspective requires paying attention to the diversity of spatial scales and temporalities intertwined in processes that create vulnerability to disasters in a specific territory. The interplay of scales (through the analysis of agri-food supply chains) and temporalities (e.g., the

long timescale of aquifer recovery and the rapid rate of water use required for intensive farming) is central to Stecca's work. It also plays a major role in Keck and Van Aken's contribution and in Osti's study of water resocialization that understands it in terms of the relationship between micro, meso, and macro levels. Furthermore, this interplay is central to critical social science research on pesticides, a subject that Centemeri and Agosta thoughtfully review.

At the same time, the slow disaster perspective requires an ethnographic approach. This is the same approach advocated by those critical agrarian studies (Taylor, 2015) that question how climate change should modify the method and objectives of this field (see, in this regard, the «critical ethnographies of the climate crisis» cited in Paprocki *et al.*, 2025). Thus, it is no coincidence that this special issue is being published by a journal dedicated to ethnographic and qualitative research. Only ethnographic methods can penetrate the social opacity that prevents disaster situations from becoming opportunities for structural and systemic transformation toward a more equitable distribution of resources and power.

Research has shown that disasters can exacerbate existing inequalities and power imbalances (Wisner *et al.*, 2012). Specifically, disasters tend to accentuate social, economic, and territorial divisions (Cutter, 2021) and accelerate social processes such as marginalization and vulnerability (Hallegatte, Walsh, 2021). If it is true that disasters are not just destructive events but also structural disruptions that impact the existing social order (Tierney, 2020), disaster recovery and reconstruction efforts often exacerbate the dynamics of exclusion and concentration of resources and power (Farinella, Saitta, 2019).

This leads us to our third point. The articles in this special issue exemplify that, contrary to Ransom's (2025) argument, disasters can be used more easily to reinforce the dominant agricultural model than to change it. As mentioned, Keck and Van Aken analyze the rhetoric used by Italian government commissioners responsible for managing PSA, depicting wild boars and small wild farms as «enemies», thereby insisting on the responsibilities of small peasant farms – often organised according to agroecological principles – to protect industrial farms that produce for export. Alfano and Olori stress that the increase in extreme climate events is not addressed with a holistic approach that promotes the potential of the agroecological model in mitigation and prevention, but rather with financial instruments and digital technical fixes. Giorgio Osti discusses the difficulty of finding solutions to flooding in an area heavily dependent on intensive fruit cultivation. Furthermore, Elena Stecca's ethnography illustrates how government incentives, in response to worsening droughts, encourage the extraction of more water from aquifers for high-value export agriculture.

The articles address the «confirmatory» outcomes of the dominant model, highlighting significant power imbalances among the involved parties. These imbalances are evident in the institutional creation of ignorance regarding health and environmental damage caused by pesticide overuse, as discussed by Centemeri and Agosta. Ethnography also reveals the challenges involved in countering the increasingly prevalent and pervasive logic of the «technical fix». This is demonstrated by Olori and Alfano's examination of the unconditional support

for digital technologies in agriculture. Furthermore, ethnography sheds light on the various «filters» at play when interpreting problematic situations caused by disasters: sociotechnical imaginaries, sensibilities, social constructions of value, beliefs, and emotional and trust-based relationships. These factors influence how disasters are understood both individually and collectively.

Fourth, adopting a multispecies perspective in ethnography sheds light on the tensions and contradictions between the discursive constructions of the ecological value of agricultural products and the actual ecology of their production. This perspective is essential to our approach of rural becomings. Questioning the transformative potential of disasters from the standpoint of rural worlds is important in order to move beyond the urban perspective that still dominates disaster studies. This urban perspective treats the rural as a homogeneous category, relying on examples from countries in the Global South that emphasize the dimensions of community and indigenousness (Jerolleman, 2020). By promoting a dialogue between disaster studies and agri-food studies, we aim to highlight both the diversity of agricultural and rural worlds and the specificity of power relations within them. There are different models of agriculture and livestock farming; these models coexist and often conflict in rural areas. There is not *one* rural world, but rather diverse and complex rural worlds that influence each other. Rural worlds are not «pure». Social groups, farms, companies, organizations, and institutions have different and sometimes conflicting interests. As Osti shows when describing the difficulties of bridging agriculture and water management in Romagna, different technical and professional knowledge can also be conflicting. There are imaginaries that contaminate each other, such as the one Elena Stecca observed among the inhabitants of southeastern Morocco regarding watermelon cultivation, which is paradoxically allied with government incentives. As Centemeri and Agosta discuss, both scientific knowledge and farmers' common sense are important for understanding the use of pesticides.

The complexity of rural areas requires in-depth analysis to improve our understanding of how slow agri-food disasters unfold and how they are governed. The challenges involved in this type of research are discussed in our interview (in this special issue) with Eve Bureau-Point and Carole Barthélémy, coordinators of the French SHS Pesticides research network. Drawing on their experience, they address a fifth key issue that cuts across the contributions to this special issue: how, with whom, and for whom should research on slow agri-food disasters be conducted, in order to support an agroecological transformation of society?

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