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#### **Editorial**

# Agribusiness in times of planetary collapse: critical approaches

L'agrobusiness en temps d'effondrement planétaire: approches critiques

Agronegócio em tempos de colapso planetário: abordagens críticas

Evidences of drastic disturbs in the macro-processes of Earth-System's self-regulation has been occupying a prominent place in contemporary political ecology. In recent decades, concern about the outbreak of the Anthropocene in this research field reflects the outcome of a new point of view in dealing with the accelerated worsening of the socioecological crisis. The usual approaches that appeal to the notion of risks to be evaluated and negotiated under the aegis of the neoliberal economic imaginary (nourished by the *technosciences*), are giving way to a new, more lucid image of our place in nature. In this new understanding are included henceforth references to the flow of mega-catastrophes that are already on the way

(Meadows *et al.*, 2012; Sinaï, 2013; Latour, 2015; Semal, 2019). In his most recent work, Dominique Bourg (2018, p. 48) prefers to abandon the mystifying rhetoric of risk evaluation under neoliberal guidelines and denounce that "it is no longer a question of the deterioration of this or that aspect of our environment, of our living space, but of the conditions themselves of habitability of the Earth, for the human race and the other living species".

A rising amount of irreversible damages affecting the resilience of the "Global Commons" (Parance & Saint Victor, 2014) seems to be the price to be paid for our attachment to the mechanistic and anthropocentric cosmovision engrained in industrialist

ideology. Setting forward the ravage of life support systems in the ecosphere, on the path of an illusory aspiration of unlimited material growth, source of persistent forms of violence and social exclusion: this is the mainspring of the arrogant civilizing pattern forged in the 18th century, and which is reproduced in new guises in the Third Millennium.

Answers to the evolutionary dilemmas posed by this *Brave New World* will depend on a renewed effort to overcome the congenital limitations of these self-destructive options to deal with the structural contradictions that are leading our planet to collapse. Even if the task before us is much more arduous than it may appear at first glance, the dogmas and illusions that continue to hinder the search for a new conception of the future have been deeply challenged in the light of a systems oriented epistemology (underlying the formation of the *new scientific paradigm* – especially in quantum physics, human ecology and cognitive sciences).

Calling for the adoption of new lenses to reevaluate the foundations of the neoliberal credo in the contemporary geopolitical scenario, Gilbert Rist (2007) is trying to show the fundamental incompatibility of the current dynamic of commodification of the ecosphere and the chances of survival of the world as we know it. He places at the center of his argument the extraordinary rigidity of the so-called "economic paradigm" in the dominant globalized culture of industrialism. This means the pursuit of indefinite growth in production and consumption of material goods on a clearly finite planet (Kapp, 1979; Sachs, 2007; Georgescu-Roegen, 1971; 1995). In his opinion, this delusive belief does not fit the awareness already attained about the deep roots of the global socio-ecological crisis. And worst, it would be neglecting its most worrying corollaries: the expansion of social inequalities and other more insidious forms of violence (direct and structural) that emerge today at all latitudes. Recognizing that the current neoliberal postulates underlying conventional models of production, distribution and consumption of goods and services continues to be associated with extensive (and politically legitimized) plundering of ecosystems, biomes and cultures, he invites us to stop believing in its unfeasible promises. In more pregnant terms, he believes that it would be inescapable in the new geological epoch of the Anthropocene

to radically change the point of view, to see the world differently. Realize the dimension of the impasses in which we went astray. Cease to believe in the promises of a better future as proposed by those who precisely mortgage it so heavily. To renounce the *fuite en avant* that presents itself as a simple panacea. To change the model of society. The one who conditions us has no more than two centuries of existence, which is very little compared to mankind's history. He managed to elude us for a long time but has now reached his limit (Rist, 2007, p. 454-455).

In this context, the need for an in-depth review of the ideological foundations and of the growing disruptive socio-ecological impacts generated by the agribusiness model (assumed here as the main driver of the current rural and urban development policy adopted in Brazil) appears as an emblematic consequence of this demystifying turning point in the field of socio-economic research. In about six decades of hegemony of this model heir to the

Green Revolution, the expectation of food security promised by its heralds remains at present fictitious<sup>1</sup> – despite a growing amount of products circulating in the gears of competitive, globalized markets. At the same time, its socio-ecological impacts on a global level attain nowadays an even more critical level in the Anthropocene. Business-as-usual as a guide in planning and managing agrifood systems in the long term is thus surrounded by structural contradictions and growing uncertainties.

On the one hand, these systems supported by agriculture and industrial livestock have been causing serious imbalances in biogeochemical cycles, compromising the resilience of ecosystems through irregular deforestation, erosion and soil contamination, reduction and depletion of water reserves, contamination of the chemistry of surface and groundwater, the sharp loss of biodiversity, the emission of greenhouse gases, and changing climate conditions – among other scourges (WIA, 2015; IPES-Food, 2016; Campbell *et al.*, 2017; UNHRC, 2017; IPBES, 2018; IPCC, 2019; IPBES, 2019; Sánchez-Bayo & Wyckhuys, 2019; Bonmatin *et al.*, 2021).

On the other hand, now from the socioeconomic, sociocultural, and health points of view, it appears that this model is also associated with ostensible violations of fundamental human rights; concentration of land and income, with marginalization of the remaining rural population; worsening of rural-urban migratory flows; erosion of local cultures and traditional communities (indigenous, quilombolas); persistence of degrading working conditions; food insecurity and threats to individual and collective health (OCFP, 2012; Carneiro *et al.*, 2015; IPES-Food, 2016; Mostafalou & Abdollahi, 2017; IMT, 2017; UNHRC, 2017; Santos & Glass, 2018).

These multi-dimensional and interactive impacts acquire a rather special configuration in the context of the Covid-19 pandemic on a global scale. A growing amount of evidence shows how this model can be associated with the emergence of new kinds of pandemics through positive feedback loops – or deviation amplifier (Wallace, 2020; IPES-Food, 2020). In addition to significantly increasing the risks of emergence and spread of new zoonoses (in a complex chain that involves, among other factors, the destruction of natural habitats and the creation of conditions conducive to the emergence of new viruses), agricultural and industrial livestock farming practices are contributing to making populations more and more vulnerable to infectious diseases. In this sense, human exposure to various types of pesticides (through food, environmental, and/or occupational) can, for example, trigger more or less serious changes in the functioning of the immune systems, making people more susceptible to diseases such as Covid-19 (Friedrich et al., 2021). In addition, the diets that have been reinforced in the

<sup>&</sup>lt;sup>1</sup> In 2019, empirical research indicated that nearly 690 million persons in the world were starving from hunger and another two billion were suffering from malnutrition, without regular access to healthy, nourishing and enough food (IPES-Food & ETC Group, 2021). Furthermore, it was disclosed that these imbalances were in fact related to defective structures of maldistribution of food and not a lack of it (IAASTD, 2009). With the outbreak of the Covid-19 pandemic, it was estimated that, in addition, almost 130 million have joined the famine-stricken contingent and millions more have been pushed to the brink of starvation. In addition, approximately one-third of global food and agricultural livelihoods were put at risk (IPES-Food & ETC Group, 2021).

evolution of the agri-food sector on a global scale – based on the excessive consumption of calories, fat, salt, and sugar – are associated with increased incidence of non-communicable diseases (such as cardiovascular disorders, diabetes, and cancer), which, in turn, are seen as factors that potentiate the virulence of the new Covid-19 pandemic (Friedrich *et al.*, 2021).

The worsening of these trends contrasts paradoxically with the recognition that the structural dysfunctions of the agribusiness model have been already identified and problematized many times in the past decades. Its operation demands an extreme artificialization of ecosystems, by the way of large-scale dissemination of monocultures, growing mechanization of crops, and dependence on the use of chemical and genetic "merchandise technologies" (such as pesticides, fertilizers synthetic, hybrid seeds, transgenic seeds, and so-called "new biotechnologies"). It rests also dependent of an intense demand for water and energy derived from the burning of fossil fuels (Petersen *et al.*, 2009; Altieri, 2012; Fernandes, 2019).

Moreover, the diversity and complex dynamics of ecological interactions and synergies of ecosystems – which constitute the axis of their integrity and resilience – tend to be systematically neglected in working with this model. In parallel, the homogeneous agricultural systems resulting from monocultures are unstable and extremely vulnerable to recurrent outbreaks of "pests" and diseases, in addition to being highly dependent on continuous external inputs (Altieri, 2012). The regular incorporation of new arable areas is also an essential feature of agribusiness, as the economic

efficiency of monocultures is based on the expectation of increasing gains in scale (Fernandes, 2019).

As a complex system articulating the latifundium; the chemical, metallurgical, and biotechnological industrial branches; financial capital and market regulation, it constitutes thus an economic development strategy nowadays controlled by transnational corporations and endowed with an extraordinary force of inertia (Welch & Fernandes, 2008). The monopolistic concentration of food production, processing, and distribution in the hands of a dwindling group of transnational conglomerates has become not only a global phenomenon (Santos & Glass, 2018) but has been intensified at a dizzying pace in the last decade (IPES-Food & ETC-Group, 2021).

In this context, the same corporations that promoted the industrialization of agrifood systems periodically renew the promise of revolutionizing agriculture through the adoption of "innovative solutions". Technological and managerial innovations are taken as a supposedly inexorable way to overcome the natural limits that have always imposed restrictions on the expansion of anthropic actions throughout history (Petersen et al., 2009). In this sense, they are deeply engaged in seeking answers to problems triggered or amplified by the same model they defend. As Altieri (2012) warns us, the solutions they propose require the adoption of forefront technologies to remove limiting factors that correspond, mainly, to mere symptoms of a fundamentally "sick" production system. Furthermore, in practice, old and new technologies are combined and sustained, so adding old and new dimensions to the ecological tragedy induced by the spread of

modern agrifood systems (Fernandes, 2019). After all, "the research-development-innovation system linked to the dominant agricultural model creates (and is created by) a market that revolves around itself" (Fernandes, 2019, p.11). Efforts and investments in proposals for restructuring agrifood systems that break with their foundations thus become inoperative. On the other hand, if the productivity gains of this model are increasingly shy compared to the first decades of its implementation, the consumption of pesticides and synthetic fertilizers has progressively increased – now under the additional influence of intercropping use of transgenic crops (Altieri, 2012; Porto & Soares, 2012; Benbrook, 2016).

Viewed from a broader perspective, the consequences of turning the biosphere into a laboratory for chemical and genetic experiments in the field of industrial agriculture – denounced since the 1960s and daily updated by new scientific evidences<sup>2</sup> – disclose more hidden aspects than the fallacious promises held by managers operating with the agribusiness model. They expose the deep incompatibility of this system with the health and well-being of human populations, with the guarantee of fundamental rights, and with the integrity

and resilience of ecosystems (PPT, 2011; UNHRC, 2017; IMT, 2017).

It is also important to emphasize that different territories are unevenly affected by the negative impacts of this model. Within the framework of asymmetric neoliberal globalization, it is the countries of the global South, such as Brazil, that take on primarily the production of low value-added goods that compete in the international market with alarming social and ecological costs.

Brazil's position as one of the world's largest exporters of commodities is celebrated in official statistics, and this sector is often extolled as one of the most profitable in the context of Brazilian's economy. However, ecosystem imbalances, environmental destruction, illnesses, and deaths caused within this model are assumed as mere unavoidable "side effects" or "negative externalities" of market's operation (Porto, 2018). The aforementioned statistics also do not account for public credits, tax exemptions, and other government incentives (sometimes unjustifiable<sup>3</sup>) granted to stimulate the sector's dynamics.

Brazilian agribusiness representatives tend to relativize not only the data that indicate Brazil's leading position in the world ranking of pesticide consumption for more than a decade<sup>4</sup>. Likewise,

<sup>&</sup>lt;sup>2</sup> PAmong the pioneering publications focusing this issue are the books *Silent Spring* (1962), by Rachel Carson, and *The Stolen Future* (1997), by Theo Colborn, Dianne Dumanoski, and John Peterson Myers. Based on updated evidence of the socioecological impacts of agribusiness, some important examples can be found in Altieri (2004); Altieri & Pengue (2006); Corsini *et al.* (2008); OCFP (2012); Ferment *et al.* (2015); Benbrook (2016); Bourguet & Guillemaud (2016); Mostafalou & Abdollahi (2017); Smith *et al.* (2019) and Bonmatin *et al.* (2021).

<sup>&</sup>lt;sup>3</sup> For example, the tax incentives to pesticides, as Soares et al. (2020) demonstrate and discuss.

<sup>&</sup>lt;sup>4</sup> Since 2008, Brazil became the world leader in the consumption of pesticides, accounting for approximately 20% of the global market for these products. According to estimates by Ibama (2020), between 2000 and 2019 the annual consumption of active ingredients rose from approximately 162 to 620 thousand tons.

other significant trends overshadowed in the current debates, such as the protagonist role assumed by agricultural commodities (particularly transgenic crops) in the consumption of these chemicals<sup>5</sup> and the contributions of family farming in dealing with the people's right to healthy food and nutrition security for Brazilians<sup>6</sup> in the long run.

The available diagnosis of human and environmental contamination resulting from the use of pesticides in the Brazilian territory, in contexts marked by different degrees of vulnerability and inequity (presented in several independent studies, such as Pignati et al., 2007; Rigotto, 2011; Palma, 2011; Oliveira et al., 2014; Nasrala et al., 2014; Rigotto et al., 2014; Carneiro et al., 2015; Bombardi, 2017; Human Rights Watch, 2018; Gurgel et al., 2019; Aranha & Rocha, 2019) would require urgent government responses. They should be directed to ensure strict control and monitoring of the production chains involved, in addition to the protection of the health of populations and ecosystems. However, the measures adopted have advanced against the warning signs issued on a national and international scale, concentrating on prioritizing and promoting industrial agriculture, relativizing (or even concealing) its impressive socio-ecological costs, and flexibilities elementary regulatory frameworks and in the weakening of control and inspection bodies.

Even today we continue to miss suitable conditions to promote wide ranging and scientifically

well-informed debates about these fundamental issues. In addition, we are confronted not only with insufficiencies of our dominant legal order, but also with the inconsistencies about norms for the production, marketing and use of pesticides adopted at the international level (UNHRC, 2017), and with the persistent controversies associated with discourses that appeal to the so-called *paradigm of the safe use* of pesticides (Rosa *et al.*, 2011).

The huge challenges emerging from the erratic trajectory of the "modernization" of the agro-industrial sector in Brazil are therefore part of a political context marked by the intensification of neoliberal agendas and the weakening of democratic institutions. As a result, the historic alliance between economic power and political power in the consolidation of Brazilian agribusiness (Delgado 2012) is even more favored to accelerate the processing of agendas in this sector – including the record release of pesticides and dismantling of legislation that regulates the use of these products (Porto, 2018; Grigori, 2021).

Bringing together contributions from a select group of authors concerned with these anomalies and impasses, our intention in this new special issue of the journal *Desenvolvimento e Meio Ambiente* is, on the one hand, to make more and more visible what has been presented as an inevitable result of the commitment to the "economic paradigm" that sustains the imaginary of industrialist modernity.

<sup>&</sup>lt;sup>5</sup> In 2016, soybean, corn, sugarcane and cotton crops together accounted for 81% of the total amount of pesticides consumed in Brazil (Moraes, 2019).

<sup>&</sup>lt;sup>6</sup> While agribusiness is mainly dedicated to the production of export-oriented agricultural commodities, much of the food consumed daily by Brazilians is produced by family farming (IBGE, 2019).

On the other hand, the edition is also in tune with the need to stimulate the formation of new axes of inter and transdisciplinary research on the immense obstacles that continue to surround design and experimentation with new patterns of agrifood systems.

The problematic behind the conception of our project is reflected in the chain of contributions that have been submitted. Most of them propose different points of view on processes that compromise the health of communities (human and non-human) exposed to pesticides, on setbacks in institutional arrangements and on widespread and accelerated destructive impacts in ecosystems. Other contributions offer a set of evidences about these processes, mobilizing the notions of crime of ecocide and new legal order. As a corollary of these two axes emerges the image of an "improbable, but possible" (Morin & Kern, 2000, p. 129) agroecological and permacultural transition in tune with the notions of global commons and ecocentrism in contemporary political ecology.

At first, Daniela da Silva Egger, Raquel Maria Rigotto, Franco Antonio Neri de Souza e Lima, André Monteiro Costa and Ada Cristina Pontes Aguiar set the focus on critical issues related to the scope of biodiversity loss already attaint in the Brazilian Savanna (the Cerrados). A robust cross-referencing of updated data provide the basis for understanding the role of agribusiness in this process of transforming the Cerrados in a "sacrifice zone for Brazilian development". This record is coupled with the notion of the crime of ecocide to show the hypertrophy of the agrochemical model found in this biome.

Ada Cristina Pontes Aguiar and Raquel Maria Rigotto investigate similar processes taking place in the Chapada do Apodi, located in the State of Ceará. There, communities have been severely impacted by extensive cultures of irrigated fruit. The text offers in addition important research findings on human and environmental contamination by pesticides in the Baixo Jaguaribe region and emphasize its tragic impacts on children's health conditions. Based on this data, the virulence of the deterritorialization and vulnerability processes conditioned by the hegemonic model of productive dynamization is debated. The authors also offer exploratory clues aimed at creating alternative strategies based on a "decolonial" approach and on valuing the potential contained in the ecological knowledge of local communities.

The article signed by Marcia Regina Faita, Adriana Chaves, and Rubens Onofre Nodari starts from the diagnosis of mass extinction of species viewed as essential requirements to sustain health and ecosystem resilience. The focus is set on the impacts of deforestation and the indiscriminate use of pesticides and transgenics on bees. It is also emphasized that, until today, research on this issue remain in an incipient stage in Brazil.

The contribution of Sonia Corina Hess, Rubens Onofre Nodari, and Mônica Lopes-Ferreira starts from data related to the dynamics of marketing and consumption of pesticides observed in Brazil in the last decade. They discuss further the growing tendency to release many of these products that contain active ingredients already prohibited in other countries (due to its harmfulness to human and environmental health). In this sense, they state that between January 2019 and June 2020, most new pesticides authorized in the country are associated with commodity crops. In addition, they present a systematization of scientific evidence of the impacts of these new products on human health and the environment, as well as problematize the

phenomenon of drift in the application of pesticides and the role of science in evaluating the impacts of these products. Finally, the hypothesis (recurrent in mass media controlled by large corporations) that there are margins for the safe use of these substances is refuted.

Converging with this theme, Aline Monte Gurgel, Clenio Azevedo Guedes, and Karen Friedrich systematize and discuss the flexibilization of rules and norms for regulating pesticides in Brazil between 2019 and 2020. They argue that this trend has been intensified in this period, due to the emergence of new political-institutional directives. In evaluating the outcomes of such measures, aggravated in the context of the Covid-19 pandemic, the authors shown how they affect more intensely the most vulnerable segments of the people and take the paradoxical shape of a necropolitics. Leonardo Melgarejo and Acácio Zuniga Leite expand this debate even further, taking into account the worsening of the socio-ecological crisis at the global level. The focus is set in the contradictions of the Brazilian agribusiness nowadays inserted in a new and dramatic cycle of zoonoses with a syndemic profile.

The recurrent controversies surrounding the search for the legitimacy of the option for the dominant model of development of the Brazilian rural environment constitute the core of the argument proposed by Caio Pompeia and Sergio Schneider. They analyze the diversity of narratives of agents involved in decision-making in agribusiness from

a point of view that considers the concern for promoting the rights to health and quality of life of populations. The focus is set on the discursive variations that express the representations and interests' pluralism in the search for answers to two specific demands, namely: the guarantee of food and nutrition security on the one hand and, on the other, food quality standards available for consumption. In this way, their contribution add updated empirical data to a deeper understanding of the cognitive and normative assumptions of public policymakers operating amidst epistemic uncertainties, structural constraints and scientific controversies.

In turn, Louise Vandelac's contribution is placed in the context of unethical and aggressive strategies of transnational agrochemical corporations operating in the global market. More precisely, she invites the readers to discover one of the most detailed accounts of the scandalous attacks and manipulations of an agribusiness giant to destroy the reputation and even the life of a renowned scientist. In her review of the book "L'affaire Roundup à la lumière des Monsanto Papers", written by Gilles-Éric Seralini and Jérôme Douzelet and published in 2020, Vandelac presents central aspects of the investigative report that exposes the complex plot which made molecular biologist Gilles-Éric Seralini a prime target for Monsanto (now Bayer-Monsanto), as a consequence of the research undertaken by him about the harmfulness of Roundup (the world's best-selling glyphosate-based herbicide<sup>7</sup>). For Van-

<sup>&</sup>lt;sup>7</sup> Glyphosate is also the most widely used active ingredient in Brazil. In 2019, more than 217,000 tons of this substance has been released for consumption (Ibama, 2020). Just by way of comparison, the second most used pesticide in the country is 2,4D. In the same year, approximately 52 thousand tons of his active ingredient circulated in the market (Ibama, 2020). Despite international warnings about the harmfulness of glyphosate (Iarc, 2015), corroborated by experts at the national level that defended its ban (Abrasco, 2019), Anvisa decided to keep this ingredient tradeable in the whole country (RDC No. 441 of December 2, 2020).

delac, the authors have the merit of revealing not only Monsanto's impressive power in manipulating information to silence Roundup's toxicity but also masterfully elucidate the role of this corporation in the kidnapping of the very bases of public regulation for the protection of health and the environment.

Surely, our editorial project could by no means by-pass some updated references to the growing amount of socio-ecological crimes committed at present in the Amazon. To cover this issue, Suzanna Hecht's article addresses the frightening rates of illegal deforestation and fires that arise in the context of the new economic and environmental policies introduced by the Federal Government. In addition, she offers an account of the structural constraints that are allowing the reproduction of such ecocidal trends.

The concern for the omissions of the current, anthropocentric-oriented legal order in dealing with these anomalies is reflected also in the text of José Rubens Morato Leite and Elisa Fiorini Beckhauser. In a scenario of serious socio-ecological setbacks and flexibilization of basic protective norms, they highlight the massive diffusion of hazardous pesticides in Brazil, beside a socially unequal distribution of their destructive impacts. From the authors' point of view, it seems imperative to prospect a new kind of legal order able to take charge of the overall demand for ecological justice.

By the same token, Rafael Speck de Souza, Isabelle Bruna Barbieri, and Mexiana Zabott Adriano evaluate the possibilities of inscribing the notion of ecocide in this quest of a new, ecocentric-oriented legal order. They start from a cursive diagnosis of the multiple dysfunctions found in our system of

pesticide regulation to focus on the contradictions involved in the toxicological re-evaluation process of the pesticide Paraquate - already banned in its country of origin due to its proven harmfulness and lethality. And in an interview that recovers the essential topics of her masterly work, centered on the design of a "new legal order for the Earth", Valérie Cabanes add some valuable inputs to this research line. They turn around the international movement seeking to insert the notion of ecocide in the text of the International Criminal Law. Moreover, her testimony include reflections on the numerous anomalies that continue to surround the expansion of the agribusiness model in Brazil to highlight the new challenges imposed henceforth by the worsening of the global crisis in the Anthropocene.

Finally, the focus placed on an agroecological transition proposal conceived under the crossfire of the aggravation of the global crisis and the outbreak of new types of pandemics gives the article by Miguel A. Altieri and Clara Inés Nicholls a relevance in this editorial project. The authors emphasize the imperative need for a radical shift in the conception of a style of food production and consumption, considered worthy of the seriousness of the negative impacts that have been externalized (and made invisible) on a global scale. In this sense, the text lists and evaluates the prerequisites considered essential to a new cycle of regenerative experiments.

In conclusion, we hope that a more clear and updated image of the congenital shortcomings of industrial agriculture and livestock in the context of agribusiness can play an important role in strengthening the demands for food sovereignty, integral health, social equity and ecological prudence on a

global scale. Even though the recognition of agroecology as an alternative strategy for recomposing agrifood systems is acquiring a growing global resonance (including within the scope of United Nations bodies – IAASTD, 2009; UNHRC, 2011; UNCTAD, 2013; UNHRC, 2017), collectives and social movements committed to the creation of a new civilizational project have been challenged to rethink the criteria of coherence and effectiveness of their interventions, given the unfavorable correlation of political-economic forces that predominates in decision-making arenas<sup>8</sup>.

In the coming decades, as highlighted by the experts who contributed to the recent report "A Long Food Movement: Transforming food systems by 2045" (IPES-Food & ETC Group, 2021), a visionary and collaborative movement led by civil society and social movements is essential. It is about halting the process of consolidating a scenario in which corporations attached to the agribusiness movement could increase (as usual) their power to control the overall management of agri-food systems in the long term. This Long Food movement would require cooperative and multi-scale action, with various strategies to push governments to act and transform the financial flows, governance structures and dynamics of agri-food systems from the ground up. After presenting the paths and opportunities envisioned to renewal the dynamics of contemporary agrifood systems, the specialists consider that, in addition to the possible risks of co-option and distortion along the way, it would be also necessary to

take into account the uncertainties that surround the evolution of the Earth-System in the Anthropocene. In fact, why not accept as possible that even the most innovative set of strategies conceived until now may be insufficient to bring humanity back to a safe operational space? On the other hand, these experts believe that, in a context of unprecedented threats and turning points, a mood of apathy and resignation would surely imply a warranted failure (IPES-Food & ETC Group, 2021). This opinion is partaken by Gancille (2019), who argues that if there is no more time to revert the current scenario, there may still be time to readjust ourselves in an intelligent and inventive way to environments that should become more and more adverse. In other words, and from a radicalized ecopolitical perspective, it would be imperative to adopt all possible measures to maximize the vitality of life support systems in the ecosphere and to reduce the destructive effects of the global crisis for the greatest possible number of living beings. For him, such measures should include "from the radical demand for individual sobriety to the obstruction and dismantling, by all acceptable means, of a predatory and destructive industrial system" (Gancille, 2019, p. 130).

### Tributes and acknowledgments

On the eve of the launch of this special edition, Brazil surpassed more than half a million deaths by Covid-19 (considering only the official records). We would like to offer our solidarity to Brazilian

<sup>&</sup>lt;sup>8</sup> In this context, we take into account evidences of co-optation of agroecological approaches by representatives of the hegemonic agro-industrial model that should be overcome (Held, 2021; Alonso-Fradejas *et al.*, 2020).

women and men who have lost their loved ones and to all those affected by the consequences of the pandemic. Here, we consider, on the one hand, the confrontation of the physical consequences of the disease itself and, on the other, the confrontation of the social, economic, cultural, and health "sequelae" in a broader way – aggravated by disastrous national management (Cepedisa & Conectas, 2021).

Furthermore, we would like to express our deep gratitude to the professionals from the most diverse areas who worked (and continue to work) on the front line of containing the pandemic, as well as those dedicated to the maintenance of essential related services.

Likewise, we would like to thank all our colleagues who contributed (directly and indirectly) to this editorial project, making it possible even in such a serious and rather turbulent context.

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