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PERSPECTIVE

Circularity for Whom? Selective Social Sustainability in the Just Circular Economy

Celina N. Amato[1*], Monica Buraschi[2], Karen M. Siegel[3]

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Abstract

Circularity is often framed as a bridge paradigm supporting sustainability transitions — but a bridge to where, and for whom? Drawing on qualitative analysis of twelve circular bioeconomy business models in Argentina, this Perspective examines their social practices against the five justice dimensions of the just circular economy (JCE). The analysis shows that social sustainability was neither completely absent nor comprehensively incorporated. Concrete achievements in employment, livelihoods, and formal protection coexisted with weaker integration of shared decision-making, territorial knowledge, long-term organisational autonomy, and the distribution of burdens within circular systems. We conceptualise this recurrent but non-uniform pattern as selective social sustainability. The concept explains how organisational, evaluative, and governance arrangements make certain social concerns more visible, actionable, and enduring than others, without presuming deliberate exclusion or a single organisational cause. Its central contribution is to complement the JCE's normative benchmark with a diagnostic lens for identifying why genuine social advances do not necessarily develop into integrated just circular transitions.

Keywords Circular Bioeconomy · Social Sustainability · Global South · Just Circular Economy · Circular Transitions

1. Introduction

The circular economy and the circular bioeconomy are often presented as potential solutions for achieving environmental, economic and social sustainability goals (Schagen et al., 2023; Schroeder et al., 2019). Despite these promises, the social dimension is often overlooked (Boström, 2012; Nilsson et al., 2024) and considered an implicit co-benefit rather than a specific political and institutional objective (Caredda et al., 2025). Kirchherr and Jones (2026) propose circularity as a 'bridge paradigm'. Bringing social sustainability into the transition towards circularity therefore raises an important question: a bridge to where, and for whom?

This Perspective develops the concept of selective social sustainability as a conceptual proposition emerging from the cases studied to examine how social dimensions are incorporated into circular transitions. Rather than assuming that the social pillar is simply present or absent, the concept draws attention to patterned combinations of concrete achievements and less fully incorporated concerns. The proposition is derived from a new qualitative analysis of evidence from twelve circular bioeconomy business models in Argentina, mapping the documented practices and tensions against the five dimensions of the just circular economy (JCE) (Ngueyap & Casadella, 2026). The analysis examines how organisational practices, governance arrangements, and externally defined evaluative requirements are associated with the visibility and organisational

* Corresponding author: celina.amato@unc.edu.ar
[1] CONICET, Faculty of Economic Sciences, National University of Cordoba, Argentina.
[2] Faculty of Economic Sciences, National University of Cordoba, Argentina.
[3] Research Institute for Sustainability (RIFS) at GFZ Helmholtz Centre for Geosciences Potsdam, Germany.

incorporation of different social concerns. The JCE is used as a normative benchmark for assessing the resulting cross-dimensional configurations (Ngueyap & Casadella, 2026).

The paper's conceptual contribution is to move beyond the idea that the social dimension is either present or absent, by showing how different aspects of justice can be incorporated unevenly within the same circular transition. This recurrent but non-uniform pattern is conceptualised as selective social sustainability. This concept provides a diagnostic lens through which the coexistence of concrete social achievements alongside partially incorporated or undocumented concerns can be identified.

2. Social Sustainability and Just Circular Economy

Social sustainability is broadly defined as the capacity of societies to ensure equitable, inclusive and lasting well-being for current and future generations (Dempsey et al., 2011; Nilsson et al., 2024). Rather than constituting a static set of technical indicators, social sustainability is a dynamic, context-dependent and multifaceted concept that addresses fundamental human needs, equity and quality of life (Cuthill, 2010; Weingaertner & Moberg, 2014). Theoretically, it operates through the interplay of two forms of sustainability: development sustainability, which focuses on addressing structural poverty, meeting basic needs, and expanding social justice for marginalised groups; and maintenance sustainability, which concerns preserving valued socio-cultural practices, institutional structures, and community cohesion in the face of change (Åhman, 2013; Vallance et al., 2011). Achieving social sustainability therefore requires balancing substantive outcomes, such as health, employment, and rights, with procedural mechanisms, including transparent participation, empowerment, and engaged governance (Boström, 2012; Cuthill, 2010).

Discussions of circular transitions have increasingly highlighted the limitations of standard, technocentric circular economy models that prioritise material efficiency without adequately addressing social equity (Caredda et al., 2025; Geissdoerfer et al., 2017). In response to these limitations, Ngueyap and Casadella (2026) propose the just circular economy (JCE) as a normative model for transforming production, consumption, and governance at firm, value chain and policy levels. The JCE pursues resource reduction alongside five justice requirements: distributive (D1), procedural (D2), recognitive (D3), intergenerational (D4), and circularity justice (D5). D1 relates to the equitable distribution of the costs, benefits, and risks of the transition across social groups, sectors, and territories. D2 concerns the effective participation and transparency of all affected stakeholders in decision-making processes. D3 involves the formal recognition and validation of the identities, local knowledge, and interests of all actors, particularly marginalised groups. D4 establishes temporal responsibility by simultaneously upholding the social foundation and ecological boundaries for present and future generations. Finally, D5 introduces an intra-chain non-transfer test to ensure that no costs, risks, or injustices are displaced from one actor, territory, or generation to another along circular value chains.

In this article, these five dimensions are used as an analytical framework for mapping how social sustainability is incorporated across the cases. The purpose is not to evaluate the JCE as a normative theory, but rather to focus specifically on its justice architecture. The broader theoretical assumptions and limitations of the JCE therefore remain outside the scope of this Perspective.

Bringing social sustainability and the JCE into conversation provides a relevant analytical framework for examining transitions towards a circular bioeconomy. While social sustainability offers an overarching conceptual foundation concerned with human needs, well-being, rights and the tension between development and maintenance (Åhman, 2013; Boström, 2012), it does not specify how justice should be examined across circular value chains. In contrast, the JCE provides a multi-scalar justice architecture specifically designed for circular systems, which is strengthened by its foundation in established social sustainability literature. Together, they enable a systematic assessment of whether circular business models contribute to substantive social goals, and how participation, recognition, intergenerational responsibility, and the distribution or displacement of costs and benefits are addressed across organisational and value-chain relationships.

3. Circular Bioeconomy Business Models in Argentina

The empirical material analysed in this Perspective was initially used in a previous study of social sustainability in circular bioeconomy business models (Amato et al., 2026). The present article conducts a new qualitative

analysis of that corpus, using the five dimensions of the JCE to examine how different aspects of social sustainability were incorporated across the cases. The empirical evidence draws on twelve circular bioeconomy business models purposively selected for combining bio-based production with circularity principles across northern Argentina, a socio-economically peripheral region (Amato et al., 2026). The sample spans a broad range of organisational forms — two cooperatives, two family businesses, five medium and large companies, two vertically integrated firms, and one start-up — across agriculture, livestock, food, biotechnology, and services.

The data comprise twenty-four semi-structured interviews complemented by secondary sources. For the first study, the interviews were coded using Nilsson et al.'s (2024) social sustainability framework, which comprises more than twenty categories and four themes recurring across the literature: inequality reduction, well-being, participation and influence, and social relationships and networks. These deductive categories were combined with categories emerging inductively from the material, and the resulting evidence was triangulated and compared systematically across cases. The secondary sources included technical reports, organisational documents, producer-association materials, company and government websites, media publications, and field notes. Complete details of these sources are reported in Amato et al. (2026). All quotations were translated from Spanish by the authors and are identified by interview number and organisational role. All participants were informed about the aims of the study and gave consent for participation, recording and use of the interview data for publications.

For this Perspective, the material was reanalysed in two stages. First, the social practices and tensions identified in each case were mapped onto the five JCE dimensions. A dimension was coded as directly identified when at least one concrete organisational practice, procedure, decision, or tension relevant to that dimension was documented through an interview or secondary source. It was coded as partial when the evidence concerned only a restricted aspect of the dimension, documented consultation without influence over decisions, or showed that the continuity of the practice depended substantially on external support. A dimension was coded as not identified when the material contained no relevant evidence. This classification does not imply that a practice was absent from the organisation, only that it was not documented in the available material. For D5, a more specific criterion was applied: the dimension was assigned only where the material documented a relationship between a circular practice and a social burden borne elsewhere within the system. The existence of a circular practice, incomplete residue valorisation, or the absence of documented displacement was not considered sufficient. This criterion yielded partial evidence for D5 in Cases 2 and 8, although the study was not designed to assess such displacement systematically across complete value chains. The mapping is qualitative and does not assign numerical scores or presume equivalence between practices of different scope.

Second, the resulting case profiles were compared across organisational forms, governance arrangements, territorial relationships, and exposure to externally defined market, regulatory, and certification requirements. Recurrence was assessed through qualitative cross-case comparison rather than through a numerical frequency threshold. The comparison was used to identify patterned associations and plausible institutional channels, not to isolate the causal effect of market orientation, certification, or organisational form. Then, selectivity was identified when the cross-case comparison revealed that some dimensions were supported by concrete organisational practices and evaluative procedures, while others remained partial, dependent or undocumented. This classification was based on the configuration of the available evidence, rather than the organisations' intentions or their overall social performance.

Triangulation was used to corroborate information and to identify differences between formal institutional developments and the way organisations function in practice. When sources diverged, the discrepancy was not resolved by automatically privileging one type of source over another. Instead, each claim was assessed in relation to the source’s timing, authorship, institutional position, type of evidence, and proximity to the processes described. Divergent accounts were retained when they referred to different periods or dimensions of the case; when they concerned the same claim, the analysis adopted the more cautious interpretation supported by the available evidence. For instance, an apparent discrepancy emerged in case 10, a quinoa producers’ cooperative supported by a mining company. A former consultant who was directly involved in the initiative reported that a change in the supporting company’s management had led to the original technical team being withdrawn and had disrupted the project’s organisational continuity. By contrast, government and sectoral publications reported the formal constitution of the cooperative, transfers of infrastructure and equipment, and subsequent commercial agreements. Rather than treating one account as invalid, the analysis considered the timing, authorship, institutional position and type of evidence provided by each source. The

publicly documented milestones were retained as evidence of the cooperative's formal organisation and resource transfers, while the interview account was used as evidence of operational discontinuity and dependence on external support. Therefore, the analysis did not infer sustained organisational autonomy from the existence of formal institutional milestones.

4. Empirical Mapping across JCE Dimensions

The cross-case mapping presented in Table 1 shows how the available evidence relates to the five dimensions of the JCE. The mapping is qualitative rather than quantitative and indicates the empirical coverage of each dimension across the cases. The case-level practices and tensions that support each classification are reported in Supplementary Table S1.

Table 1. Cross-case mapping of evidence onto the JCE dimensions. *Source: own elaboration*

Case	Organisational form and orientation	D1	D2	D3	D4	D5
1	Vertically integrated economic group; market-oriented	Direct	Partial	—	—	—
2	Private biodynamic farm; socio-environmentally oriented	Direct	Partial	—	Direct	Partial
3	Agro-industrial firm; export- and innovation-oriented	Direct	Partial	—	Partial	—
4	Vertically integrated poultry company; export-oriented	Direct	—	—	—	—
5	Jojoba-producing economic group; export-oriented	Direct	Partial	—	—	—
6	Biotechnology start-up; R&D- and globally oriented	Partial	—	—	—	—
7	Diversified agricultural and livestock company; market-oriented	Direct	Partial	—	Partial	—
8	Seed-processing company; export-oriented	Direct	Partial	—	—	Partial
9	Vertically integrated agricultural and pharmaceutical group	Direct	Partial	—	—	—
10	Quinoa producers' cooperative supported by a mining company; community-oriented	Direct	Partial	Direct	Partial	—
11	Smallholder and Indigenous producers' cooperative; territorial and food-sovereignty oriented	Direct	Direct	Direct	Direct	—
12	Privately governed ecosystem-services and seed-production company	Direct	Partial	—	Partial	—

Notes: D1 = distributive justice; D2 = procedural justice; D3 = recognitive justice; D4 = intergenerational justice; D5 = circularity justice. "Direct" indicates that the available material documented at least one concrete practice, procedure, or decision relevant to the dimension. "Partial" indicates that the evidence covered only a restricted aspect of the dimension, documented consultation without influence over decisions, or showed substantial dependence on external support. A dash indicates that the dimension was not identified in the available material and should not be interpreted as evidence of its absence.

The mapping shows that the five JCE dimensions were not incorporated as an integrated package across the cases. Employment, income, formal protection, and livelihood support were more visible than participation in strategic decisions, recognition of local knowledge as a source of authority, the long-term continuity of social achievements, or the displacement of burdens within circular systems. These differences were patterned, but not uniform. Cooperative governance was generally associated with stronger evidence of participation and recognition. However, some initiatives remained dependent on external factors, while some private firms developed long-term or territorially embedded practices. Therefore, the findings cannot be reduced to a binary distinction between firms and cooperatives, nor can they be attributed causally to market orientation alone. The following subsections examine the evidence concerning each JCE dimension in turn.

4.1. Distributive Justice (D1)

Distributive justice was directly documented in nearly all cases and partially documented in the remaining start-up case, principally through employment, income generation, formal labour protection, and support for local livelihoods. While firms generally addressed D1 through formal employment and legally required

protections, cooperative initiatives also supported smallholder livelihoods, women's involvement, redistribution, and access to productive resources. Evidence from the biotechnology start-up was limited because its anticipated social benefits were primarily expressed through its mission rather than its established practices.

Market, regulatory and certification requirements reinforced certain aspects of D1 by making formal employment conditions and specific risks auditable. International customers requested declarations concerning child labour and compliance with labour and tax legislation, while labour inspections examined formal employment and potential forced labour risks (Interview 22, CEO of vertically integrated firms; Interview 24, shareholder of a jojoba production and processing firm). Fair for Life, a certification that aims to promote fair trade in agricultural and artisanal value chains around the world, also generated a price premium intended for workers and community initiatives (Interview 16, owner of a seed-producing company). However, broader questions concerning the distribution of value, risks and decision-making power were less systematically documented. As one producer explained, the organisation provided seasonal workers with all legally required protections, but its practices "do not go beyond that" (Interview 23, engineer at a jojoba production and processing firm).

4.2. Procedural Justice (D2)

Although procedural justice was often relevant, it was generally only partially documented. While several cases involved consultation, technical cooperation or relationships with public agencies, the available evidence generally did not show sustained influence by workers, suppliers, or communities over strategic decisions. The most direct evidence was found in the smallholder and Indigenous producers' cooperative, where collective governance was part of the organisation's decision-making structure.

In market-oriented cases, social and operational requirements were predominantly mediated through externally defined buyer requirements, standards and audit procedures. British Retail Consortium Global Standards (BRCGS) food-safety certification, Hazard Analysis and Critical Control Points (HACCP), good manufacturing practices, and the ISO 22000 standard primarily made product safety, quality, and traceability auditable. Firms responded by conducting laboratory testing, administering supplier questionnaires, implementing differentiated product classification, establishing process controls, and making technological investments. Nevertheless, their scope was bounded: one interviewee explained that BRCGS included some employee and socio-environmental requirements, but only within the certified plant. In contrast, the broader Sedex Members Ethical Trade Audit (SMETA), which the firm had not adopted, would have covered a wider organisational perimeter (Interview 5, owner and CEO of an agricultural company). Another interviewee summarised the pressure from buyers directly: "European buyers ask you for all the little labels [...] kosher, halal, organic" (Interview 9, CEO of a seed-processing company). While these arrangements made standardised and auditable concerns organisationally actionable, they did not allow participation in defining the criteria or influencing decisions in a similar way. This suggests a potential institutional channel that could influence D2, but not as the sole or independently established cause.

4.3. Recognitive Justice (D3)

Recognitive justice was documented in cases where local knowledge and territorial identity influenced organisational practices and validation arrangements. This was most evident in the quinoa producers' cooperative supported by a mining company and in the smallholder and Indigenous producers' cooperative. In the latter, for example, ancestral agricultural knowledge shaped production and collective organisation, and native crop varieties were recovered and returned to communities. The cooperative also participated in the development of a participatory guarantee system as an alternative to private certification. This system democratises knowledge, with producers, experts and consumers creating oversight systems to ensure compliance with standards. These groups then work together to promote the adoption of organic agricultural techniques based on their knowledge. As one representative explained: "under conventional certification, you are organic if you are certified; if you are not, you are not organic" (Interview 15, representative of a farmers' cooperative).

The quinoa producers' cooperative supported by a mining company also incorporated community identity, producers' knowledge and ancestral quinoa cultivation practices. Other cases documented local recruitment,

technical cooperation or territorial relationships, but not how local knowledge influenced organisational criteria or decisions. Therefore, territorial presence alone was insufficient for D3: evidence was required that local actors and their knowledge were recognised as legitimate sources of authority.

4.4. Intergenerational Justice (D4)

Where present practices supported the long-term preservation of social, ecological, or productive capacities, intergenerational justice was directly documented. This was evident in the case of the biodynamic farm, where soil regeneration and integrated socio-environmental stewardship were observed, and in the smallholder and Indigenous producers' cooperative, where the preservation of native crops, ancestral knowledge, collective capacities, and territorial livelihoods was evident. However, other cases provided only partial evidence, as particular long-term environmental, productive or community-oriented initiatives were documented without establishing their institutional continuity.

The quinoa producers' cooperative supported by a mining company is an example of this. Although the initiative recovered ancestral cultivation and created productive infrastructure, its continuity depended substantially on the supporting mining company. Following a management change, a former consultant reported: "They discontinued the consultancy and dismissed the team. They wanted to buy the quinoa from the producers at a very low price, but the producers refused" (Interview 8, private consultant on social projects). Although public sources subsequently documented formal organisation, infrastructure transfers and commercial agreements, they did not establish sustained organisational autonomy. Consequently, the case was classified as 'partial' for D4: while external dependence did not negate the agency or previous achievements of the producers, it did weaken the evidence for their independent continuity.

4.5. Circularity Justice (D5)

Circularity justice was the least systematically documented dimension because evidence was required to connect a circular practice with a burden borne elsewhere in the system. This was only partially identified in the biodynamic farm and the seed-processing company.

In the biodynamic farm, closed-loop soil management based on animal integration and the prohibition of synthetic herbicides led to an increased reliance on physically demanding manual vegetation control. In the seed-processing company, mixed residues were transferred to livestock users without traceability, while unsuccessful valorisation initiatives sometimes shifted residue accumulation problems to recipients. These cases suggest the potential for the displacement of burdens onto workers or external actors. However, the study did not systematically trace such effects across complete value chains or compare their magnitude. D5 is therefore considered partially informed and a priority for further value-chain research.

5. Selective Social Sustainability: A Conceptual Proposition Emerging from the Cases

The preceding analysis shows that social sustainability was neither completely absent nor incorporated as an integrated set of justice requirements. Instead, concrete achievements in some dimensions coexisted with the partial, dependent, or undocumented incorporation of others. This recurrent but non-uniform pattern is conceptualised as selective social sustainability: a cross-dimensional configuration in which some social concerns become organisationally recognised and actionable while others remain weakly institutionalised or outside prevailing practices and evaluative arrangements. Selectivity does not imply deliberate exclusion. It describes an observed configuration associated with differences in governance, evaluation, and external dependence, rather than a causal mechanism assumed to operate uniformly across contexts.

Applied to the JCE dimensions, the concept introduces a specific diagnostic question. For distributive justice (D1), the issue is not only how benefits and burdens are distributed, but also which enter organisational documentation and evaluation. For procedural justice (D2), the focus is who defines the relevant criteria and whether consultation produces influence over decisions. For recognitive justice (D3), the relevant question is whether local actors are merely acknowledged or whether their identities and knowledge become sources of

organisational authority. For intergenerational justice (D4), the issue is whether long-term objectives are supported by the autonomy and capacities required to sustain achievements. For circularity justice (D5), the key question is whether analysis extends beyond visible circular gains to trace related burdens across organisational and value-chain boundaries. These questions shift the focus from the mere existence of social practices to the conditions under which justice dimensions become visible, actionable, and enduring.

The cases suggest several channels associated with this pattern. In market-oriented organisations, buyers, certification bodies, regulators, and corporate management largely defined the requirements to be documented and assessed. Consequently, formal employment, food safety, quality, and traceability became particularly actionable because they were standardised, auditable, and connected to compliance or market access. In contrast, participation in defining priorities, recognition of territorial knowledge, and burdens beyond organisational boundaries were less frequently incorporated into the same procedures. Although cooperative governance made participation, redistribution, and local knowledge more visible, dependence on external finance, infrastructure, certification, or technical assistance could limit the sustainability of these achievements. Power thus operated through unequal authority to define criteria and organisational boundaries, allocate resources, and sustain practices over time. These are plausible institutional channels supported by the cases, but their causal effects have not been independently established.

Selective social sustainability is related to, but analytically distinct from, several well-established concepts. A weak or absent social pillar indicates insufficient attention to social sustainability (Boström, 2012; Nilsson et al., 2024), whereas procedural and recognitive injustice highlight specific normative deficits relating to participation, decision-making and recognition (Williams & Doyon, 2019). Power asymmetries describe differences in actors' capacities to influence decisions, while institutional selectivity concerns the ways in which institutional arrangements favour certain actors, claims, or criteria (Murphy, 2012; Morrison et al., 2019). Selective sustainability disclosure focuses on the uneven communication of sustainability performance (Marquis et al., 2016), whereas CSR-washing and related concepts — such as social washing — concern possible discrepancies between communicated commitments and actual practices (Pope & Wæraas, 2016). By contrast, selective social sustainability neither presumes misrepresentation nor denotes a single injustice. It captures a cross-dimensional configuration in which genuine achievements coexist alongside marginalised concerns. It also goes beyond identifying a social sustainability gap by specifying its form. More broadly, concepts related to the normative strength, degree or pace of implementation, or organisational management of competing demands may help to explain why a selective configuration emerges or persists; however, they do not identify its cross-dimensional structure.

Selective social sustainability and the JCE therefore perform complementary functions. The former identifies how social concerns are unevenly incorporated into organisational practice, while the latter provides the normative benchmark for assessing the integration of distributive, procedural, recognitive, intergenerational, and circularity justice. The distance between the observed configurations and this integrative horizon constitutes a just circularity gap. This gap indicates that achievements in particular dimensions do not by themselves amount to the integrated realisation of justice envisaged by the JCE, without diminishing their substantive value. The Argentine cases therefore generate selective social sustainability as a conceptual proposition rather than conclusively validating it.

6. Concluding Remarks

This Perspective shows that the social dimension of circular transitions cannot be understood as simply present or absent. While the Argentine cases exhibited genuine progress in terms of employment, livelihoods, formal protection, participation, territorial recognition and long-term socio-environmental practices, these achievements were not evenly distributed across the five dimensions of justice. The key finding is that progress in one social dimension does not necessarily extend to others or develop into an integrated just circular transition.

Selective social sustainability captures the pattern of coexisting achievements and marginalised concerns. It shifts attention away from whether circular initiatives include social practices, and towards which concerns become organisationally visible, actionable and enduring, and which remain partial, dependent or undocumented. The cases also illustrate that this pattern cannot be reduced to a binary distinction between firms and cooperatives, nor can it be attributed to market orientation alone. Different configurations of justice

were associated with evaluative requirements, governance arrangements, organisational boundaries, and external dependencies. When used alongside the JCE, selective social sustainability provides a diagnostic lens through which to examine the distance between concrete social achievements and their integration across distributive, procedural, recognitive, intergenerational and circularity justice — a distance conceptualised here as the just circularity gap.

This proposition is limited by the scope of the study in terms of some empirical and methodological aspects. The cases establish associations rather than independent causal effects, and the organisations did not necessarily identify as circular bioeconomy business models or claim to represent the JCE. Evidence concerning circularity justice was particularly limited because the study was not designed to systematically trace the displacement of burdens across complete value chains. Further research should examine whether selective social sustainability occurs in other sectors, territories and institutional contexts, identify the conditions under which these configurations become more integrated and enduring, and use value-chain designs that can assess circularity justice directly.

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Data Availability Interview transcripts cannot be shared publicly or upon request due to confidentiality commitments and the risk of identifying participants and organisations. Supporting case-level evidence can be found in Supplementary Table S1. Further information on the cases, data collection, coding procedures and secondary sources can be found in Amato et al. (2026). No data repository was used.

Declarations

Competing Interests The authors declare no competing interests.

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Use of AI The authors declare that they have used generative AI or AI-assisted tools (such as Claude, NotebookLM and DeepL) to support translation and the editing of sections of the text. The authors have developed the original ideas and arguments of the text and they are fully responsible for the integrity and accuracy of the article.

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