TRaNS: Trans -Regional and -National Studies of Southeast Asia (2026), 1–22
doi:10.1017/trn.2026.10026

CAMBRIDGE UNIVERSITY PRESS

ORIGINAL ARTICLE

Mediatised Agricultural TechnoEnvironments in Indonesia. Reimagining Embodied Knowledge and Practice in Technological Environments

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(Received 18 February 2025 UTC; revised 21 May 2026 UTC; accepted 3 July 2026 UTC)

Abstract

Indonesia's response to the digital era entails both opportunities and challenges and shows how the state and civil society alike navigate through policies and implementations. Mediatisation is affecting more and more areas of life, and Indonesian netizens negotiate and develop everyday practices based on their socio-cultural background and imaginaries that are part of discourses of cultural modernisation. This paper investigates such processes based on a case study on organic agriculture, which represents long-established practices and bodies of knowledge in Indonesia. Farmers' embodied practices and embodied knowledge are reimagined and given new meaning in Indonesia's emerging mediated TechnoEnvironments. This reimagining manifests in circular readjustments of state policies and civil society initiatives; the apparent receptiveness of the Indonesian government, however, bears the risk of disembodying longstanding practical knowledge. Based on a systematic review of online reports and presentations between 2014 and 2024, this paper analyses visions of organic agriculture from both government (policy documents) and social movement actors, and how those imaginaries influence each other. The main objective is to show how discourses and imaginaries of organic agriculture are reimagined and negotiated online, to develop a better understanding of new communication dynamics between state and non-state actors in the digital era.

Keywords: Mediatisation; technological environments; organic movement; policy-making; Indonesia

Responsive Governance and Discourses of Cultural Modernisation

In the literature on Indonesia's development and modernisation as a nation state, a lot has been written about the Post-Suharto reformasi era, about the process from militarism, bureaucratisation and repression to democratisation, decentralisation, media liberalisation, but also its "illiberal turn" (Diprose *et al.* 2019), meaning a recent turn towards illiberalism across diverse areas of policy making in Indonesia. As a response to the state's and markets' failure to address social issues, illiberal models have emerged in fields such as decentralisation, civil–military relations, economic and foreign policy but also in terms of human rights (Diprose *et al.* 2019: 691). Indonesia's former President Joko Widodo (Jokowi), who had been quite successful with his new developmentalism (Warburton 2016), attracted harsh criticism at the end of his second and final term of office, notably from civil society. The "Omnibus Law for Job Creation" introduced in 2020 is criticised for restricting workers' rights and dismantling environmental protection, for instance by threatening indigenous peoples' access to land and dwindling rainforests. There is also criticism of weakening existing environmental laws and legal

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protections for indigenous groups, heightening concerns about land grabs (cp. Göpel 2024). Apparently, Jokowi's *model pembangunan baru* (new developmentalism) followed the reformasi tradition and served as a narrative to justify deregulation in the name of progress and development.

Civil resistance movements such as *#ReformasiDikorupsi* in Indonesia aim to fight the deterioration of democracy, shrinking civic space, acute corruption, etc., in line with criticism against the Omnibus Law and the new criminal code – yet only moderately successful. During a panel at the 2022 EuroSEAS conference titled "Civil resistance in Southeast Asia"[1] that also focused on Indonesia, the discussion circled around (1) the basic principle that for building democratic structures, cultural components must be taken into consideration, and (2) when searching for reasons why civil resistance and non-violent intervention are declining, the hypothesis was that democratic institutions are now working "too well", and governments have become "too responsive". In a publication resulting from the panel, the authors identify changes in the environment for activism and political agency: While virtual space has expanded, opening new avenues for voice and solidarity-building, innovations in strategies for suppression have kept pace, and physical space faces new constraints (Bünte and Weiss 2023: 298).

In recent literature on digital governance and public participation in policy making in Indonesia, positive case studies and evaluations stand beside rather critical examinations and assessments. While for West Sumatra, digital governance has been linked with better social inclusion and more inclusive development (Arianto 2024), examples from Central Java (Wahyunengseh *et al.* 2020) and beyond Java (Hermana and Silfianti 2011) emphasise risks of digital governance implementation in poverty reduction policies, of social and economic marginalisation. Studies on collaborative and digital governance in various Indonesian cities show that while smart city programs are envisioned to support political participation and good governance, a common issue is that implementation of the programs does not go beyond information dissemination, and local political authorities do not involve other actors in government management and public policy making (Hardi and Gohwong 2020; Mukhlis and Perdana 2022; Triyanto *et al.* 2022). Allowing political participation and implementing collaborative governance requires, beyond the government's four official pillars (digital ethics, skills, culture, and security), actual collaboration among governments (central and local government) and with the private sector, media, academics, society, and other communities (Budiati and Jumiati 2021). Instead, political authorities still tend to use a top-down approach in their (urban) management, i.e., in planning, organizing, implementing, and controlling, according to their development agenda.

Besides business- and economy-oriented development schemes, sustainability concepts are receiving more consideration in fields such as rural development, agriculture and food systems, but also cultural development. *Pembangunan Desa* or village development, in the sense of autonomous development strategies, is presented as a key factor for poverty reduction in rural areas (Agustina and Yahya 2022), and local capacity – villagers' capability to address local livelihood and governance problems – as essential for effective village government (Bebbington *et al.* 2006). For *Pembangunan Pertanian* or Agriculture Development, a shift from conventional, growth-oriented agriculture to more sustainable, organic agriculture with a holistic and integrated approach is envisioned (David and Ardiansyah 2016). This will be discussed in detail below. More autonomous governance approaches to village and agricultural development would require the government's receptiveness to local cultural or situated knowledge, which, again, implies the question of responsiveness.

Since Indonesia's independence, in the context of nation-building and development, local cultures in Indonesia have been defined as outdated, backward, something that needs to be overcome in order to become a modern, developed Indonesian society, and/or selected and preserved as a presentable part of the country's cultural diversity (Schlehe 2009). This national narrative of a modern, unified national culture that overcomes individual, traditional local cultures has made a

[1]The panel was held at the 2022 EuroSEAS (European Southeast Asian Studies) conference in Paris, France: https://euroseas2022.org/panels/civil-resistance-in-southeast-asia-patterns-and-effectiveness (27 March 2024).

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remarkable contribution to Indonesia's nation-building and state unity and has been revived for the promotion of national policies and local projects by Indonesian governments time and again. However, the notion of "local wisdom" has entered debates in Indonesian academia and policymaking, demanding the appreciation of local knowledge sources beyond reducing culture and tradition to folklore, mainly for touristic purposes (Pesurnay 2018). This creates "new geographies of imagination" (Knauft 2002) in the sense that local, cultural approaches and knowledge gain recognition and are involved in policy-making processes in various fields, such as environmental conservation (Putri *et al.* 2022), disaster recovery (Kusumasari and Alam 2012), religious moderation (Kasdi *et al.* 2020), language teaching and education (Suprapto *et al.* 2021), agriculture management (Kurnia *et al.* 2020), and so forth. This arguably indicates that the central government has become more responsive towards the interests and concerns of the local population. At least, it suggests that Indonesian academia has successfully begun to contribute to more integrative, transdisciplinary research and participative policy making. However, the question here is how the government deals with criticism - towards organic farming policies and regulations - that comes from civil society actors, and whether this criticism influences policy-making or remains superficial in the sense of a "too responsive" government that adapts to criticism in order to avoid civil resistance.

In this paper, the supposed responsiveness of Indonesian government institutions and the ways in which civil society actors seek to participate in or influence policymaking processes will be approached by focusing on discourses of (agri-)cultural modernisation. The focus here lies on the cultural components for building democratic structures and cultural modernisation, as a dynamic interplay between civil society and state actors. In particular, the cultural articulation and communicative conditions for the circulation of and access to media content and related media practices are investigated. This paper thus contributes to reflections on TechnoEnvironments as part of discourses of national, cultural modernisation and on the mediatisation of TechnoEnvironments.

TechnoEnvironments and Mediatisation, Activism and Circularity

TechnoEnvironments in Southeast Asia are approached here as the manifold interfaces of environments and technology; environment is a broad term, used to address natural environments, built environments, technological environments, and the infrastructures and actions that constitute these environments. TechnoEnvironments are meant to describe newly evolving socio-materialities connected to technology in environmental, social, and cultural transformations in Southeast Asia. They are constituted as hybrid spaces with consequences for social and political in- and exclusions, economic advantage and exploitation, and the ecological relations between humans, non-humans, and the world.[2]

In Southeast Asia, imagining TechnoEnvironments has been part of discourses of cultural modernisation that can be traced back at least to the 1970s, for instance, to science-fiction literature in Indonesia and the Malay world (cp. Graf, this issue), but also non-fictional discourses on mechanisation and automation. Technical imaginaries have since also been translated into national strategies to enter the "4th industrial revolution", such as "Making Indonesia 4.0". These political visions and strategies are widely embraced as future-oriented development plans, but we also find critical perspectives on imagined effects of modernisation, mechanisation, and mediatisation in a variety of creative and artistic examinations, contributing to public discourses and imaginaries on living conditions in TechnoEnvironments. These, in turn, are widely circulated and communicated via new media technologies, creating ever more mediatised TechnoEnvironments in Southeast Asia.

This profound mediatisation contributes to new geographies of imagination in the sense that it creates a shift in the power relations concerning processes of defining "modern" lifestyles: With progress

[2]For a more elaborate conceptualisation of TechnoEnvironments, see Padmanabhan and Kurfürst's introduction to this special issue.

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as an imaginary construct that defines some as progressive by comparison with others who are backward, those who represent local "backward" cultures now gain the opportunity to bring into play their power of imagination. The participatory environment of their digitally networked societies allows people in Southeast Asia to take an active part in cultural production, with especially younger generations using the internet to share content they or their peers produce. Not just young people but citizens in general contribute to public discourses in and about digital media environments, producing knowledge and meaning. Cultural modernisation thus becomes more open in the sense of more diverse imaginaries of multiple modernities; cultural production becomes more open in the sense of more diverse 'produsers', although embedded in established power relations and not free from constraints and regulations.

The question here is how cultural production in the interplay of established powerful players such as national governments or (trans-)national organisations and civil societies striving for more participation evolves in mediatised TechnoEnvironments. How do alternative imaginings and public discourses on cultural modernisation influence the strategies and agendas of policy makers and vice versa?

Drawing on sociological and anthropological theory on social movements and resistance (Gillan 2020; Nash 1992; Tufekci 2017), the mutual influence of national, political visions and strategies and public discourse and imaginaries can be seen as circular re-imagining. In accordance with Kevin Gillan (2018), an understanding of continuity and change in the content and form of social movements over longer time periods is the general objective here. Based on his concept of 'timescape' that specifies the macro-level spatio-temporal boundaries in which social movements can be located (Gillan 2018: 516), particular events and the continuity of movements, cultural and material flows, discourses and practices are investigated over an analytically relevant timescale. Following June Nash's (1992) approach to analyzing complex social movements, a description of people's responses at different moments in time is combined with interpretations by the media. To understand a social movement, the analysis must cover specific aspects of action and discourse in the various moments of that movement's unfolding, including the various participants' interpretations of the events in which they are or were involved (Nash 1992: 275). Another important aspect is the government's response to a more open public sphere and cultural production, to the new information regime that apparently empowers social movements (Tufekci 2017). While strategies may include legal push-back, stricter control, and blocking or coopting (digital) public space (Tufekci 2017: 6), governments have also become more receptive to impulses coming from civil society.

With its history of authoritarian developmentalism and relatively weak civil society, Southeast Asia has been examined concerning activists' politics, motivations, tactics, and strategies, and claims to authenticity (Ford 2013). The common characteristic of these engagements is that activists "imagine themselves to be engaged in a struggle against the state, which is simultaneously seen as enemy and potential ally in the struggle for social change (Ford 2013: 1). With new, digital media technologies, new forms of Asian activism (Barendregt and Schneider 2020) emerge, characterised by an ambiguity in the relationship between regimes and their citizens, particularly between the state and the middle class (Ford 2013: 11). Asian forms of online, digital activism often combine the mechanisms of conventional, established media with the (potential) power and subversion of local, strategic, and social media. Although the Internet's role as a public sphere that facilitates critical discourse might be threatened by consumerism and state-corporate elites (Lim 2003), networked engagement – from micro-activism to hashtag activism in authoritarian settings – makes social movements successful (Lim 2018). Looking at media communication of and within social movements, Merlyna Lim (2018: 103) identifies imaginaries, practices of participation, and trajectories as three phases in which these entanglements unfold. While Lim adds that "pathways of social movements are not linear" (Lim 2018: 104), the circularity of the phases and mechanisms she presents as a framework is emphasised in this paper, particularly looking at a broader timescape of the social movement that serves as a case study.

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The circularity of imaginaries and discourses becomes apparent, especially with media representations and mediatisation contributing to more open information and cultural production. State ideologies and policies, programs, and narratives evoke social movements with alternative visions, narratives, and imaginaries, which in turn encourage policymakers to reconsider and adapt their policy, and so forth. With a focus on digital activism, digital commons (as a subset of the commons), with resources such as data, information, culture, and knowledge that are created and/or maintained online, come to the centre of attention. They present a suitable approach to investigating the organisation of collective action, placing it "beyond market and state" (Bollier and Helfrich 2012, cited by De Rosnay and Stadler 2020). Identifying practices and politics of un/communing digital resources – above all cultural knowledge – in governance and social activism reveals how powerful media discourses and imaginaries actually are.

Digital commons represent a field of tension in which people can benefit from enhanced participation, on the one hand, while technologies and media content, on the other, are increasingly being exploited, manipulated, and domesticated for political projects and by transnational corporations. The circular processes of reimagining the digital commons in this field of tension points to the danger of policymakers (and other powerful actors) harvesting, domesticating, and alienating alternative cultures and resources for their programs. Cultural traditions and so-called local or indigenous knowledge – I would say embodied knowledge and practice – are the focal point for this process. This knowledge is particularly manifested through farmers' creativity and cultivated senses (Laksmana 2021); it is embodied in the double sense of relating to embodied experience and practice while also being embodied in a more comprehensive body of cultural knowledge. Part of the national strategies and programs go beyond political and economic realms, and where they touch upon cultural modernisation, they cause resistance and/or strategic cooperation. The result is social movements and imaginaries, alternative visions and versions of modernity, especially in terms of TechnoEnvironments.

In Indonesia's emerging mediated TechnoEnvironments, farmers' embodied practices and embodied knowledge are reimagined and given new meaning (Desai 2006; Laksmana 2021; Lin, Bates, and Goodale 2016). This reimagining manifests in circular readjustments of state policies and civil society initiatives; the apparent receptiveness of the Indonesian government, however, bears the risk of disembodying longstanding practical knowledge. In my case study, the mediated discourses and imaginaries of both state actors and activists are investigated, distinguishing between the pre-digital era (Independence until the end of the New Order, 1998) and the digital era (post-Suharto until now).[3] Besides a relevant timescape for the organic movement in Indonesia, this distinction serves to underline the changes that mediatisation or digitalisation brought about for the social movement and activist-government-relations.

Methodologically, this study focuses on digital space and content, yet builds on ethnographic onsite fieldwork in the context of "IndOrganic", a collaborative research project on organic farming in Indonesia.[4] My sub-project on organic agriculture and food systems investigated people's religious, ecological, and agricultural beliefs and practices, including the value systems that underlie them; it involved farmers, activists, and NGOs in the Indonesian organic movement but also educators and civil servants in the agriculture sector. This study expands the analysis of their contestations and negotiations by investigating mediated discourses and imaginaries. Based on a systematic review of

[3]The introduction of the internet to Indonesia quasi coincided with the end of Suharto's New Order regime in 1998; the role of the internet and related, new communication practices in the fall of the New Order has been discussed in detail (Hill and Sen 2000, Lim 2002/2003).

[4]As part of the IndOrganic project (2016-2020), my post-doc research on values and belief systems in Javanese agriculture included 4 months of ethnographic fieldwork in Bandung, Bogor, Tasikmalaya and Yogyakarta. The IndOrganic project was funded by the German Federal Ministry of Education and Research (BMBF, 031B0233). For more information see https://www.uni-passau.de/en/indorganic.

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online reports and presentations between 2014 and 2024, this paper analyses visions of organic agriculture from both government and social movement actors, and how those imaginaries influence each other. In particular, the online promotion of official organic agriculture programs and regulations (policy documents) are juxtaposed with online reactions and the promotion of alternative ideas by civil society actors. The primary sources that were used for this are the Ministry of Agriculture and their online promotion of official policy, on the one hand, and non-governmental organisations (NGOs) that explicitly, constructively criticise agricultural policies, on the other.

The two NGOs "AOI" and "WALHI" (see below) were identified as influencing policy making through their constructive criticism online and thus serve as cases for civil society engagement. The former was a research partner in the IndOrganic project between 2016 and 2020; as an umbrella organisation for organic farming in Indonesia, it advocates farmers' sovereignty and has more than 120 members (mainly farmers groups). The latter is an umbrella organisation that advocates for farmers' and environmental protection; it was chosen due to its long-standing commitment to represent farmers' concerns and constructively criticise agricultural policy. Both AOI and WALHI have a documented record of voicing farmers' concerns and criticizing the Ministry of Agriculture's official agricultural policy, government projects, and regulations. Without disregarding the intersectionality in social movements (Broad 2017), a focus on these two NGOs allows for a targeted analysis of mediated discourses and imaginaries coming from civil society, but also of their critique and potential influence on policy-making.

Based on my findings, I argue that the alternative imaginaries of cultural modernisation and modern TechnoEnvironments (re-)produced by civil society actors via new, digital media technologies, are taken up by a very receptive government and policy makers but are not necessarily implemented in the imagined ways of those whose embodied knowledge and practice are being "harvested" for policy making. The process of national, political visions and strategies influencing public discourse and imaginaries, and vice versa, is conceptualised as a circular reimagining of TechnoEnvironments. Referring again to the EuroSEAS 2022 panel on civil resistance in Southeast Asia and the hypotheses that democratic institutions are now working "too well" with governments becoming "too responsive", I see my case study and argument resonate with these ideas and hopefully provide more detailed insights into the ways in which governments respond to civil imaginings and ways in which cultural modernisation, civil resistance and democratic participation can interplay. Taking Barendregt's and Schneider's (2020) call for a careful and ethnographically informed approach to digital activism seriously, the presented case from Indonesia contributes to a better understanding of today's forms of digital activism in Southeast Asia [and to its theorizing from a Southeast Asian perspective].

Reimagining Indonesian Agriculture before the Digital Era

In Indonesia, we find a variety of local or regional ecological religious traditions that could be labelled animism, such as Javanese *Wiwitan*, Dayak *Kaharingan* (Kalimantan), *Adiri* (Papua), or the Balinese *Tri Hita Karana*. These were defined as backward and not in line with modern, progressive agendas of state and religious actors, reflecting the state policy on religion since the Sukarno era. Related long-established agricultural practices changed with the so-called Green Revolution, implemented in Indonesia by Suharto's New Order regime from the mid-1960s onwards. Yet, the state's productivist approach and agricultural intensification programs had ecological repercussions for local people and their environments, which led to mixed responses and different positions toward agricultural policies (Schreer and Padmanabhan 2019).

In the 1970s, the Indonesian organic farming movement emerged as a response to the social and environmental impacts of the Green Revolution, and from the 1980s onwards the social movement expanded across the archipelago, with grass-roots organisations promoting sustainable agricultural practices and organic agriculture as an alternative to the industrialised farming methods imposed by the government. Civil society groups and non-governmental organisations envisioned a

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holistic agricultural system based on organic values and practices, involving technical, ecological, and socio-economic aspects. Although their organisation and communication efforts were limited, this ultimately led to the emergence of new, independent farmers' movements after the fall of the New Order in 1998. This section describes the TechnoEnvironment of a modernised, intensified agriculture created in the context of the Green Revolution and juxtaposes the official government narratives with re-imaginings of (organic) agriculture before the introduction of digital media and communication technology.

Before the launch of the Green Revolution in 1968, the left-wing administration of President Sukarno created a "mass guidance" (*bimbingan massa, Bimas*) program to modernise agriculture by improving rural infrastructure, supporting agricultural extension, and providing farmers with high-yielding rice varieties, pesticides, fertilisers, and loans. As a subject-making endeavour, *Bimas* was intended to transform the mentality of the farmer from "traditional" and "instinctive" to "rational" (Welker 2012: 391). Among the various tensions in government-farmers interaction, farmers complained about a lack of adequate instructional support from extension workers, problems in the provision of fertiliser and pesticides in time for planting, and the partial appropriation of inputs and credit repayments by corrupt officials (Hansen 1972: 936). Aside from press reports on peasant dissatisfaction with the program, systematic accounts of these problems and complaints can be found in reports on *Bimas* by leaders of the Association of Agricultural Cooperatives (*Gabungan Koperasi Pertanian, Gakoperta*) from West Java (Hansen 1972: 938). However, *Bimas* promoted its agricultural transformation and the agricultural sector as the major factor contributing to Indonesia's economic growth and pushed Sukarno's policy of increasing rice production for national food self-sufficiency. Yet, when the government created the military-based organisation Welfare Operation Command (*Komando Operasi Gerakan Makmur, KOGM*) that monitored and ensured farmers' use of fertilisers, improved seeds, etc., this rigid measure fostered resistance from the side of the farmers (Soen 1968: 67/152).

The initially unaligned Indonesian Peasant Front (*Barisan Tani Indonesia, BTI*) was founded in 1945; by 1963 it claimed 7.1 million members or a quarter of all adult farmers and became the largest peasant organisation (White *et al.* 2022: 70-71). Beyond its national strategy, BTI introduced "Mutual Help Teams" (*Regu Saling Bantu*) on the local level that supported rural farmers and workers with production inputs and advice on practical problems they faced. This direct communication and support were an important factor in the BTI's mass appeal (White *et al.* 2022: 71). Furthermore, the BTI was among the pioneers of critical agrarian studies in Indonesia, with the BTI magazine discussing various problems concerning farmers and rural areas; Mochammad Tauchid for instance, the main editor of the BTI magazine, published articles on agricultural modernisation, in which he described it as not merely a matter of machinery but of educating peasants to organise themselves in modern institutions and to engage in active citizenship (Luthfi 2020: 112). In 1964, Sukarno welcomed thousands of peasants at the Presidential Palace for the BTI national conference and assured his support and protection, stating "Do not suffer peasant-phobia, do not suffer BTI-phobia" (White *et al.* 2022: 72). However, despite Sukarno's explicit support, the communist-aligned BTI was banned together with the Indonesian Communist Party (PKI) after the political turmoil in 1965-66. And despite Sukarno's administration implementing policies to increase food production and improve distribution, food shortages persisted and worsened by the global famine of the 1960s. This eventually led to the launch of the *Revolusi Hijau* (Green Revolution) in 1968.

Suharto's New Order expanded the Green Revolution from the early 1970s onward, through a series of mass guidance and mass intensification (*intensifikasi massal, Inmas*) programs, making the agricultural sector a focus of their economic development efforts and *Bimas* the political symbol around which the government sought to recreate its image in a more positive light (Hansen 1972: 937). Under Suharto, no independent organisations were allowed below the district level, preventing farmers and the rural population from formal political engagement. In 1973, all agrarian organisations were re-organised into the "Indonesian Farmers' Harmony Association" (*Himpunan Kerukunan*

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Tani Indonesia, HKTI), which was subordinated to the regime's ruling party Golkar (White *et al.* 2022: 72). "For half a century [the HKTI] functioned as a figurehead organisation with no effective role in voicing the concerns and aspirations of Indonesia's tens of millions of villagers" (White *et al.* 2022: 72, referring to Bourchier 2015: 175). The main ideology and narrative of the Green Revolution policy was to progress from traditional to modern agriculture, to boost national rice production and achieve rice self-sufficiency. The definition of modern agriculture was envisioned as enabling the Indonesian agricultural sector to overcome the challenges of a complex global food system:

> "*The new method is known as modern or conventional agriculture. Conventional agriculture promotes patented seeds, chemical fertilizers and herbicides, irrigation, mechanization, and commercialization. It changes traditional to modern agriculture, moving agriculture from a simple system based on locality and subsistence to a complex global food system involving global politics and economics.*" (Winarsih *et al.* 2024: 42)

In 1984, Indonesia achieved rice self-sufficiency by producing 25.8 million tons of rice, surpassing the national demand of 25 million tons, for which President Suharto received an FAO award in 1986.[5] In the same year, however, a massive brown plant-hopper infestation devastated rice crops in Java, as a result of indiscriminate spraying of chemical pesticides; the pest of rice crops reoccurred starting from the mid-1970s, and urged Suharto to issue a Presidential Decree (INPRES 3/1986) that banned the most harmful pesticides and initiated a new Integrated Pest Management (IPM) model. The introduction of IPM, implemented through Farmer Field Schools (FFS) in 1986, can be seen as a paradigm shift in agricultural development, from the distribution of technological packages to human development. Although Indonesia ceased its national IPM program after the termination of the World Bank/USAID support in 1999, an IPM farmers' alliance was established that developed community-based IPM (CIPM), including farmer-to-farmer training, action research, and farmers' studies, farmers' organisation and advocacy (Winarto 2004: 248). Yunita Winarto (2004: 266) argues that CIPM contributed to a new farming culture in which some farmers served as educators in their communities, replacing the old "model farmers" of the Green Revolution era. While the success of IPM is debatable, participatory IPM and FFS facilitated the emergence of new, independent farmers' movements with a social justice agenda after the fall of the Suharto regime in 1998 (Reuter and MacRae 2019: 6).

The New Order's agricultural policy focused on food security and food (self-)sufficiency as a strategy to ensure socio-economic stability, gain support from the broader population, and project a strong nationalist identity. To convince farmers of its superiority, the broad and extensive program of agricultural intensification employing chemical fertilisers and pesticides was underpinned by official narratives and metaphors such as "medicine for the soil" (*obat tanah*) or medicine against pests (Winarto 2001). Media coverage of the *Revolusi Hijau* in Indonesia played an important role in the dissemination of the New Order's ideology, as part of the portrayals of the success stories of national development programs. The national, state-controlled television TVRI reached millions of Indonesians and portrayed the overall success of the new, modern agricultural policy (Setiawan 2015: 59). Thus, the New Order regime transformed the agricultural system into a TechnoEnvironment, in which the official discourse on modern agriculture was dominated by narratives and imaginaries of modern agricultural technology replacing outdated traditional methods. In terms of media and communication, the New Order's TechnoEnvironment incorporated the mass media to disseminate their vision broadly among society.

On the contrary, organic agriculture was seen as a protest movement against the state and its agricultural policy, challenging the political control of farmers and farmer organisations (Tamtomo 2021: 5). Organic organisations led by urban middle-class activists only cautiously began to emerge

[5]The United Nations' Food and Agriculture Organisation (FAO) honours outstanding contributions to global food security (cp. https://www.fao.org/fao-awards/en; 30.09.2024).

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in the early 1990s, in the last decade of the Suharto regime, using the discourse of environmental justice and human rights (White *et al.* 2022: 73). Yet, from the 1980s onwards, the organic movement expanded slowly across the archipelago, with grass-roots organisations promoting sustainable agricultural practices and organic agriculture as an alternative to the industrialised farming methods imposed by the government. Criticizing the observable degradation of soil and water quality, pest immunity to pesticides, and decreasing harvest yields, farmers and activists set the task of harmonizing the imperatives of efficient food production and preserving natural resources and environments. Civil society groups and non-governmental organisations envisioned a holistic agricultural system based on organic values and practices, involving technical, ecological, and socio-economic aspects. This ideological orientation and return to nature-friendly cosmologies also (re-)created eco-religious trends and a "greening" of Islam and Christianity in Indonesia (Reuter 2015).

Inspired by the growing international environmental movement, national and international NGOs, religious initiatives, and activists independently launched the organic movement in Indonesia. As White *et al.* (2022: 73) state, peasant struggles and protests during the New Order were mainly limited to "everyday forms of resistance" and local protests against displacement (for infrastructure projects). While some of these protests were supported by urban intellectuals and received national media attention, such movements against the state faced harsh repression and were crushed by force. In the late 1980s, the Suharto regime introduced a new policy of "openness" (*keterbukaan*) in public political discourse and eased restrictions on the media; while coercive monitoring of the press was reinforced in the mid-1990s, this laid the foundation for resistance and liberalisation (Aspinall 2005). The partial relaxation of media restrictions allowed limited coverage of land expropriation and peasant struggles, which contributed to the re-emergence of agrarian movements (White *et al.* 2022: 73).

In 1980, the Indonesian Forum for the Environment (*Wahana Lingkungan Hidup Indonesia, WALHI*) was formed in cooperation with the government, as an umbrella organisation that enabled representation of farmers. WALHI received support from the Ministry of Environment, a "safe haven for environmental justice activists" (Peluso *et al.* 2008: 384), which was crucial for the representation of farmers, since "environmental debates were the only public media through which farmers' rights or access to land lost to extractive enterprises could be discussed" (Peluso *et al.* 2008: 384). One of the most important pioneers of the organic movement in Indonesia is the Bina Sarana Bakti (BSB) foundation, a centre for organic agriculture development established by Reverend Agatho Elsener in 1983. BSB was the first organic farming training centre to educate and support farmers and organisations all over Indonesia (Jahroh 2010: 2). In 1990, the Ganjuran Catholic church hosted and issued the "Ganjuran Declaration", the first declaration on organic agriculture in Indonesia. The World Food Day Secretariat for Farmers and Fishermen (*Sekretariat Petani dan Nelayan Hari Pangan Sedunia*, SPTN-HPS) was established as a non-profit and non-governmental organisation to implement the Ganjuran Declaration. SPTN-HPS promotes organic farming as concerned for the environment, affordable and socially just, rooted in local cultural practices and values, and acknowledging farmers' rights to assemble - as a reaction to the strict government regulations on the freedom of farmers in choosing their cultivation methods and of forming farmer groups (Tamtomo 2021: 5).

Influential pioneers of organic agriculture in Indonesia, such as BSB and SPTN-HPS from Java, focused on disseminating the values and techniques of organic farming to establish a network of organic producers and practitioners all over the country. Their primary means of communication, however, has long been direct personal contact between educators and farmers. In Central Java, several community radio stations have represented the interests of farmers' groups since the late 1990s. The Farmer's Voice Network (*Jaringan Radio Suara Petani, JSRP*), located in West Java, was founded in 1999 and claimed to have more than 600 community radios as members in their network by 2007. JSRP considers farmers their target audience and works with the Ministry of Agriculture to distribute information on better farming techniques over the radio (Chaerowati and Ibrahim 2023: 266). Outside of Java, in eastern Indonesia (NTT), for instance, up to the 2000s, farmers' only source

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of information was agricultural extension workers and, in addition, SPTN-HPS educators. The latter provided farmers in NTT with a balanced information about the benefits and disadvantages of both conventional and organic farming methods. "Their improved agricultural literacy […] encouraged them to convert to organic farming" (Winarsih *et al.* 2024: 50).

Between 1985 and 1990, BSB implemented the first large-scale IPM program, which helped decrease the use of synthetic pesticides by 90 per cent. From 1989 on, with support from the FAO, farmer trainings were held in field schools, drawing on participatory development models (cp. above). However, the IPM programme was only partially successful since it reached only a fraction of Indonesia's farmers, who had widely adopted Green Revolution ideas and techniques. Thus, the initiated shift in Indonesian agriculture towards IPM was rather inconsistent, with conventional Green Revolution and IPM models coexisting in state policies. This indicates that the Indonesian state under Suharto did not establish a unified agricultural sector but incorporated different approaches and strategies on organic and conventional agriculture. The agricultural TechnoEnvironment established by the Suharto regime, however, clearly favoured imaginaries of modern, conventional agriculture over holistic, localised IPM and organic approaches. The latter were introduced into the circular reimagining of organic agriculture - and became relevant for policy making - only with the introduction of digital media, as the next section shows.

Modern Indonesian Agricultures and Food Systems in the Digital Era

Following the 1998 reforms, the government, experts, activists, and NGOs envisioned an alternative, independent agricultural system based on people-centered food sovereignty, which included revitalizing traditional ecological farming. In 2001, the government, under President Susilo Bambang Yudhoyono, launched the Go Organic 2010 Program to develop industry-based organic agriculture. The aim was for Indonesia to become one of the world's top organic food producers by 2010. This formal recognition of the organic sector was both a response to the growing number of organic agricultural organisations in the country and an attempt to take advantage of the growing international market for organic produce (Winarsih *et al.* 2024: 44). The result was that Indonesia's organic farming sector started booming, based on grassroots initiatives with new government support. Rapid growth in organic farming, from 40,970 to 238,872 ha, between 2007 and 2010, began with grassroots movements (Reuter and Macrae 2019: 7). The concepts of people-centred food sovereignty and ecological farming, however, were not maintained despite critiques that activists and educators addressed at responsible government bodies such as the Ministry of Agriculture (e.g. Tjahjadi 2010). Thus, the Go Organic Program has been dubbed a failure ("*Go Organik gagal*") by activists (ibid.).

Indonesia's former President Joko Widodo (Jokowi) has reemphasised the government's support for organic agriculture as part of his national development agenda. As part of his strategy, the Ministry of Agriculture set up the "1000 Organic Agriculture Villages Program" (*Program 1000 desa Pertanian Organik*) in 2014, which aimed to spread organic agriculture across the archipelago until the end of 2019. The program was part of Jokowi's national development agenda, *Nawa Cita* ("Nine Priorities"), and combined various government strategies to achieve food sovereignty. However, the organic farming strategy failed to show significant progress, and the MoA has been criticised for not conscientiously implementing the program (Hoesein 2018). A major point of criticism was that the program focused on technical measures, outputs and efficiency, while failing to take proper account of the lifeworld realities and experiences of villagers, for instance, their explicit need for (subsidies for) organic fertilisers. Nonetheless, in part due to continued government support, the organic agricultural sector grew significantly in the following years. By 2016, the Indonesian Organic Alliance AOI, as one of several associations of organic farmers, had 117 members, including 80 organisations, located in 20 provinces. According to data compiled by AOI, the area of land used for organic production (including aquaculture and the collection of forest products) was more than 261,000 ha in 2015. Since this still represents less than 1% of total agricultural land in Indonesia, the vision of the

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Go Organic and the 1000 Organic Villages programs was not achieved (Schreer and Padmanabhan 2020: 333).

Both organic government programs can be considered a failure, and Jokowi's strategy was and is criticised for being too market- and certification-oriented. These issues continue to dominate debates on agricultural policy, with different imaginaries of the role and potential of organic food production. The International Federation of Organic Agriculture Movements (IFOAM) established its principles of organic agriculture in 2008, which served as a standard and guideline for policy making and for the organic agriculture movement; these principles prioritise health, ecology, fairness, and care. In response to the government programs, AOI and government experts alike have argued that Indonesia's organic agriculture policies are not in alignment with these four principles; for instance, the centralised strategy contradicts the fairness principle (Winarsih *et al.* 2024: 44). This critique must be viewed in the context of contested agriculture and food policies in Indonesia, and the interpretation of food sovereignty by the state. Based on the Indonesian Food Law (18/2012), food sovereignty, as articulated by state actors, is framed as the right of the Indonesian state and nation to develop a food policy independently. Referring to the country's vast natural resources, the state affirms its ability to the nation's demand for food in a sovereign and independent manner. "By linking food security to national security, the government legitimises its own role in determining the country's food policies, and its definition of food sovereignty in terms of the rights of the state" (Schreer and Padmanabhan 2020: 330).

In contrast to its market-oriented definition of the term organic, the national standard "SNI No. 01-6729-2002" defines organic agriculture as a holistic production management system that increases and develops the health of the agro-ecosystem. Its default role is a guarantee system for the organic value chain with nationally and internationally recognised certification schemes for export and import purposes, in addition to contributing to environmental protection efforts at the local level (SNI 2002) (Schreer and Padmanabhan 2020: 333). While the government's interest in organic farming seems to be mainly driven by ideas of market expansion, the state's discourse nevertheless borrows from international environmental, development, and food sovereignty discourses to justify its engagement. The MoA states that the spread of organic agriculture provides a good opportunity to improve the critical condition of the country's agricultural soil and to make farmers independent, emphasizing that all inputs for organic agriculture are "based on local knowledge" (DitJen Perk Kementan 2016). In a similar vein, the government refers to the Millennium Development Goals (MDGs) and the concept of sustainable development to promote organic farming as "agriculture that goes back to nature" and "protects agricultural soils, which form the source of people's staple food" (DitJen TP Kementan 2015) (Schreer and Padmanabhan 2020: 334). These official narratives are inclined towards (inter-)national organic movements and indicate strong resemblances to their explicit values and imaginaries.

With the national standard SNI, organic agriculture in Indonesia entered a phase of regulation, standardisation and certification, with a shift from focusing on organic production to a focus on marketing organic products. The related conventionalisation debate basically divided the organic movement into two streams, with a dominance of the agro-economic perspective over those who reject the conventionalisation of organic production and marketing (Tamtomo 2021). The SNI's framework of standardisation and certification proved too rigid for many farmers, mainly due to high compliance costs and rent-seeking officials, leading to a decline of certified organic farms in 2011 and to the emergence of alternative, less cost-intensive (self-)monitoring schemes such as Pamor, the Indonesian participatory guarantee system (PGS) organised by the Indonesian Organic Alliance (AOI). With Pamor becoming less reliable, local NGOs in the organic agriculture sector increasingly made their own efforts to develop the organic market and contribute to market expansion (Tamtomo 2021: 27). In general, "top-down initiatives led by the state or commercial actors have struggled to inspire farmer engagement in the post-Reformasi era […], while grassroots initiatives tend to be more robust" (Reuter and MacRae 2019: 7). At the same time, parts of the organic movement have

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accepted the shift towards marketing organic products, become more aligned with state policies, and lean towards conventionalisation.

As part of the IndOrganic project, investigators examined how civil society actors adapt to government regulations, policies, and programs, and analysed attempts at reconciling socioecological ideals with economic markets and profit. Laksmana and Padmanabhan (2021) identified three categories of organic farming actors based on their different degrees of engagement with the government: disengaged, partially engaged, and fully engaged. While there are actors that prefer not to cooperate with the government at all, many instead partially or strategically cooperate with the government and try to find ways to integrate their deep ecological values into regional and national organic farming policies. Collaborating with the government at the level of village administration, the group gets access to monetary resources (village funds) and, at the same time, influences local policymakers in terms of agricultural development. "Due to their influence and centrality in the network, partially engaged actors have the opportunity to disseminate the holistic principles of the OF [organic farming] movement while simultaneously promoting alternative OF systems that are distinct from the government's approach" (Laksmana and Padmanabhan 2021: 397).

Beyond engagement with the government, Tamtomo (2021) has investigated to what extent different groups reject or accept the conventionalisation of organic farming, and identified two major strategic directions taken by organic actors: (1) maintenance of their deep agro-ecological principles and rejection of any engagement in the official organic market, and (2) openness to developing their trading business and expanding their organic market. Smallholder and (potential) organic farmers face similar difficulties, such as the high cost of certification (discouraging them from entering the formal organic market), inadequate support by extension workers, shortfalls in market access, and price control. All groups face similar tensions and trade-offs between their respective values on the one hand and practices which are linked to the market and institutional structures of the agro-industry on the other (Tamtomo 2021). Despite different doctrines, knowledge, and belief systems, the examined agro-environmentalist groups share common values of a deep agro-ecology and organic lifestyle, and promote the eco-friendly, small-scale production and consumption of healthy, local food (Tamtomo 2021: 10f.).

So, what we see is resistance and cooperation by actors from the organic farming movement vis-à-vis the Indonesian government bodies and their organic agriculture policies. The more recent historical developments since the fall of the New Order show that official narratives are influenced by global discourses, and, more importantly, are a product of circular reimagining of visions of organic agriculture from both government and social movement actors. The fact that the Ministry of Agriculture has integrated international standards and terminology, which resonate with local agro-ecology values, indicates that the Indonesian government has, at least to some extent, taken up imaginaries from the organic movement. The other way around, the organic movement has, time and again, reacted critically to government projects, policies, and regulations, and used the identified shortcomings to articulate more precisely how their ideals and plans could be implemented more effectively. Green Revolution narratives of "medicine for the soil" for instance, have been taken up and turned around by organic activists as a response to the costly state certification required to label agricultural produce organic; they renamed their uncertified organic products "healthy" (*sehat*), defining it as "without chemical input" (*bebas bahan kimia*) (Mayrowani 2012; Winarsih *et al.* 2024: 57). In terms of religious value systems and agricultural beliefs and practices, the notion of modern agriculture that is rationalised and overcomes traditional beliefs is reversed, and religious values reemphasised as pivotal for sustainable food production. This can be seen in the reintroduction of *wiwitan* elements in Islamic values education in East Java (Maimun *et al.* 2020) and in an overall re-enchantment of agriculture in Bali (Pedersen and Dharmiasih 2015), for instance. In the Balinese case, the Indonesian government supports the re-enchantment of agriculture with state-funded construction of irrigation temples and shrines (Pedersen and Dharmiasih 2015). In Java, state-funded "eco-*pesantren*" provide formal and semi-formal religious education which reflects new ecological

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curricula and models. Muslim scholars collaborate with state officials to develop Islamic eco-theology and organic farming. However, there are also *pesantren* that do not follow government curricula; they establish alternative approaches and teachings without the state's financial support and formal acknowledgment. Instead, they combine concerns for healthy nutrition and the environment with Islamic doctrine and values, and promote organic local or home production as an alternative to agribusiness and the market (Keilbart 2021).

The promotion of alternative visions and approaches to organic agriculture is increasingly driven via digital media technologies. Rural Indonesians have experienced many changes in recent decades in education, infrastructure, livelihoods, incomes, mobilities, and lifestyles. As of 2019, 73% of Indonesian villages had internet access and, in many villages, connectivity is now as good as in the cities, making "young people of all classes […] busy with smartphones and social media accounts, engaging with global ideas and lifestyles" (White *et al.* 2022: 76). This is not to say digital divides no longer exist in Indonesia. Inequitable access to digital technologies affects the participation in social movements, especially where socio-economic disparities are prominent (Hilbert 2015). However, the organic movement in Java is well under way to realise a more inclusive and adaptive agriculture in the digital era (cp. Satria and Natalia 2025), with nationally operating NGOs quite successfully bridging digital divides. Media representations and social media have become an important tool for organic educators and activists, interconnecting networks across Indonesia but also the rural areas with urban environmentalists and organic activists. The circular reimagining in mediatised networks and via digital media outlets is discussed in the following section.

Mediatised Agricultural TechnoEnvironments in Indonesia

Part of the TechnoEnvironments of "modern agriculture" in Indonesia is the various mediatised imaginaries of so-called modern agriculture – *Pertanian Modern*. The Indonesian government and, above all, President Jokowi, promoted modern agriculture as a national development project that integrates very well in the "Making Indonesia 4.0" strategy, with "digital farming", "smart agriculture", "agriculture 4.0", and similar concepts. For an agricultural transformation, the Indonesian Ministry of Agriculture has formulated a strategy to develop Agriculture 4.0 as smart agriculture that "will support a sustainable agro-food sector" (MoA 2020). Recently, Jokowi urged regional governments to investigate the potential of smart agriculture, acknowledging regional differences while emphasizing the need for the agricultural sector to adapt to digital technological developments (Ulya and Ramadhan 2024). In 2019, President Jokowi generally promoted the mechanisation of Indonesian agriculture online, stating: "We must have the courage to shift traditional agricultural patterns to modern agricultural patterns using technology. […] Give our farmers a new mindset" (Pertanian.go.id 2019).[6] While this reflects the terminology used during the Green Revolution, Jokowi also expressed his concerns for farmers' wellbeing in the process of "socialisation carried out to modernise farmers" (Pertanian.go.id 2019). The 'middle-men' responsible for this socialisation are agricultural extension officers, who provide technology and knowledge, and communicate the government's vision of a digital transformation of the agricultural sector. Recent studies show that extension officers and farmers alike embrace smart farming technology, although not equally unconditional (Subejo *et al.* 2019; Sukarno *et al.* 2022).

While many farmers find the official visions of smart agriculture attractive, also to motivate younger farmers, and cooperate with the Indonesian government, others reject the "technological fix" and market-oriented approach. They promote their deep ecological values and knowledge, and their vision of local, small-scale organic agriculture and gardening. The promotion of their alternative visions and approaches of organic agriculture is driven via digital media technologies, such as

[6]Translation from Bahasa Indonesia by the author. This applies to all subsequent online sources.

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dedicated websites (e.g. https://aoi.ngo, www.walhi.or.id/ www.komunitasorganikindonesia.org[7]), social media platforms (e.g., Facebook, Instagram, X/Twitter), and Instant Messaging Services (mainly WhatsApp). The ways in which Indonesian organic communities build their members' identities as producers, consumers, and environmentalists, both in physical and digital space, have been outlined (Atmadi 2013; Wilujeng 2021) using the Jakarta-based network *Komunitas Organik Indonesia* (KOI). As part of KOI, *Lingkar Organik* or "Organic Circle" in Yogyakarta (Central Java) and *Balai Belajar Bali* or "Bali Learning Hall" in Tabanan (Bali) are regional communities that connect local farmers, sellers, and consumers of organic food; they use the *Komunitas Selaras Alam* or "Harmony with Nature Community" WhatsApp group to connect their members transregionally, and a Jakarta-based radio broadcasting station to disseminate their organic values (Wilujeng 2021). These values amount to an organic, healthy, and eco-friendly lifestyle (Wilujeng 2021: 78), and while KOI facilitates the marketing of organic products, their explicit aim is to balance profits with environmental aspects (Wilujeng 2021: 80). While KOI unsuccessfully tried to cooperate with the Ministry of Agriculture, their focus is rather on ministering to the community than criticizing government bodies and strategies.

Nationally operating NGOs such as WALHI and AOI, on the other hand, give a voice to farmers and actors of organised civil society, and have no qualms about criticizing government strategies and regulations. The circular reimagining of agricultural TechnoEnvironments becomes clear in the interplay of NGOs criticizing government policy and regulations while promoting their values and visions online, and government officials re-adjusting agricultural policies, programs, and regulations accordingly, which is also promoted online. In 2022, celebrating WALHI's 42nd anniversary, the NGO published a blog article that reminded us of the organisation's development since its foundation in 1980 and its struggle against Suharto's "exploitation of natural resources in the name of development […] and economic growth" (walhi.or.id 2022). The article also emphasises WALHI's achievements after the fall of the New Order regime, enshrining environmental protection in law and putting organic agriculture policy on a statutory basis; as stated, this was achieved in cooperation with other civil society organisations such as the Indonesian Farmers Union (SPI), the Agrarian Reform Consortium (KPA), and the Indonesian Farmers Alliance (API).[8]

The implementation of system applications and supervision of organic products were re-regulated in the MoA regulation number 64/Permentan/OT.40/5/2013, which became effective in May 2014. The regulation was distributed online via several websites and information platforms (e.g., pertanian.go.id, but also provincial government and various university websites). In December 2014, AOI urged the Indonesian government to support the promotion of organic farming, criticizing that the regulations governing organic farming would still depend on [conventional] agricultural policy but should instead be more specific and independent (Khoer 2014). In addition, AOI advocated for organic as local and family farming, and cooperated with the city government (*Pemerintah Kota*, Pemkot) of the city of Bogor to support a shift towards family-based organic farming. The related AOI blog article stated "local crops can adapt to the local environment and do not need special fertiliser. Besides, the resulting products are healthier to consume, the quality of local crops is no less than hybrid plants" (Hazliansyah 2014). Between 2014 and 2017, AOI recorded successes on its blog in establishing local farmers' markets, organic (vegetables) centres and fairs, and organic adjuvants in various Indonesian provinces, including Sumatra, Java, Bali, and Kalimantan.

As mentioned above, the Ministry of Agriculture set up the "1000 Organic Agriculture Villages Program" in 2014, and aimed to spread organic agriculture across the archipelago. The revised

[7]The website komunitasorganikindonesia.org was inactive at the time of submission of this paper; being established in 2008, the website was at least active until 2019 [last accessed: 26 September 2019]; the website was also used as a data source in other recent publications (Atmadi 2013, Wilujeng 2021).

[8]The article refers to UU No. 27/2007 (concerning Management of Coastal Areas and Small Islands) and UU No. 32/2009 (concerning Environmental Protection and Management).

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national standard SNI 6729 from 2016 redefines organic farming as "holistic production management system to improve and develop agro-ecosystem health including biodiversity, biological cycles and biological activity of the soil". […] "Organic farming emphasizes the implementation of management practices which prioritizes the use of inputs from waste cultivation on site, taking into account the adaptability to local circumstances and conditions. […] This can be achieved […] without the use of synthetic ingredients to fulfil special needs in the system". The revised national standard thus addressed AOI's critique and formally recognised the conduciveness of local plants, crops, and fertilisers. The 1000 Organic Villages Program was advertised as improving the land and environment (*lahan dan lingkungan*) as well as the economic and health situation in the respective villages; the former, as stated, was due to preserving water and land from chemical pollution.[9] This advertisement, again, was done online via pertanian.go.id, but also provincial government websites and various online news outlets.

The aforementioned criticism towards the government's official, large-scale organic programs aimed at the problem that the programs focused on technical measures, outputs, and efficiency, while failing to take proper account of the lifeworld realities and experiences of villagers. Both AOI and WALHI defended the interests of farmers and local communities in the form of combined offline and online protests, rallies, gatherings, and events. Between 2016 and 2018, an AOI consortium organised educational and promotional programs, for instance in villages in Kalimantan, in the context of the US-funded "Millenium Challenge Account Indonesia" (MCA-I) program.[10] In 2017 and 2018, AOI re-promoted PAMOR in remembrance of the 2008 national workshop on participatory guarantee systems, and criticised the continuous lack of small-scale organic farmers' access to (local) markets (Fatimah 2017). In September 2019, on the occasion of the National Farmers' Day, WALHI formed a National Agrarian Reform Committee (*Komite Nasional Pembaruan Agraria*, KNPA) together with the Agrarian Reform Consortium (KPA), the Sundanese Farmers Union (SPP), and other NGOs, and met President Jokowi to discuss their ideas for an agrarian reform. Their primary concern was the interests and needs of small-scale farmers, while their most important point of criticism was that government policy was still made without dialogue. According to WALHI's blog article, President Jokowi promised to support the agrarian reform and to invite KNPA representatives for further dialogue.[11]

Between 2020 and 2022, WALHI repeatedly published blog articles about links between the COVID-19 pandemic and exploitation in environmental, economic, and social terms. They criticised the state for a lack of alertness (*ketidak sigapan*) while serving the interests of powerful corporations and elites, and requested to focus on protecting ecosystems and the people (*rakyat*).[12] They explicitly criticised Jokowi for maintaining oligarchic and dynastic business politics and for his emphasis on [foreign] investment; their "environmental review and outlook 2021" (Hidayati 2021) suggests a shift from "growth-based development" and "big infrastructure projects" to a "new household-based economy" that acknowledges small-scale economic activities such as family farming.[13] A 2022 AOI policy paper (Aji *et al.* 2019) provides a more systematic policy review (including legislation, ministerial regulations, technical guidelines, and the national standard SNI) and recommends more tailored policies (based on interviews, group discussions, and a household survey covering Java, Sumatra, Kalimantan, and Flores). First, the organic farming government projects and regulations are criticised for their

[9] https://pustaka.setjen.pertanian.go.id/info-literasi/info-program-mengenal-program-desa-pertanian-organik (accessed 07 October 2024).

[10] The MCA-Indonesia (MCA-I) was formed as a development trust fund and is the first nationally owned trust fund institution designated by the Indonesian government to implement the US$ 600 Million grants program, which is the largest commitment of the USA in the last three decades in Indonesia (Prabandani 2015: 2).

[11] https://en.walhi.or.id/aksi-htn-hari-tani-nasional-24-september-2019 (accessed 07 October 2024).

[12] https://en.walhi.or.id/ekosida-dan-pandemic-covid-19 (accessed 07 October 2024).

[13] https://en.walhi.or.id/tinjauan-lingkungan-hidup-2021-negara-gagal-atasi-krisis; https://www.walhi.or.id/uploads/buku/TLH_2021_edited_2.pdf (pp. 7-9) (both accessed 07 October 2024).

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high-productivity and global competitiveness paradigm, while neglecting village development (*pembangunan desa*) and marketing opportunities on the village level. Second, their critique aims at partial implementation of organic farming systems, while working with an ecosystem requires a holistic, integrated application of the organic farming and cultivation system. Both shortcomings would lead to government programs and the official definition of organic being perceived as merely a label without real meaning or effect (Aji *et al.* 2019: 20). In addition, the paper criticises that existing regulations would not strengthen autonomy at the farmer household level but maintain dependence of farmer households on the state and market (Aji *et al.* 2019: 27). Related newspaper articles shared AOI's view of Indonesia's still constrained organic agriculture (*masih terkendala*), urging the government to provide incentives to organic farmers such as better marketing opportunities, official acknowledgment of (tedious) sustainable land maintenance, support in the maintenance of seed variety, better capital allocation, and price incentives.

In 2023, the Indonesian national research and innovation agency (BRIN) reacted to AOI's critique and publicly announced its views on organic farming and its prospects in Indonesia (BRIN 2023). BRIN stated that organic farming system practices are aimed at the healthcare of both producers and consumers, and at environmental protection. Organic farming was defined as "a combination of the three pillars of future agriculture (*pertanian masa depan*), namely economic (competitiveness and income), social (employment and health), and environmental (biodiversity and pollution)." Referring to the national standard SNI 6729-2016, certification was presented as crucial for marketing organic produce both at the domestic and export level. The suggested marketing strategy aimed at entering niche markets, "positioning the product as healthy, safe and environmentally friendly food". Although organic farming institutions were advised to "strengthen farmer organisations" (*penguatan organisasi petani*), this was defined as "increasing organic farming literacy and partnerships with research and innovation institutions". The role of the government was defined as "providing seeds for organic farming, increasing literacy in organic farming technology, increasing literacy in organic products to consumers, [and] providing access fees." (BRIN 2023).

Therefore, the criticism and demands expressed by WALHI and AOI are only partially addressed. The demanded consideration of village development, family farming, and marketing at the village level is discounted by emphasizing certification of organic produce for both export and domestic markets. The demand for strengthening autonomy at the farmer household level is bypassed by the affirmation to strengthen farmer organisations in the sense of educating farmers (through official institutions). The demand for government support in the maintenance of seed variety, which is explicitly understood as farmers' expertise and capability, is being reinterpreted as a role of the government, i.e. providing seeds for organic farming (without elaborating on which kinds of seeds). BRIN's official statement thus reflects the government's approach of selectively addressing and reinterpreting critique from civil society organisations and the organic farming movement, while effectively promoting the official organic farming strategy publicly.

A recent example is the circulation of Jokowi being awarded the FAO Agricola Medal in August 2024, honouring his efforts for transforming Indonesia's food system and contributing to global food security. Besides broad television coverage, extensive online news coverage (Jakarta Globe, Tempo.co, Antara News, Kompas.com, DetikNews asf.) but also social media content (Facebook, Twitter/ X, Instagram, Youtube) reported positively on Jokowi's achievements, including his emphasis on sustainability and the acknowledgment of regional diversity, local knowledges and approaches. "The President also expressed appreciation [for] efforts to promote environmental sustainability, which includes establishing a nursery to cultivate seeds and native plants from Papua, aimed at rehabilitating the local forests" (SetKab RI Indonesia 2024). This has been taken up by the organic farming community and linked to a satirical "meme" that exists since 2021 (Figure 1) and is widely circulated up to now, which is mocking Jokowi's apparent poor understanding of agricultural affairs:

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Figure 1. Meme mocking Jokowi's apparent poor understanding of agricultural affairs.[14]

Jokowi asks, "What is this?" and the Minister of Agriculture, Syahrul Yasin Limpo, responds, "This is what farmers grow, they call it rice plant (*padi*). Once picked, they call it grain (*gabah*). President Jokowi then asks, "And where is the rice (*beras*)?" to which the Minister responds, "We import [it]!".

The imagined dialogue between Jokowi and the Minister of Agriculture points to the irony of Indonesia still importing rice (e.g., from Vietnam, Thailand, and Myanmar) despite increased domestic production and agricultural expansion. On a deeper level, it can be interpreted as a critique of policymakers for not understanding and ignoring farmers' embodied knowledge in organic agriculture policies. This points to the contrast between embodied knowledge of farmers and NGOs, on the one hand, and the perceived disembodied (technological) progress promoted by policymakers on the other hand. Agricultural TechnoEnvironments – as newly evolving socio-materialities connected to technology in environmental, social and cultural transformations – in Indonesia are thus characterised by a dominant state ideology of modernisation and progress, which is questioned by

[14]https://www.radioidola.com/2021/mengurai-ironi-petani-di-negeri-agraris-perlukah-impor-beras/ (accessed 07 October 2024).

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practitioners and activists who advocate for alternative organic farming and food systems. These agricultural TechnoEnvironments are mediatised in the sense that renegotiations of organic agriculture take place in hybrid (online and offline) spheres, with official online reports and representations constantly being criticised by organic movement actors. The dynamics of this social movement and resistance lead to a circular reimagining of agricultural TechnoEnvironments, with national, political visions and strategies influencing public discourse and imaginaries, and vice versa. The latter can also be seen by the example of this meme mocking Jokowi, since such critical expressions from civil society are taken up by the Indonesian government to adjust policy or, at least, to adjust their narrative framing.

Conclusions

Recent literature on digital activism and civic engagement in Southeast Asia investigates digital environments as "arenas for political identity formation, mobilisation of marginalised populations, and contestation of dominant narratives" (Vanie 2025: 153). The tension between digital platforms simultaneously democratizing access to political participation and reinforcing mechanisms of control "illustrates the fragile balance between empowerment and repression, [and highlights] the urgent need for nuanced approaches to studying […] digital activism" (Vanie 2025: 154). For Indonesia, digital activism has been described as "a central arena for civic contestation [with] tangible outcomes such as policy shifts" (Nugroho 2025: 91, 102). The question, how digital activism successfully brings about policy changes or systemic change, is often answered by urging policymakers to welcome the participatory feedback from activists and encouraging activists to team up with NGOs (and other actors) to enhance continuity and impact. My long-term analysis of the long-established organic movement in Indonesia shows that digital media technologies enable activists and NGOs to voice criticism of agricultural policy and proposals for improvement, yet policymakers become "too responsive" in the sense that they adapt official narratives and programmes to the participatory feedback from civil society but do not necessarily adapt policies accordingly, which undermines alternative visions and imaginings. Disentangling this process of adapting narratives and – potentially – policies constitutes a more nuanced approach to studying digital activism and governance.

Approaching organic agriculture as a persistent social movement is a fruitful timescape and frame due to the emergence of new, independent farmers' movements after the fall of the Suharto regime in 1998, in the context of democratisation and decentralisation. With digitalisation and mediatisation of politics and everyday life, the concept of TechnoEnvironments provides adequate analytical tools to trace the circular re-imagining of modern agriculture and organic values in Indonesia. Two different streams of imagining modern or future agriculture in/as TechnoEnvironments can be identified, namely the official government vision and those who (strategically) support it versus the organic movement that resists and criticises organic farming policies and regulations. The latter reject official state certification and control, large-scale and export-oriented marketing, technological and methodical education of farmers, while advocating for local and family farming, more inclusive policy making, farmers' autonomy and acknowledgment of their established, embodied knowledge. As Dimas Laksmana (2021) has argued, regulatory institutions of modern agriculture as a technoscientific regime of power are predicated by disembodiment of knowledge; farmers thus transform their encounters with scientific knowledge into sites of politics where they reinterpret, question, and challenge established practices and institutions. As part of Indonesia's contemporary TechnoEnvironments, their alternative imaginings and the resultant public discourses on cultural modernisation challenge the strategies and agendas of policy makers. In line with Gramsci's (1971) concept of hegemony, power holders control the masses through state coercion but also by gaining their active consent, which Indonesian policy makers try to achieve by addressing the concerns and criticisms of the organic movement. The apparent responsiveness of government bodies and representatives points to the danger of power holders harvesting, domesticating, and alienating alternative

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cultures and resources – based on local or indigenous knowledge, embodied knowledge, and practice – for official programs and agendas. The continuous criticism from WALHI and AOI shows that many farmers do not accept the official vision of modern agriculture, while the official responses, regulatory and promotional material found online, indicate the government's consent engineering through social media (cp. Saraswati 2021). This underlines my argument that the alternative imaginaries of cultural modernisation and modern TechnoEnvironments (re-)produced by civil society actors via new, digital media technologies are taken up by a very receptive Indonesian government but are not necessarily implemented in the imagined ways of those whose embodied knowledge and practice are being "harvested" for policy making. The process of national, political visions and strategies influencing public discourse and imaginaries, and vice versa, unfolds as circular reimagining of TechnoEnvironments, with a technoscientific regime of power threatening farmers embodied knowledge and values of organic agriculture.

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Cite this article: Keilbart, Patrick Frank. 2026. "Mediatised Agricultural TechnoEnvironments in Indonesia. Reimagining Embodied Knowledge and Practice in Technological Environments." *TRaNS: Trans -Regional and -National Studies of Southeast Asia* 1–22. https://doi.org/10.1017/trn.2026.10026

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