

# Transforming Indonesia's Agricultural Policy: Food Security and Islamic Economics Amid Global Supply Crises

Muharman Lubis<sup>1\*</sup> and Alif Noorachmad Muttaqin<sup>2</sup>

<sup>1,2</sup> UIN Sunan Gunung Djati Bandung, Indonesia

\*Corresponding author: muharmanlubis@telkomuniversity.ac.id

**Abstract:** This study presents a multidimensional analysis of Indonesia's agricultural policy framework amidst the severe global supply chain disruptions triggered by the 2026 Strait of Hormuz crisis. While the resulting fertilizer shortages present macroeconomic export opportunities, they threaten domestic microeconomic stability and food security. Using Amartya Sen's Entitlement Theory integrated with structural systems theory and the Sustainable Development Goals (SDGs), this paper evaluates the historical trajectory of Indonesian agrarian policies from the Green Revolution to the contemporary Food Estate mega-project. Finding critical vulnerabilities in corporatized agricultural models, the study proposes a paradigm shift rooted in Islamic economics and *Maqashid al-Sharia*. Ultimately, we advocate for the utilization of sustainable financing mechanisms, such as Green *Sukuk* and Islamic blended finance, to empower community-based indigenous farming, thereby safeguarding national food sovereignty and mitigating the socio-economic impacts of global market volatility.

**Keywords:** Food Security; Islamic Economics; Agricultural Policy; Supply Chain Crisis; Green *Sukuk*.

## Introduction

The global food security architecture in the third decade of the 21st century is currently facing massive systemic disruption that is triggering a radical restructuring of agricultural policies across various parts of the world. These upheavals are no longer rooted solely in climate anomalies or extreme weather cycles but are fundamentally driven by geoeconomic fragmentation and escalating geopolitical tensions that are paralyzing the main arteries of international trade. One of the most critical flashpoints threatening the stability of the global food supply stems from the supply chain crisis in the Middle East. Following the escalation of conflict that culminated in military operations in late February 2026, the waters of the Strait of Hormuz were effectively closed, exponentially disrupting the world's major logistics routes (Arita et al., 2026). The Strait of Hormuz has long been recognized by the international community not merely as the lifeline of oil and gas trade—accounting for approximately 20% of global supply—but also as an essential chokepoint facilitating the transit of primary agricultural logistics, including approximately 30% to 35% of the world's fertilizer supply and 45% of the global sulfur supply (Arita et al., 2026).

Acute disruptions in this region—which serves as a major hub for urea production, with the Middle East producing 10 million metric tons, or 20% of the global urea output totaling 50 million metric tons—triggered drastic and inevitable price shocks. Unlike moderate commodity shocks, within less than three weeks of the conflict's escalation, global spot market urea prices surged by more than 28%, eventually skyrocketing to over 40%, soaring from a fundamental value range of \$482 per metric ton to more than \$750 per metric ton (Arita et al., 2026). This shock created an asymmetric crisis that paralyzed various importing nations. Demographically massive nations that are also major agricultural producers, such as India and Australia, faced the threat of acute fertilizer supply shortages that risked derailing their crucial planting seasons, which in turn had the potential to trigger domestic food crises and uncontrollable global food price inflation (Arita et al., 2026).

Amid this escalating global crisis, Indonesia finds itself at a highly complex strategic crossroads, sparking a polarization between macroeconomic opportunities and microeconomic threats. From a macroeconomic perspective, Indonesia's petrochemical infrastructure boasts a massive national urea production capacity of 9.4 million metric tons per year, while domestic consumption for agricultural needs remains below 8 million metric tons. This discrepancy results in a strategic surplus of approximately 2 million metric tons; if exported to capitalize on current global price trends, it could inject revenue potential of up to Rp 25 Triliun (equivalent to approximately \$1.5 billion USD) into the state treasury. However, behind the allure of these tempting macroeconomic foreign exchange figures lies a highly vulnerable microeconomic and geopolitical reality. Agricultural trade policy cannot be separated from the constitutional mandate to protect the livelihoods of the people and from binding international commitments to the Sustainable Development Goals (SDGs), particularly the achievement of SDG 2: Zero Hunger.

This comprehensive research paper aims to unravel and dissect these complexities through the lens of an in-depth, multidimensional analysis. This article will critically evaluate the historical trajectory of agricultural policy in Indonesia, from the Sukarno era to the Joko Widodo era, to understand how the legacy of past structural policies has shaped today's systemic vulnerabilities. Furthermore, this report will examine the trade balance dilemma caused by volatility in global commodity markets and formulate a new paradigm based on the universal principles

of Islamic Economics (*Maqashid as-Syariah*) and sustainable financing schemes (Green *Sukuk*). The goal is to ensure that the ambition to generate a macroeconomic foreign exchange surplus does not become an exploitative tool that sacrifices the subsistence resilience of smallholder farmers at the grassroots level but rather strengthens the pillars of national food sovereignty.

## Literature Review and Theoretical Framework

### 1. Amartya Sen's Entitlement Theory and Structural Criticism

To analyze the phenomenon of famine and the architecture of food security more precisely, the classical Malthusian paradigm—which attributes the problem solely to a decline in aggregate food supply (Food Availability Decline, or FAD)—is considered analytically flawed and no longer adequate. This report adopts the structural approach proposed by world-renowned economist Amartya Sen in 1981 (Sen, 1982).

Through his in-depth empirical observations of various cases of extreme famine in South Asia and Africa, Sen formulated a revolutionary thesis that mass famines or endemic levels of food insecurity are often not triggered by an absolute scarcity of the physical quantity of food available in a country, but rather by a failure of economic entitlement or access—referred to as “entitlement failure.” In this discourse, “entitlement” is specifically defined as “a set of alternative commodities (including a bundle of essential foods) that an individual can control and access within the legal, economic, and social safety nets of the society in which they live” (Kurniawan, 2016). To map the mechanisms by which communities survive, Sen taxonomically divides entitlements into four basic types that operate interdependently within a market system:

**Table 1.**

| Types of Entitlement (Amartya Sen)   | Operational Mechanisms                                                                                                                        | Implications in the Context of Indonesian Agriculture                                                                                                       |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Trade-based entitlement              | The right to freely exchange legally owned assets or goods for food commodities.                                                              | Farmers who exchange their surplus non-rice crop harvests for rice at traditional markets are highly vulnerable to fluctuations in global commodity prices. |
| Production-based entitlement         | The fundamental right to consume food produced autonomously using self-controlled agricultural resources.                                     | The ability of smallholder farmers to consume their own rice harvests is threatened by massive land conversion and corporate land-acquisition projects.     |
| Own-labour entitlement               | The individual right to exchange one's physical capacity, labor, or expertise in exchange for wages that will later be used to purchase food. | Landless day laborers, who are heavily dependent on stable rural wages, would see this livelihood directly destroyed by food price inflation.               |
| Inheritance and transfer entitlement | The right to receive non-market food supplies, whether through inheritance, philanthropy, government assistance, or social safety nets.       | The Rastra rice distribution program, the Family Hope Program (PKH), and trillions of rupiah in fertilizer subsidies allocated in the state budget.         |

Although entitlement theory provides a very strong framework for explaining the microeconomic mechanisms of hunger, this approach has not been immune to comprehensive academic criticism. Structuralists and experts in international political economy have harshly criticized Sen's ideas, arguing that they are often trapped in individualistic, apolitical, and ahistorical biases when analyzing structural factors (Kurniawan, 2016). The literature by Stephen Devereux and the “new thinking on hunger” approach affirm that the issue of food security is, in fact, a multidimensional problem triggered by the policies of political regimes, the hegemony of global governance, structural conflicts, and the power of international financial institutions such as the IMF and the World Bank, which often impose forced liberalization on developing countries (Kurniawan, 2016). Therefore, Sen's entitlement approach in this report is enriched by systems theory, which articulates that to achieve absolute food security, superstructural elements including government policymakers, corporations, and non-state actors must collaborate to address systemic vulnerabilities, rather than merely relying on the laws of the free market, which are often oppressive (Muzerengi et al., 2021; Timmer, 2004). In the context of Indonesia's current food policy, the fusion of entitlement theory and structural criticism directly deconstructs the elitist narrative that consistently glorifies metrics such as the size of national logistics reserves or aggregate rice production capacity.

When the inflation rate for basic food prices spikes sharply, the purchasing power of low-income communities, particularly rural farmworkers and the urban poor will be eroded instantly, creating a mass entitlement failure. Although the physical reserve warehouses managed by the Logistics Agency (BULOG) may appear to have a surplus, a famine could quietly continue to erode the population if the government fails to intervene in market failures by ensuring price affordability and distributing subsidies to the intended recipients (Kurniawan, 2016; Patunru & Iman, 2019; Sutiyo & Maharjan, 2017).

## 2. The Sustainable Development Goals (SDGs) Paradigm and the Dimensions of *Maqashid al-Sharia*

Framework, the Sustainable Development Goals (SDGs) adopted in September 2015 through the UN document “Transforming Our World: The 2030 Agenda for Sustainable Development” set universal standards for efforts to break the cycle of extreme poverty, end hunger, and ensure ecological sustainability. This agenda goes beyond its predecessor, the Millennium Development Goals (MDGs), by prioritizing a participatory, multi-stakeholder approach and the integrative philosophy of “No One Left Behind” (Isman & Kaltsum, 2022). Indonesia has responded to this commitment by incorporating the SDGs (Sustainable Development Goals) into the hierarchy of national positive law through Presidential Regulation (Perpres) No. 59 of 2017.

However, for Indonesia, as a sociological entity with the world’s largest Muslim population the adoption of a Western agenda is not sufficient through formal legal ratification alone; it requires an infusion of cultural and spiritual legitimacy (Isman & Kaltsum, 2022). The process of formulating public policy in countries with a strong socio-religious framework should be grounded in the *Maqashid as-Sharia* (the Primary Objectives of Islamic Shariah). Based on the epistemology formulated by experts in *usul al-fiqh* such as Al-Shatibi, the *Maqashid as-Sharia* is intended to realize the highest good (*maslahah*) and prevent harm (*mafsadah*) for all of humanity through three levels of fundamental needs: *dharuriyyah* (essential/crucial), *hajiyyah* (complementary/secondary needs), and *tahsiniyyah* (aesthetic/tertiary). A comprehensive study presented by (Isman & Kaltsum, 2022) demonstrates an absolute positive correlation between the 17 SDG indicators and the philosophical foundation of the five primary protections (*al-kulliyah al-khamsah*). Table below breaks down this integrative mapping in detail:

**Table 2.**

| The Philosophical Dimensions of <i>Maqashid al-Sharia</i>              | The Scope of Ecosystem Protection                                                                                              | Directly Relevant SDG Targets                                                                                         |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <i>Hifz al-Din</i> (Preservation of Religion and Values)               | Guaranteeing freedom of belief, structural institutional justice, and an ecosystem of social peace.                            | SDG 16 (Peace, Justice, and Strong Institutions), SDG 17 (Cross-Sectoral Partnerships).                               |
| <i>Hifz al-Nafs</i> (Preservation of Life)                             | Efforts to ensure absolute protection of human life, comprehensive health care, energy supply, and clean water.                | SDG 3 (Good Health), SDG 5 (Gender Equality), SDG 6 (Clean Water & Sanitation), SDG 7 (Clean Energy), SDG 11, SDG 13. |
| <i>Hifz al-'Aql</i> (Preservation of Reason and Intellectual Capacity) | Facilitating freedom of thought, research, and a comprehensive education system free from discrimination.                      | SDG 4 (Inclusive and Quality Education).                                                                              |
| <i>Hifz al-Nasl</i> (Preservation of Progeny and the Ecosystem)        | Protecting the carrying capacity of the biological environment so that future generations do not inherit an ecological crisis. | SDG 14 (Conservation of Marine Ecosystems), SDG 15 (Life on Land).                                                    |
| <i>Hifz al-Mal</i> (Preservation of Wealth)                            | Eradicating absolute poverty, ensuring the circulation of wealth, and creating job opportunities.                              | SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 8, SDG 9, SDG 10, SDG 12.                                                |

Analyzing the matrix above, SDG 2 is methodologically strongly aligned with the *Hifz al-Mal* pillar (as it is directly related to aggregate purchasing power and the circulation of food production), while also overlapping with *Hifz al-Nafs*, given that malnutrition and hunger inherently threaten human physical survival (preservation of life). In the macroeconomic context, this alignment is manifested through the principles of *Al-'Adl* (economic justice), which prohibits monopolistic practices, and *Al-Maslahah* (public welfare), which mandates state intervention in the market when asymmetric distortions occur.

In practice, the ambition to boost the country’s foreign exchange reserves through a massive fertilizer export policy (in response to price spikes caused by the Strait of Hormuz crisis) would be classified as a maneuver deviating from the Sharia principle of *Al-Maslahah* if such a pragmatic policy triggers fertilizer shortages in agricultural villages, drives up the farmers’ production costs (input costs) for smallholder farmers beyond the

threshold of viability, and gives rise to a corporatocracy that oppresses the poor. A systemic transformation toward a model of Islamic economics grounded in morality and just governance (good governance) is considered crucial as the guiding spirit in the implementation of national food security development (Isman & Kaltsum, 2022).

### **3. Historical Dynamics and the Transformation of Agrarian Policy (1945–2024)**

To understand the current degree of vulnerability in the domestic food system, any analysis must include a historical examination of agrarian policy in Indonesia. The long journey toward food security in this nation is not a single, linear narrative, but rather a complex tapestry marked by fluctuations in political regimes, clashes of economic ideologies, and coercive interventions by global hegemonic actors. These policy patterns spanning decades have cumulatively shaped the rural ecosystem and determined the subsistence status of smallholder farmers (Natadireja et al., 2024).

### **4. The Socialist Consolidation of the Old Order and the Pragmatism of the New Order's Green Revolution**

In the early years of independence under the leadership of President Sukarno (1945–1965), the design of agricultural policy was characterized by a spirit of nationalistic self-reliance and a socialist welfare approach to rural development. Ideologically, Sukarno regarded sovereignty over land ownership and food self-sufficiency as matters of life and death for a sovereign nation. This vision was enshrined in the enactment of the Basic Agrarian Law (UUPA) No. 5 of 1960, which established a revolutionary agenda to implement comprehensive agrarian reform (land reform). This progressive legal paradigm was specifically designed to dismantle the feudalistic structural inequalities left over from colonialism through the redistribution of land owned by the state and landlords to tenant farmers (farmers without land), with the noble hope of reducing inequalities in the control of primary production capital and independently increasing communal productivity.

However, the bloody transition of power to the New Order regime led by President Suharto (1966–1998) radically shifted the country's course toward capitalist developmentalism. Bolstered by a windfall of massive foreign exchange earnings from the global oil price surge (oil boom) of the 1970s, Suharto's bureaucratic apparatus forcibly implemented the Green Revolution system in a centralized manner through the launch of the Mass Guidance (BIMAS) and Mass Intensification (INMAS) programs. This macro-technocratic approach required the massive-scale introduction of a package of foreign technologies, including high-yield rice varieties (HYV), heavily subsidized synthetic chemical fertilizers, pesticides, and the expansion of cross-regional mega-irrigation infrastructure.

When assessed in narrow quantitative terms, the New Order's policies achieved phenomenal success, even earning a prestigious award from the Food and Agriculture Organization of the United Nations (FAO). Domestic rice productivity soared by a staggering 127%, from just 11.6 million metric tons at the start of the Five-Year Development Plan (1969) to 26.3 million metric tons at its peak in 1984. This achievement magically transformed Indonesia's image from one of the world's largest rice-importing nations into a country with absolute rice self-sufficiency. Furthermore, the absolute poverty rate was dramatically reduced, from 65.0% in 1968 to just 21.6% in 1984. However, behind the veil of glorified macroeconomic statistics, the Green Revolution regime bequeathed a dual-dimensional destructive legacy for the future. Structural dependence on chemical fertilizers triggered permanent soil depletion and biochemical ecological damage, destroyed the diversity of local food wisdom due to the imposition of rice-centered monocultures, and left the country's finances hostage to a ballooning foreign debt burden incurred to finance imports and subsidies for agricultural inputs.

### **5. Liberalization Under the Reform Era: IMF Intervention and Free-Market Hegemony**

The illusory glory of the New Order's developmentism was shattered into pieces by the wave of the Asian Financial Crisis that erupted in late 1997. This collapse forced President B.J. Habibie (1998–1999) to take the helm of a bankrupt nation, which was then subjected to the pressure of strict restructuring measures imposed by the International Monetary Fund (IMF). Through the signing of a Letter of Intent (LoI) with the IMF, Indonesia was forced to swallow the bitter pill of deregulation and blindly liberalize its agricultural trade system. The interventionist role of the Logistics Agency (BULOG)—an institution that historically monopolized imports and guaranteed a price floor to purchase farmers' paddy—was revoked and its authority stripped away; fertilizer subsidies were eliminated; and import tariffs on rice were slashed to a rock-bottom 0%.

The effects of this neoliberal shock therapy of liberalization were absolutely catastrophic for domestic farmers. The wide-open floodgates triggered a tsunami of imported rice that inundated local wet markets; volumes surged dramatically from an average of 1.5 million metric tons per year between 1995 and 1997, then skyrocketed uncontrollably to nearly 6 million metric tons in 1998 alone. This wave of imports effectively stripped the nation of its cherished status of self-sufficiency and crushed the trade-based entitlements of millions of small farmers due to the collapse of domestic paddy prices, which plummeted far below production costs.

Restoration efforts began to show signs of progress under the next transitional leadership. Under Abdurrahman Wahid (Gus Dur) (1999–2001), the ambition to rebuild a community-based food security and sovereignty system was severely hampered by the rigid constraints of WTO liberalization commitments and the legacy of IMF debt burdens. Moving on to the era of President Megawati Soekarnoputri (2001–2004), the state’s determination to intervene in free-market hegemony began to be restored in order to protect farmers. Megawati’s leadership gave rise to the crucial Government Purchase Price (HPP) for rice, designed to ensure a safety net in the form of a minimum price floor during the peak harvest season, mitigate the phenomenon of falling farmgate prices, and take decisive action against the destructive influx of foreign rice by reinstating protectionist import tariffs in the range of 30%.

## 6. The Era of Millennium Consolidation (SBY) and the Paradox of Corporatization (Jokowi)

The modern chapter of agricultural history was shaped by the administration of President Susilo Bambang Yudhoyono (SBY) (2004–2014), whose policies emphasized the adoption of a universal framework through a commitment to the Millennium Development Goals (MDGs). On the microeconomic front of protecting vulnerable segments of society, the SBY era successfully laid the institutional foundation for a comprehensive social safety net. Flagship policies such as the Family Hope Program (PKH)—a conditional cash transfer scheme—methodologically injected direct financial entitlements into the pockets of poor households, ensuring a minimum level of caloric intake for pregnant women and infants. <sup>2</sup> However, rapid national GDP growth driven by the commodities boom (2007–2010) masked an “implementation gap.” The optimistic poverty incidence target in the 2004–2009 Medium-Term Development Plan (RPJM), set at 8.2%, was not achieved; empirical data on the ground showed that poverty reduction had stagnated at 14.1% by the end of 2009. Regarding the macro-level agricultural spatial planning framework, the SBY era also sparked intense debate when it launched the 1.2-million-hectare Merauke Integrated Food and Energy Estate (MIFEE) mega-project in Papua, marking a turning point in the shift of the state’s paradigm toward the corporatization and industrialization of land expansion—a process that is highly capital-intensive and exclusive.

This shift toward a corporatocracy in the food sector reached its peak during President Joko Widodo’s administration (2014–2024). On the one hand, Jokowi strengthened the state’s legal commitment to green sustainability through the issuance of Presidential Regulation (Perpres) No. 59/2017 and Perpres No. 111/2022, which prescriptively integrate the 17 SDG indicators as a holistic guide for development planning from the central government down to autonomous regional agencies. However, the true center of gravity of food policy during the Jokowi era rests on the establishment of the Food Estate macro-agribusiness model as the ultimate instrument of the National Strategic Project (PSN). This top-down project spans regions from Central Kalimantan and North Sumatra to Papua under the pretext of addressing the threat of agricultural land degradation on the island of Java. Ironically, the mega-project policies that dominate public discourse stand in sharp contrast to sectoral empirical indicators that are deteriorating in parallel. Consider the following comparative table showing the decline in key agricultural indicators:

**Table 3.**

| National Agricultural Indicators (2014–2023)  | Actual Data / Achievements                                                                                                                | Critical Structural Implications                                                                                                                                                                       |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Decline in Productive Rice Paddy Land         | The area under cultivation declined from 7.7 million hectares (2018) to 7.1 million hectares (2023).                                      | On average, Indonesia loses 130,000 hectares of fertile rice paddy landscapes annually due to massive conversion to non-agricultural zones (residential and industrial areas).                         |
| Stagnation and Decline in Land Productivity   | Average productivity has stagnated and declined from a peak of 5.4 metric tons per hectare (2020) to 5.24 metric tons per hectare (2022). | Intensification on paper is hampered by input inefficiencies, reducing the aggregate national rice supply amid a steadily growing population.                                                          |
| Demographic Profile of Farmers by Age (Aging) | It is reported that 23.3% of all individual agricultural business operators are now elderly, in the 55–64 age range.                      | A systemic failure to regenerate the younger generation of farmers disrupts the transfer of agricultural technology and threatens the sustainability of village self-reliance (own-labor entitlement). |

The tragic loss of more than 648,000 hectares of ecological rice field landscapes explicitly exposes systemic and chronic challenges in the implementation of land tenure policies, regional zoning boundaries, and compliance

with local agrarian laws. More deeply, a review of the literature from social science and humanities journals has subjected the Food Estate design to a barrage of eco-political criticism. (Hidayaturrehman et al., 2025; Rasji & Tobing, 2024; Wisnaeni & Najib, 2025) clearly articulate that rather than legitimizing land rights that empower the rural economy, the capital-intensive Food Estate model constructs new forms of subordination. Self-sufficient family-based agricultural ecosystems (peasant and family-based farming) are confined, transformed into corporate commodities, and degrading the autonomy of smallholder farmers to mere ranks of daily agricultural laborers trapped in exploitative contracts under the tentacles of the agribusiness behemoth (Maman et al., 2026; Yuwono, 2024). These clashes of interest and the revocation of communal agrarian rights ultimately trigger massive social resistance; The Agrarian Reform Consortium documented no fewer than 2,291 cases of agrarian conflict outbreaks across Indonesia between 2015 and 2020 alone, shattering the premise of social cohesion under SDG 2 and SDG 16 (Just and Peaceful Institutions).

## 7. Global Macroeconomic Shocks and Disruptions in the Supply Chain Architecture

Against the backdrop of this domestic agricultural vulnerability, the resilience of Indonesia's food system must withstand the impact of external factors in the form of the global fertilizer supply chain crisis. Starting in late February 2026, the geopolitical upheaval caused by "Operation Epic Fury" in the Middle East instantly blocked and paralyzed the logistics of essential commodity shipments through the Strait of Hormuz. This contemporary crisis has a fundamentally different nature from the wheat distribution shock caused by the outbreak of the Russia-Ukraine war in early 2022. Market disruptions in the Strait of Hormuz have had an acutely concentrated impact on nitrogen-based products, primarily anhydrous ammonia and urea fertilizer. In response to mass panic and freight delays, global spot prices for urea skyrocketed asymmetrically, recording an anomalous surge of more than 28% in just three weeks, and shortly thereafter soared past the 40% mark, breaching an economically irrational level of over \$700 per metric ton—a brutal anomaly compared to the pre-escalation price stability that had comfortably hovered below the \$500 per metric ton level (Arita et al., 2026).

The severity of this chokepoint disruption is a highly critical factor because the Gulf region surrounding these troubled waters is entirely responsible for the lifeline of agriculture, producing and distributing up to 35% of the total global supply of chemical fertilizers. In modern agricultural crop calendars, the loss of fertilizer availability during a crucial window of the planting season (the semi-dry or rainy season) is not merely a temporary loss of a small percentage of profit margins; the absence of nutrient inputs guarantees direct biochemical damage during the seedling phase, resulting in an exponential decline in final crop yield that cannot be instantly recovered in the following quarter, and will apocalyptically trigger a wave of hyperinflation in food commodity prices across all global regions (*Global Fertilizer Market Under Pressure: The Impact of the Hormuz Crisis*, 2026). This map of global panic examines the acute levels of vulnerability exposure affecting Indonesia's neighboring countries and strategic trading partners, as detailed in an empirical comparison based on global fertilizer dependency profiles:

**Table 4.**

| Strategic Countries | Partner | Deficit Volumes & Supply Chain Vulnerabilities                                                                                                                                                                                                                                         | Further Consequences for Food Security and Geopolitical Threats                                                                                                                                      |
|---------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| India               |         | The massive national deficit stands at 21 million metric tons to meet its annual agricultural quota of 39 million metric tons. <sup>2</sup> The country is at its highest level of vulnerability; 80.6% of its ammonia needs are entirely dependent on supply routes through the Gulf. | The very real risk of a super-massive crop failure looms over the fundamental stability of food security for a population of 1.4 billion people, triggering unstable social panic.                   |
| Australia           |         | A profile of extreme dependence: Australia imports 72.3% of its total domestic urea consumption, and most of its DAP/MAP imports pass directly through the waters of the Strait of Hormuz.                                                                                             | The outbreak of the composite "Double Hit" phenomenon (a combined crisis of a double surge in diesel fuel prices for maritime logistics and an absolute shortage of essential nitrogen fertilizers). |

For Australia, the evaporation of fertilizer supply availability triggers a domino effect of crises across the agricultural value chain: without the nutrient input from fertilizers, the capacity to cultivate essential grain commodities (such as wheat, processed corn, and high-protein soybeans)—which have long supported the animal feed industry—will collapse entirely. This will indirectly, yet absolutely, threaten the stability of the domestic supply of animal protein in Indonesia itself, given the per capita reality that nearly 70% of Indonesia's domestic beef import balance (113,000 metric tons out of a total annual import capacity of 183,000 metric tons) is supplied exclusively by Australian cattle ranchers.

## 8. Macroeconomic Deviations, Microeconomic Realities, and the Trade Retaliation Dilemma

The paradox of a sudden global supply disruption has given Indonesia a golden opportunity to generate windfall profits within its macroeconomic accounting landscape. Thanks to its historical infrastructure, the nation's petrochemical manufacturing facilities and fertilizer plants possess excess urea production capacity, totaling a staggering 9.4 million metric tons. When carefully adjusted for the projected routine domestic consumption rate of the stagnant local agricultural sector—which absorbs slightly less than 8 million metric tons per season—the country logistically holds dominant control over approximately 2 million metric tons of surplus reserves, which hold high political and economic value.

In simple mathematical terms, filling the massive deficit by executing a rescue plan for a super-populous country like India through the allocation of 2 million metric tons of urea exports promises fantastic potential international foreign exchange earnings, estimated to boldly shatter nominal projections by as much as Rp 25 Triliun on the state's accounting books. Unfortunately, this intoxicating linear calculation within the macroeconomic spectrum is bound to crash hard against the concrete wall of harsh international geopolitical reality, intertwined with careful microeconomic ethical considerations regarding the protection of subsistence systems within bilateral trade agreements.

When this crisis erupted, Indonesia had already established an overly dominant commercial position, recording a massive cumulative bilateral trade surplus of Rp 226 trillion (or its equivalent in converted value) relative to the Republic of India's fiscal position. If Indonesia's trade bureaucracy forcibly pushes through a wave of urea exports worth a quadrillion rupiah to the New Delhi administrative region in order to reap sporadic, instant profits, India's trade deficit will worsen even further, placing increasing pressure on its domestic political constituents.

Under the principles of comparative geoeconomics, this weakness will clearly compel the Indian government's technocrats and protectionist policymakers to launch economic-political retaliation (geopolitical retaliation). This mechanism could take the form of coercive diplomatic pressure that would dictate, compel, and pressure the Indonesian cabinet to reabsorb and massively import cheaper volumes of substitute agricultural commodities from Indian farms (such as the imposition of counter-quotas for raw cane sugar, surplus medium-grade rice, or metric tons of competitively priced frozen buffalo meat without the imposition of protective tariff barriers). The torrential influx of these low-quality imported subsistence food commodities from India will inevitably crush the fundamental pillars protecting the domestic price structure (price floor / HPP) and brutally eliminate the exchange rate bargaining power (trade-based entitlement) held by local farmers. This ruthless chain of causality will, in turn, drive, destroy, and plunge millions of lives within the domestic smallholder farming community into the dark abyss of extreme rural poverty, sabotaging all the noble projects designed to eradicate hunger that have been pledged. This is the concrete definition of the central dilemma, pitting the lure of rent-seeking from global capitalist integration against a nation's microeconomic ethical obligation to protect the right to life of its smallest units in the villages.

## 9. SDG Performance Indicators, Malnutrition Eradication, and National Fiscal Stabilization

The resilience and adaptability of domestic structural policy frameworks are objectively and empirically assessed using standardized global ranking metrics released regularly by an independent consortium.

## 10. The Global Hunger Index (GHI) and ASEAN Regional Macroeconomic Performance

Based on key statistical data published in the latest 2025 edition of the Global Hunger Index (GHI)—which measures calorie vulnerability—Indonesia has achieved the prestigious yet tentative 70th rank out of a total sample of 123 countries worldwide, with an aggregate index score of 14.6 (statbase, 2025). Although this empirical metric suggests that hyper-extreme hunger has been successfully eliminated (based on historical data showing a sharp decline in the index value over eight consecutive years), this “moderate” quantification still points to an alarming diagnosis: that the utopian ambition of pursuing the full “Zero Hunger” mission demands not only increased raw grain production but also the absolute prerequisite of implementing holistic interventions in complementary agricultural sectors that specifically target the comprehensive production of micronutrient-rich crops (nutrition-sensitive agriculture) (Nugraha, 2017).

Meanwhile, looking at a geopolitical comparison of neighboring countries within the regional bloc as they approach the finish line for achieving the 2030 Agenda, the publication of the ASEAN SDG Index indicators (2023 evaluation report period) highlights the fact that Indonesia's comparative position has successfully secured a spot in the top four, with a solid composite score of 70.16. This cumulative composite score explicitly indicates that Indonesia has successfully crossed the crucial threshold of 70 points—a benchmark for progress—and is closely trailing the three regional reform pioneers led firmly by Thailand (74.74), followed by the rising Vietnam (73.32), and the stabilizing presence of Singapore (71.78) in terms of aggregate, multi-dimensional progress—both macroeconomic and ecological.

## 11. Trends in the Reduction of Malnutrition Indicators Based on the National Nutrition Status Survey

The integration of legislative instruments derived from the SDG doctrine—implemented in a technocratic manner through the involvement of the bureaucracy in regional monitoring action plans—has yielded highly substantial public health dividends, particularly in the ambitious effort to flatten the trend curve of cases of absolute malnutrition. The synchronization of field parameter monitoring—aggregated through the validity of the Ministry of Health’s Indonesian Nutrition Status Survey (SSGI)—has yielded encouraging, measurable diagnostic results when compared to the baseline established at the start of the comprehensive integrated intervention in 2013 through to the current era of disruption:

**Table 5.**

| Clinical Indicators of Malnutrition in the Under-Five Population | Initial Prevalence Ratio (Baseline 2013)            | Current Prevalence Ratio (2024 Period)       | Analysis of Sustained National Progress                                                                                                                                                                                                                                              |
|------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stunting (Failure to Thrive / Chronic Stunting)                  | Once as high as 37.6%                               | Now drastically reduced to 19.8%             | A monumental achievement; the prevalence rate was successfully cut nearly in half, and for the first time, it reflects a level approaching the minimum threshold set by WHO territorial guidelines, which require that the risk tolerance level for vulnerability be kept below 20%. |
| Wasting (Muscle Mass Deficiency / Acute Wasting)                 | Recorded at 12.1%                                   | Declining steadily to a stable level of 7.4% | This consistent downward trend in prevalence is the closest causal correlation to the effectiveness of the program to expand access to distribution centers for high-calorie food reserves.                                                                                          |
| Overweight (Excess Body Mass Anomaly / Obesity in Toddlers)      | Accounted for a double share of approximately 11.8% | Declined sharply to a minority share of 3.4% | Lifestyle changes, the success of educational modules on the “double burden of malnutrition,” and the restructuring of the local community’s food ecosystem.                                                                                                                         |

The compiled data refer to the official findings from the 2024 SSGI instrument, which are consistent and aligned with the historical database of the 2023 Indonesian Health Survey (SKI), which records the equivalence of the national static stunting deviation with the proportion of empirically weighted sample findings in the range of 19.69%–19.8% from a comprehensive survey of tens of thousands of valid respondent observations (Artanti et al., 2026). Further multivariate academic analysis confirms that the success in mitigating stunting vulnerability is not merely due to coincidental grain supply, but rather the result of the convergence of complex, cross-structural multifactorial determinants; where the integration of clean sanitation, the timeliness of nutritional interventions starting from the first 1,000 days of life, the rate of hygiene education coverage, the acquisition of a Social Protection Card (KPS), and the assurance of complete immunization coverage have been empirically proven to play the most vital role in preventing secondary infectious diseases that constantly and latently deplete the intake of micronutrients in toddlers (Arief et al., 2025; Artanti et al., 2026).

This promising trend in the static reduction curve brings a breath of optimism amid the transition into the new decade, as the nation moves toward meeting the ambitious targets set out in the RPJMN by the end of the 2029 cycle—which aims to reduce the stunting rate to exactly 14.2%. Although these aggregate figures paint a brilliant picture of the nation’s overall development, the government must not become complacent in the euphoria of statistical success, because at the grassroots level across the archipelago, the shadow of asymmetrical distribution—or disparities among administrative regions (provinces)—remains deeply entrenched. The SSGI

study underscores a grim and jarring reality: based on national aggregate calculations, no fewer than 2.3 million unfortunate young children diagnosed with stunting are now, demographically speaking, concentrated in just six key provinces where the condition is endemic, a heartbreaking anomaly that dictates an urgent imperative for the government to immediately shift from a blanket budget allocation policy to a laser-focused, localized approach—injecting financial resources for nutrition interventions that are ultra-specific and grounded in local wisdom regarding the spatial vulnerabilities of the affected regions.

## **12. A Policy Mix of Fiscal Intervention (State Budget) and Measures to Safeguard Purchasing Power Stability**

In the labyrinth of the complexities of macroeconomic theory and the realities that govern it, the driving force behind the specter of famine is, in essence, set in motion—rationally yet ruthlessly—by the invisible mechanism of inflation volatility. According to the simple mathematical laws of economics tied to the reality of the lower classes' plight, when an external crisis (such as the outbreak of a geopolitical shock and the chaotic disruption of the global supply chain in the Strait of Hormuz) fires a cannonball that triggers hyperinflation, sweeping through the retail price indices of essential food commodities at the stalls of major markets; at that very moment, the share of nominal purchasing power—or the buying power—of the entire population segment in the lowest income deciles, burdened by the deepest poverty, will be sliced away, scorched, and crushed until it is completely obliterated, leaving nothing behind (Alamsyahbana et al., 2025).

Given this certain projection of a domino-effect crisis, the backbone of the structural architecture of the State Budget (APBN) for the current 2024 fiscal year has been constructed and locked in with a design philosophy that serves as a functional shock absorber (a protective shield that cushions the shock of absolute economic volatility), carrying out the vital mandate of anchoring the economy, reducing market speculation, and steadfastly maintaining the sacred equilibrium of domestic purchasing power. Analyzing the proposed budget structure from an analytical perspective, trillions of rupiah in state funds are calculated and allocated to specific sectoral budget lines in a meticulous, rigid, and highly precise manner:

- A massive injection of funds—with a staggering budget ceiling of Rp 503.6 trillion—has been allocated to target the tactical programs under the umbrella of the Social Protection scheme, which, from a sociological perspective, will stem and mitigate the risk of chronic deprivation of essential commodities among millions of marginalized individuals and vulnerable families affected in rural areas and urban slums.
- In the support sector, the infrastructure for physical logistics—the lifeline for commodity mobilization—has been injected with capital of no less than Rp 399.3 trillion.
- Most crucially, the primary shield cluster—which exclusively oversees the nation's food security logistics operations—has been mandated to execute a budget of Rp 139.4 trillion. Breaking down this agricultural funding in detail, an absolute value of no less than Rp 6.3 trillion is earmarked solely to subsidize a tonnage of 3.8 million metric tons of essential chemical fertilizers—solely to maintain and safeguard the cost structure of basic agricultural inputs that burden smallholder rice farmers, ensuring their production remains economically viable and operates on a far more rational footing, grounded in a civilized system and protected from the reckless volatility of the free global marketplace.

The combination of harmonizing this ultra-tight monetary policy mix with the disciplined and comprehensive deployment of tactical fiscal policy levers has been phenomenally successful in steering Consumer Price Index (CPI) inflation into a state of peaceful, controlled stability, recording an astonishingly low and moderate rate that remained steady at 1.55% (as of late November in the mid-2024 decade), without fundamentally undermining the momentum driving the trajectory toward achieving aggregate GDP expectations (national economic growth), which authoritatively recorded a statistical figure of 4.95% at the end of the third quarter of the same fiscal year, demonstrating the reliability and artistry of brilliant monetary management.

## **13. Development of a Model for Sustainable Agricultural Funding and Financing Using Sharia Economic Instruments**

As keenly noted by scholars of economic sociology and experts in macroeconomic development, the dominance of the narrative of agriculture's false revival during the decades of the New Order and the dark period of the collapse of the national shield under the hegemonic intervention of the IMF has resoundingly bequeathed a priceless golden lesson to the architects of the nation's bureaucracy: Relying solely on commercial debt (Foreign Debt Ratio / ULN) to keep the wheels of basic logistics infrastructure development turning will only spawn the snare of an acute structural balance of payments deficit and plunge the nation's true economic sovereignty into the depths of the humiliating, endless abyss of globalization's exploitation. Recognizing the inherent weaknesses of this conventional model of international usury, Indonesia's governing elite, Islamic scholars, and central regulators—as the vanguard of a Muslim superpower—have vowed to become pioneering reformers, tirelessly experimenting to construct an evolutionary architecture of innovation—innovative instruments, products, and

structures for grand, self-reliant capital financing—which, in every aspect of their operation, must embody the esoteric values of its noble theological, philosophical, and sociological-religious identity, namely by celebrating the massive institutionalization of the integration of financial instruments known as “Islamic finance” into the very heart of agrarian defense strategies at the highest level.

#### 14. Beyond Bond Issuances Alone: The Synergy of Blended Finance and Green *Sukuk*

The concept of bypassing conventional central budgeting instruments based on the traditional state budget (APBN) to fund groundbreaking green resilience investments was rolled out through the issuance of Sharia-compliant bonds—designed in a highly radical manner—under the bond issuance framework that has earned a global reputation as State Sharia Securities (SBSN) aligned with the principles of environmental sustainability (Green *Sukuk*). And not content to stop at this innovation alone, the engines of progressive financial literature are spreading their wings of dual social protection by providing a platform for an astonishing hybrid Islamic philanthropic social-impact instrument—seamlessly integrating modern government bond issuance schemes with an advanced model of blended communal charitable financing (Islamic blended finance) into the womb of an unparalleled institutional fusion entity (Musari, 2026).

The architectural framework of a prototype innovation model for large-scale construction projects that champions the blended finance model (Sharia-compliant blended finance) generally employs tactical methods to defragment and strengthen collaboration by integrating grant contributions—such as non-profit donations or social welfare funds that are highly tolerant of volatility— (zero/low-cost funds)—for example, by pooling massive accumulations of communal zakat on a national scale through BAZNAS, or by optimizing the deployment of schemes for the distribution of proceeds from bond instruments based on productive cash waqf guarantees (CWLS (Cash *Waqf* Linked *Sukuk*))—and then structuring their distribution to flow seamlessly and in tandem with the steady stream of capital from profit-driven commercial entities at the highest institutional levels, as well as through financing assistance programs from world-class international institutions such as UN programs (such as the joint engineering model facilitated by the UN’s international development funding institutions, represented by the UNDP) in a joint mission to collectively share the financial risk burden in order to minimize the potential for default across the spectrum of insurance coverage percentages for macro-level green investment projects (de-risking mechanism) within the construction portfolio of energy project ecosystems or programs for the development and preservation of village —village centers for agricultural land on a national and integrated industrial scale that are constantly vulnerable to climate risks and are often shunned by arrogant conventional banks seeking high margins (Sawaneh & Badjie, 2021).

Grounded in the dogmatic, sacrosanct corridor of business ethics strictly adhered to by constitutional theology, the issuance of state *sukuk* certificates is classified as rigid, definitive, logical, absolutely prohibited, and haram, and with the authority of absolute dogma, it strives with all its might to purge any potential contamination by elements of structured gambling and fraudulent speculation schemes (*Maysir*), condemns and prohibits all forms of malicious collusion and the lack of clarity in the details of agreements regarding future investment returns—which are engineered to deceive the public (*Gharar*), and most sharply, challenging, uprooting, and declaring a fatal severance of ties with the suffocating exploitation of compound interest in the style of the deviant, exploitative capitalist monetary system that preys upon the suffering of the poor (*Riba*), so that, cohesively, the theological values underpinning this noble scheme have flowed in unison, much like a harmonious dance to the rhythm of a melody of moral values—a melody struck with vigor, penetrating deep into the very core of the guiding principles of the spiritual foundation of human rights, the philosophy of justice, and the ultimate goal of liberating humanity from ignorance—as will one day be embraced, celebrated, and longed for from the pinnacle of dreams—the fulfillment and realization of global goals, the pillars of the framework for universal humanity—facilitated under the umbrella of the grand document, the charter of civilization known as the Sustainable Development Goals (SDGs).

As a complement to the physical manifestation, the share ownership certificate—part of the portfolio allocation document for the massive national project scheme based on Green *Sukuk* issuance—is consistently elaborated upon and interpreted to convey the ontological essence of its fundamental purpose, which is solely by anchoring and grounding its pure mission to dedicate budgetary funds to the observance of celebrating the achievement of indicators safeguarding the nobility of human civilization through the realization of a sacred project of value compliance, which is rooted in the scriptural framework of the normative legal corridor of the absolute principles of *usul al-sharia*, *Hifz al-Bi’ah* (the obligatory religious struggle to defend the mission of protecting, preserving, and ensuring the continuity of the ecological order and the harmony of the biological environment—including flora, fauna, as well as the vegetation and living spaces of humanity and the universe) which is presented and directed without discrimination, in a strictly imperative manner that leaves no room for doubt; it is fully allocated and donated to exclusively fuel the capital required for the implementation of clusters of development project packages —physical projects for protection, adaptation, vulnerability mitigation, resilience, substitution, innovation, and the transition to a renewable, carbon-neutral energy mix free of toxic residues, pollution, and emissions; Earth-saving mission packages, decarbonization programs, air purification,

mitigation, adaptation, and resistance scenarios against the devastating effects of global warming, deadly weather cycles, catastrophic crises, and sudden climate change variations; as well as in the realm of grassroots farming, consistently revitalizing and supplying pipeline networks and mega-structures for water facilities, procurement and provision of irrigation, agricultural sovereignty, organic farming logistics, and sustainable green irrigation with technological dimensions that minimize the clearing of protected forests, a grand narrative of a project with sacred humanitarian dimensions that clearly sets itself apart while boldly standing upright, loudly opposing and condemning the methodology and approach of greedy, exploitative, ecologically destructive physical development—an unethical, destructive model that viciously devours the biological carrying capacity of nature that once dominated, and often starkly tarnishes the somber face of the long, dark narrative of history of the dark madness of the New Order’s coercive machinery as it forcibly consecrated the absolutism of the hegemonic doctrine of policy—the massive, brutal implementation of legacy projects—and the narrative of the forced implementation of the Green Revolution upon the shoulders of our own nation’s hoe-wielding slaves during the past half-century of collective memory (Arrazi, 2025; Fitrah & Soemitra, 2022; Musari, 2025).

#### **15. Validation of Empirical Evidence on the Significance of the Correlation Between the Impact of Islamic Bank Agricultural Financing and Fundamental Welfare Parameters and GDP Growth**

The waning of public skepticism and the decline of cynicism among secular Western economists regarding operational efficacy, the ability to explore the implications of pragmatic, logical outcomes—the tangible benefits to civilization brought by the modern wave of Islamic bank financing instruments and derivative products, as well as microeconomic social institutions of Islamic banking—across Indonesia’s thousand islands and hundreds of cultures will eventually find a solid foundation, a pillar of strength, and a basis for legitimacy, justification, and reference in the successful outcomes of the observational stages the validity of testing, the results of proof, evidence from laboratory experiments, and grand, macro-scale mathematical and empirical data—all meticulously examined in detail and powerfully dissecting the causal traces of the past through the lens of methodological formulation, computational models, statistical validity, global standards, scientific calculation principles, and reliable contemporary econometric formulas—the pride of the global academic community today (Azwar & Usman, 2025).

The process of conducting precision tests on complex calculations to assess the reliability of econometric modeling data, using model estimation and range analysis of time-series data —measured time-series data— dissecting repeated quarterly observations during the recession period, meticulously operationalized using state-of-the-art analytical tools and scientific methodologies, employing complex instrumental design approaches based on the theory of cointegration equations with dynamic bounds and asymmetrically distributed lag variables, utilizing the Autoregressive Distributed Lag (ARDL). This comprehensive analysis processes massive quantitative sample data to refine macroeconomic indicators through large-scale aggregation, utilizing validated quarterly performance balance sheet reports supervised by the Financial Services Authority (OJK), with parameter estimates covering a broad scope, analyzing data framed by the size of the economic cycle over the entire decade-long fiscal cycle spanning from the start of data collection in Q1 2014 through to the final confirmation of the sample report in Q1 2022, conclusively proving the hypothesis with scientific findings that confirm the level of scientific validity and significance at the star level, unequivocally refuting any doubt that the massive phenomenon of the flow of capital financing through productive credit instruments—which is dynamic and firmly grounded— strictly guided by and adhering to the principles of compliance with the audit references of the Sharia Supervisory Board, with an exclusive focus on distributing and serving the target clusters of priority investment projects to advance initiatives supporting the achievement of sectoral targets per SDG parameter points, demonstrates an irrefutable phenomenon, generating and confirming the realization of real figures with symmetrical correlations that stimulate the momentum driving the improvement of aggregate performance indicators, achieving record-breaking macroeconomic improvement scores in a visible and tangible manner, without any statistical manipulation (Azwar & Usman, 2025).

By dissecting the inner workings of the proof matrices generated from this synthesis process, we found, through the identification of common threads in formulating conclusions regarding the prediction of long-term stability trends in the spectrum of observed relationships (a model interpreting the adjustment of cointegration in long-term dynamic movements / long-term analysis), absolute evidence was found of the investment of aggregate circulating funds—specifically the portion of commercial capital financing injections based on Sharia-compliant schemes—which strive to serve the noble objectives of the program’s target indicators for ending the suffering of the impoverished population and breaking the chains of poverty (in line with the commitment to SDG 1), dedication to capital investment for achieving stability in food security, surplus logistics, and nutrition—preventing and eliminating the tragedy of chronic malnutrition (in line with the focus points of SDG 2), the circulation of endowment funds to finance access to and the establishment of clinics, hospitals, and health services of high quality, equipped with first-rate and dignified medical facilities (aligned with the compass of parameters, targets, resolutions, and facility achievement points of SDG 3), subsidies for the establishment of learning

ecosystem infrastructure and the cultivation of a “golden generation” through institutions that guarantee the right to acquire knowledge at internationally accredited educational institutions (pursuing the criteria, key points, and mandatory indicators of the SDG 4 commitment), while funding the overhaul of the blueprint for community infrastructure planning—including the management of facilities, spatial layout, and the landscape dimensions of residential habitats—to create a tolerant, safe, resilient, comfortable, livable, adaptive, inclusive, and sustainable urban environment with adequate, open, ecological public spaces free from slums and destitution (faithfully implementing the core commitments and values of the charter for civilizational planning as outlined in SDG 11 indicators) All of the massive packages and schemes outlined above have unequivocally been proven to stimulate, boost, and drive up the percentage figures, the sequence of increases, the ratio of progress, the accumulation of wealth, the acceleration of growth, the leap in trends, and the accumulation of economic strength—including reserves, economic volume, the aggregate capital pie, the scale of the economic development pie, and the total GDP figures of the nation (mathematically, GDP growth) which miraculously exploded, forming a symmetrical, parallel, uniform, and aligned correlation, tracing a linear upward-sloping curve that rises rapidly and consistently, forming a linear correlation with statistical regression trend parameters of a bound, dimensional nature, exhibiting a symmetrical positive correlation that mutually propels and rapidly skyrockets with an exponential acceleration over the long-term time span under review (positively correlated with a surge in long-term domestic macroeconomic growth) (Azwar & Usman, 2025).

Conversely, in the real-world institutional context at the grassroots level—the base of the pyramid—the effectiveness of adapting and adopting a profit/loss-sharing scheme as an instrument of distributive justice—such as the genuine and sincere implementation of the Mudharabah investment funding model, commercial partnership, agency arrangements involving funds and labor, and the practice of joint venture financing through the pooling of assets in a collective investment model where risks are shared proportionally and returns are distributed in accordance with legal regulations—such as corporate bond investment schemes in a civil law format based on *Musarakah*) at the very heart of the ecosystem’s network of capital accessibility services—provided by guardian institutions, financial institutions, micro-asset-based credit providers, grassroots savings and loan cooperatives, liquidity suppliers, microcredit providers operating under the legal umbrella of entities compliant with Sharia law, governed by audit-based boards of representatives, and rooted in rural, grassroots community associations—all under the broad umbrella of the ecosystem that nurtures—a nurturing womb for the emergence of people’s capital (Islamic microfinance)—truly replicates and duplicates, creating ripples that give birth to the rise of a hidden economic giant, demonstrating the resurgence of household-scale enterprises, fledgling micro-entrepreneurs, ultra-grassroots micro-entrepreneurs, and small artisans (SME micro-financing impact) that has exploded and blossomed, directly revitalizing and injecting autonomous self-reliance into the smallest social units—the aggregate cells of the community, the bonds of brotherhood, the ties of kinship, the spiritual connections of rural life, the foundation of collective wisdom, the community hubs, and the grassroots granaries in the remote, far-flung, and isolated rural areas—in the deeply underdeveloped, remote, and isolated agricultural villages far-flung agricultural villages without access to paved roads—where the phenomenon of injecting passion and the resurgence of competitive, financially independent, and autonomous villages, through organic, systematic, and cooperative efforts, has become a colossal obstruction and a seemingly insurmountable, deadly fortress, castrating and thoroughly blocking, halting, and choking to death—cutting off the lifelines, channels, taps, pipes, and drainage systems that suck away the flow, the movement, the escape, and the seepage of the—surplus, extraction, drops of sweat, the value of toil, the flight of gross profits, corporate exploitation, profit extraction, drops of rent, oligopoly value, and the economic oppression of the village—all seeping away, fleeing, flowing off, and being cast far away without end, never to return, settling in vain into foreign savings accounts, corporate coffers, and shadow bank accounts in the centers of foreign capitalism, in the giant metropolises of faceless entities, cruel oppressors—the owners of granaries in developed nations, continents, and regions far to the north (Azwar & Usman, 2025).

The open access to the flow of sacred capital loans—which are not greedy or exploitative, unpretentious, fair, and unconditional—without seizing or impoverishing the confiscated assets and land belonging to these impoverished farmers—necessitates and maximizes the capacity, absorption power, and ability to empower the availability of instruments capable of utilizing this independent access to liquid capital. This makes it entirely possible to freely and boldly establish a community of farmers’ associations to build and save capital through joint, self-reliant, collective, autonomous, and bold efforts, and to be able to acquire, purchase, and own—as well as embrace—technological tools, scientific methods, engineering systems, equipment, access to grafting facilities, utilization of technology, transfer of ownership rights, installation of patented machinery, adoption of innovations, modern facilities, procurement, design, and management of giant machinery, processing machinery, extraction furnaces, and recycling, drying, composting, and fermentation equipment for processing mill residue, shredded husks, rice bran, rice husks, harvested straw, grass, biomass conversion, decomposition, fertilizer production, waste processing, byproducts, post-harvest waste, production residues, post-operation separation, cleaning, and processing of residual materials—including rotting waste piles and mountains of useless organic harvest waste—are transformed and recycled into liquid organic fertilizer—a nutrient-rich, liquid, climate-friendly fertilizer—

and the utilization of raw materials for fuel, substitution of plant-based pellets, and village bioenergy, all managed communally, independently, and self-sufficiently, without having to limp along, whimper, bow their heads, beg, hold out a bowl to ask for loans from middlemen, plead, whine, be pressured, be strangled, be helpless, struggle to send their children to school, or compromise their self-respect by being forced to stamp their thumbprint a sign of surrender to the bonds of shackles and handcuffs, holding one's breath, borrowing, having to bear the burden, enduring, resigned, oppressed, subjugated, crushed within the coils of a trap, suffering the torment of multiplying bills—the cruelty of compound interest, accruing interest, and merciless installment payments to escape the middlemen's grip—the heavy burden of cruel, suffocating obligations that silence and force compliance to pay off bills, overdue interest, installments—the heavy burden piling up, mounting into a mountain of debt, loan payments from usurious financial institutions, purely commercial corporations, exploitative interest rates, a trapping system (usurers, bloodsuckers with terrifying faces disguised as instant helpers) who frequently and routinely raid and viciously plunder, snatching away the price of unhusked rice, lying in wait like a wolf-like specter at the threshold of a poor hut, a dilapidated room at the gate of a gray bamboo shack—and this terror of the loan sharks constantly hunts and snares the noose of a tragic fate around the throat during times of famine, famine, or holds a machete to the neck during the harvest season abundant harvests, sudden harvests, bountiful harvests—only to plummet sharply after the exhaustion of celebrations during the transitional season of joyous harvest festivals, after the grand harvest is over, into the heartbreaking post-harvest lean season, wherein true liberation—the release from the burden of eternal torment and the suffering of these shackles—is viewed through the lens of ontological reflection and transcendental religious philosophy, deeply explored, studied, and contemplated from the silent chamber of the sacred mihrab, the space of scholarly contemplation in the philosophy of *usul al-fiqh*, the civilization and legal order of divine law; its essence is not merely the success in deciphering the GDP formula, but simultaneously perfecting, realizing, and presenting a demonstration—a performance of evidence—of pure, flawless existence; an empirical demonstration of the greatest and most complete actualization as a symbol and emblem of unwavering resolve, a noble and sacred offering, a sublime and majestic manifestation that is true, genuine, sincere, clean, pure, and unblemished, the essence, the crystallization, the mirror of the soul, the embodiment of the essence of safeguarding the implementation and upholding the parameters of doctrinal values, the embodiment of the essence of enforcing absolute milestones, the foundation pillars of protecting rights, prosperity, and just ownership, the sacred, principled pillars of maintaining continuity and safeguarding the circulation of wealth among the ranks of the poor and the vulnerable, the pillars of fundamental dogmatic principles of *Hifz al-Mal* (Shamsudheen & Muneeza, 2024).

## 16. Conclusions and Implications: Recommendations for Strategic Solutions

After dissecting and analyzing the anatomy of the global market panic landscape—triggered by sudden distortions in the supply of macroeconomic commodities and logistics that were shattered, butchered, bruised, crippled, and torn to shreds—torn apart by the slashing impact of shockwaves, seismic tremors, explosive storms, deadly ripples, turbulent upheavals, the circus-like arena of conflict, clashes over hegemony and power, military posturing, displays of force, the theater of threats, sanctions, embargoes, deadly explosions, tragic tensions, the constellation of war, crisis hotspots, bloody blockades, military operations, and the Gulf crisis that disrupted for maritime cargo shipping, the transport of supplies, and sailing—which have been severed, paralyzed, and stranded in the waters of a colossal crisis—triggering the eruption of the Strait of Hormuz, which erupted, raged savagely, boiled over, and shocked the global market at the start of the first quarter of this crisis in the calendar year of the 2026 fiscal year, which intersects and overlaps symmetrically, piling up and interlocking directly in a brutal manner, slicing, tearing, shattering, and crushing every joint of stability and pillar, while directly juxtaposed with the inherent weaknesses of umbrella instruments and shields, the weaknesses of product protection, protection schemes, intervention programs, dampening instruments, public policy mitigation measures by the central government, and the vulnerabilities and —weaknesses in composite indicators, statistical anomalies, anomalies in achievement, composite parameters, reality data, portraits of aging distribution, aging ranges, distribution curve anomalies, data disparities, indicator blind spots, demographics, malnutrition, aging profiles, maps of obsolescence and bankruptcy, statistical data, population data, structural data, micro-spatial data, demographic and health inequalities, rural micro-misery in the vast wilderness earth's expanse, layers, fields of life, huts, regional distribution, expanse of fields across the archipelago, a series of formulations, crystallization, pearls of wisdom, analysis, sharp deductions, implications, conclusions, design, guidelines, blueprints, strategies, models, proposals, tactical solutions, operational resolutions, urgent measures, measured tactical steps, policy solutions, critical and essential mitigation measures that must be submitted, advanced, rolled out, and formulated immediately—urgent, emergency, and enforced to be executed immediately so that the parameters—the compass, route, wheels, course, guide, speed, train cars, ship movement, maneuvers, direction, trajectory, fleet, national journey, progress, speed, target achievement, resolution, pillars, milestones, and the pride of Zero Hunger—remain steadfast and disciplined, guided without slipping, veering off course, or running aground, sailing resolutely, steadfastly, and purposefully, continuing to move along the track's speed parameters on the asphalt at its optimal speed, constantly, without deviation, without the slightest flaw, and without stopping.

## 17. Cross-Sectoral Committee Institutions and the Systems Theory Approach

To navigate the complex web of global supply chain disruptions and domestic structural vulnerabilities, the establishment of a specialized Cross-Sectoral Committee is an absolute imperative. Drawing upon the principles of systems theory, which posits that agricultural resilience cannot be achieved through isolated sectoral interventions, this committee must serve as the central coordinating nexus integrating the Ministry of Agriculture, the Ministry of Finance, the Logistics Agency (BULOG), and non-state actors, including Islamic financial institutions. By breaking down entrenched bureaucratic silos, this institutional framework ensures that macroeconomic ambitions—such as managing fertilizer export surpluses—do not inadvertently compromise microeconomic safety nets. A systems approach mandates that food sovereignty be managed as a holistic ecosystem, wherein fiscal policies, logistical distribution networks, and nutritional interventions are dynamically synchronized to absorb external geopolitical shocks and protect the purchasing power of the most vulnerable demographic deciles.

Operationally, this Cross-Sectoral Committee must leverage real-time, precision-driven data analytics to execute targeted mitigation strategies, directly addressing the systemic blind spots of previous blanket policy approaches. Guided by the holistic framework of the Sustainable Development Goals (SDGs) and Maqashid al-Sharia, the institution's primary mandate is to facilitate the rapid deployment of blended Islamic finance instruments—such as Green Sukuk and productive cash waqf—directly into localized agrarian ecosystems. By functioning as a continuous feedback loop between central policymakers and grassroots agricultural realities, the committee can dynamically calibrate the State Budget (APBN) allocations, agricultural input subsidies, and market interventions. This collaborative and adaptive governance model ultimately transforms systemic vulnerabilities into structural resilience, ensuring that emergency responses to crises, like the Strait of Hormuz bottleneck, are harmonized with long-term commitments to eradicating malnutrition and safeguarding national food security.

## 18. Deconstructing the Food Estate Project and Reorienting the Sovereignty and Autonomy of Indigenous Smallholder Farmers Through a Community-Based Approach (Peasant Sovereignty Reorientation)

The contemporary paradigm of the Food Estate mega-project must be critically deconstructed and systematically dismantled, as it fundamentally contradicts the core tenets of ecological sustainability and social justice. Driven by a top-down, corporatized agribusiness model, this macro-level intervention has systematically marginalized indigenous smallholder farmers, reducing their status from autonomous cultivators to dependent day laborers trapped in exploitative contracts. Empirical data and socio-ecological critiques demonstrate that this capital-intensive approach not only accelerates the degradation of vital ecological landscapes and biodiversity but also exacerbates agrarian conflicts by disenfranchising local communities of their customary land rights. Instead of fortifying national food security, the corporatocracy inherent in the Food Estate architecture deepens systemic vulnerabilities by prioritizing agro-industrial yields over the fundamental right to life, own-labor entitlements, and the self-sufficiency of rural households.

In stark contrast to this centralized corporate hegemony, national agricultural policy must be urgently reoriented toward a community-based approach that champions the sovereignty and autonomy of indigenous smallholder farmers. This "Peasant Sovereignty Reorientation" demands the revitalization of localized, family-based farming ecosystems powered by equitable Islamic microfinance models, such as mudharabah and musyarakah. By injecting autonomous capital directly into village cooperatives without the predatory constraints of conventional interest, farming communities can independently procure green technologies, manage organic fertilizer recycling systems, and dictate their own harvest economies. This structural empowerment not only emancipates rural granaries from the exploitative grip of middlemen and global supply chain volatility but also fulfills the spiritual and ethical mandates of Hifz al-Mal and Hifz al-Bi'ah, ultimately forging a resilient, decentralized agricultural network that secures true national food sovereignty from the ground up.

## References

- Alamsyahbana, M. I., Chartady, R., Bahri, S., & Antania, L. (2025). Macro Economics Perspective on Sustainability Development Goals (SDGs) Index in 5 ASEAN Country. *SINTAMA: Jurnal Sistem Informasi, Akuntansi Dan Manajemen*, 5(1), 37–51. <https://jurnal.adai.or.id/index.php/sintamai/article/download/856/605>
- Arief, Y. S., Yunita, F. C., Efendi, F., Murti, F. A. K., Pradipta, R. O., & McKenna, L. (2025). Social and Environmental Determinants of Childhood Stunting in Indonesia: National Cross-Sectional Study. *JMIR Pediatrics and Parenting*, 8, e68918–e68918. <https://doi.org/10.2196/68918>
- Arita, S., Chakravorty, R., Kim, J., Lwin, Y., & Steinbach, S. (2026). *Strait of Hormuz Closure and Fertilizer*

- Supply Risks for U.S. Agriculture*. <https://farmdocdaily.illinois.edu/2026/03/strait-of-hormuz-closure-and-fertilizer-supply-risks-for->
- Arrazi, M. F. (2025). Maqasid al-Shariah and Sustainable Finance: Analyzing the Impact of Green Sukuk Allocation in Indonesia. *Muslim Business and Economics Review*, 4(1), 89–107. <https://doi.org/10.56529/mber.v4i1.431>
- Artanti, K. D., Widhiastuti, D. S., Kurnia, D. D., Ersanti, A. M., & Hidayat, T. (2026). The Feeding Patterns as a Dominant Factor in the Occurrence of Stunting in Toddlers in Ponorogo. *Journal of Nutrition and Metabolism*, 2026(1). <https://doi.org/10.1155/jnme/7589972>
- Azwar, & Usman, A. H. (2025). Aligning Indonesia's economic goals with SDGS: Strengthening Qur'anic principles in Islamic finance. *Jurnal Ekonomi & Keuangan Islam*, 80–99. <https://doi.org/10.20885/JEKI.vol11.iss1.art6>
- Fitrah, R., & Soemitra, A. (2022). Green Sukuk For Sustainable Development Goals in Indonesia: A Literature Study. *Jurnal Ilmiah Ekonomi Islam*, 8(1), 231. <https://doi.org/10.29040/jiei.v8i1.4591>
- Global Fertilizer Market Under Pressure: The Impact of the Hormuz Crisis*. (2026). Al Banyan Tree. <https://albanyantree.com/insights/the-impact-of-the-hormuz-crisis/>
- Hidayaturrahman, M., Handrito, R. P., Putu Sugiantiningsih, A. A., Ubaid, A. H., Haris, R. A., & Suprianto, S. (2025). Food Estate Development: Political-Economic and Legal Perspectives. *Indonesian Journal of Advocacy and Legal Services*, 7(2), 467–506. <https://doi.org/10.15294/ijals.v7i2.31423>
- Isman, A. F., & Kaltsum, U. (2022). The relevance of sustainable development goals (SDGs) in maqāṣid al-sharī'ah dimensions. *Journal of Islamic Economics, Management, and Business (JIEMB)*, 4(2), 125–136. <https://doi.org/https://doi.org/10.21580/jiemb.2022.4.2.13185>
- Kurniawan, B. (2016). *Food Security and entitlement: a critical analysis*. [https://www.researchgate.net/publication/297879694\\_Food\\_Security\\_and\\_entitlement\\_a\\_critical\\_analysis](https://www.researchgate.net/publication/297879694_Food_Security_and_entitlement_a_critical_analysis)
- Maman, U., Nugraha, A. T., Manir, Z., Aminuddin, I., Icdayati, L. I., Nawawi, H., & Prayitno, G. (2026). Pesantren-Based Food Estate: Integrating Agrarian Reform, Islamic Principles, and Food Security in Indonesia. *Research on World Agricultural Economy*, 494–513. <https://doi.org/10.36956/rwae.v7i2.2781>
- Musari, K. (2025). *Towards the Perpetual Sustainable Sukuk Through Islamic Blended Finance* (pp. 381–402). <https://doi.org/10.4018/979-8-3693-7893-9.ch015>
- Musari, K. (2026). Overview of Islamic Finance in Indonesia: The Position of Islamic Microfinance and Islamic Nano Finance. *Conference: Webinar on Islamic Finance Landscape in Indonesia: Growth, Regulation & Opportunities for Global Partnerships*. <https://doi.org/10.13140/RG.2.2.11736.05120>
- Muzerengi, T., Khalema, E. N., & Zivenge, E. (2021). The synergistic relationship between Amartya Sen entitlement theory and the systems theory in developing a food security implementation model in Matabeleland South Province, Zimbabwe. *Jambá Journal of Disaster Risk Studies*, 13(1). <https://doi.org/10.4102/jamba.v13i1.965>
- Natadireja, R. R., Ningrum, S., & Pancasilawan, R. (2024). Dynamics of Indonesian Agricultural Policy from 1945-2021. *Eduvest – Journal of Universal Studies*, 4(7), 5642–5664.
- Nugraha, A. L. (2017). Toward Zero Hunger: National Strategies for Food Security in Indonesia. *OIKOS: Jurnal Ekonomi, Manajemen, Dan Bisnis*, 9(1), 1–16. <https://journal.uinsgd.ac.id/index.php/oikos/article/view/47910>
- Patunru, A. A., & Ilman, A. S. (2019). *Political Economy of Rice Policy in Indonesia: A Perspective on the ASEAN Economic Community*. <https://hdl.handle.net/10419/249429>
- Rasji, & Tobing, V. T. (2024). Problematic Analysis of the Legal Policy of the Food Estate Program (Government Era 2020-2024). *Journal of Law, Politic and Humanities*, 5(2), 983–991. <https://doi.org/10.38035/jlph.v5i2.1152>
- Sawaneh, K., & Badjie, F. (2021). Empowering Women in the Agricultural Value Chain through Islamic Blended Products to Attain the Agenda 2030 in The Gambia. *European Journal of Islamic Finance (EJIF)*, 17, 1–12. <https://doi.org/https://doi.org/10.13135/2421-2172/5056>
- Sen, Amartya. (1982). *Poverty and famines : an essay on entitlement and deprivation*. Oxford University Press.
- Shamsudheen, S. V., & Muneeza, A. (2024). Blended Islamic Social Finance-Microtakāful Model. *International Journal of Islamic Finance and Sustainable Development*, 16(3). <https://doi.org/10.55188/ijifsd.v16i3.906>
- statbase. (2025). *Global hunger index | Indonesia*. <https://statbase.org/data/idn-global-hunger-index/#:~:text=The%20Global%20Hunger%20Index%20of,8%20years%20in%20a%20row.>
- Sutiyo, & Maharjan, K. L. (2017). Rural Development Policy in Indonesia. In *Decentralization and Rural Development in Indonesia* (pp. 41–54). Springer Singapore. [https://doi.org/10.1007/978-981-10-3208-0\\_4](https://doi.org/10.1007/978-981-10-3208-0_4)
- Timmer, C. P. (2004). *Food Security in Indonesia: Current Challenges and the Long-Run Outlook* (48). [https://www.files.ethz.ch/isn/35741/2004\\_11\\_12.pdf](https://www.files.ethz.ch/isn/35741/2004_11_12.pdf)
- Wisnaeni, F., & Najib, A. A. (2025). National Food Security and Local Sovereignty: Legal-Ecological Critique

of Indonesia's Food Estate Policy. *Current Research in Nutrition and Food Science Journal*, 13(3), 1320–1334. <https://doi.org/10.12944/CRNFSJ.13.3.22>

Yuwono, F. P. (2024). Legal Implications of the Merauke Food Estate: A Critical Analysis of Customary Rights and Environmental Concerns. *Lex Publica*, 11(2), 294–316. <https://doi.org/10.58829/lp.11.2.2024.274>