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Rice Food System Analysis Update Ayeyarwady May 2026

Contents

| | |
|---|-----------|
| 1. Introduction and Purpose of the Update..... | 1 |
| 2. Monitoring Approach and Methodology..... | 1 |
| 3. Key Developments Since the December 2025 Assessment..... | 2 |
| 4. Market Dynamics and Price Transmission..... | 2 |
| 5. Movement, Fuel and Mechanization Constraints..... | 3 |
| 6. Credit, Farmer Economics and Production Viability..... | 4 |
| 7. Climate, Post-Harvest Quality and Environmental Stress..... | 5 |
| 8. Household Food Access, Diet Quality and Coping..... | 6 |
| 9. Governance, Trade and Political Economy..... | 7 |
| 10. Systemic Interpretation and Emerging Risks..... | 8 |
| 11. Monitoring Priorities for 2026..... | 8 |
| 12. Conclusions and Strategic Implications..... | 9 |
| Annex 1. Indicative Market and Price Developments..... | 10 |
| Annex 2. Farmer Cost Structure and Production Economics..... | 10 |
| Annex 3. Stakeholder Roles within the Rice Food System..... | 11 |
| Annex 4. Environmental and Climate Signals..... | 11 |
| Annex 5. Monitoring Indicators for 2026..... | 11 |
| Annex 6. Conceptual Rice Food System Map..... | 12 |
| Annex 7. Areas for Further Research..... | 12 |

1. Introduction and Purpose of the Update

The January–March 2026 monitoring builds on the December 2025 Rice Food System Analysis for Myanmar and examines how pressures identified during the monsoon harvest period evolved across the Ayeyarwady Delta during the post-harvest and early summer rice cycle. The earlier assessment highlighted growing stress linked to fuel shortages, rising production costs, market volatility, post-harvest quality risks and weakening farmer profitability, while also emphasizing the growing importance of traders, machinery operators, transporters and input retailers in maintaining the wider functioning of the rice system. Although rice production and market flows remained operational during the December assessment, continued production was not necessarily translating into long-term resilience.

Several of these pressures became more visible during the January–March period. Farmgate prices declined sharply after harvest while fertilizer, labor, fuel and mechanization costs remained high, increasing pressure on farmer margins and reducing confidence regarding future cultivation. Fuel shortages became more operationally significant, affecting harvesting schedules, machinery mobility and land preparation across several Delta townships. At the same time, unstable drying conditions contributed to elevated grain moisture and post-harvest quality problems, while salinity intrusion increasingly affected confidence regarding summer rice cultivation.

The assessment continues to approach rice as part of a wider food system linking production, mechanization, transport, fuel, markets, finance and household food access. Conditions across the Delta suggest that the rice system remains functional, but increasingly through fragile forms of adaptation, informal arrangements and rising operational pressure across the wider rural economy.

2. Monitoring Approach and Methodology

The January–March monitoring was conducted as a follow-up exercise to the December 2025 desk study and focused primarily on selected rice-producing areas of the Ayeyarwady Delta. Rather than conducting a large-scale quantitative survey, the exercise aimed to understand how structural pressures identified during the earlier assessment were materializing operationally at field level and how different actors within the rice system were adapting during the post-harvest period.

Discussions were conducted with farmers, traders, brokers, tractor service providers, machinery operators, input retailers and local stakeholders involved in post-harvest handling and household food management. Particular attention was given to issues already identified during the December assessment, including fuel shortages, mechanization constraints, post-harvest drying conditions, trader behavior, informal credit dependence and farmer liquidity pressure. The monitoring also examined changing

perceptions regarding summer rice cultivation, salinity exposure and household coping strategies.

The assessment continued using a food systems perspective in which rice was analyzed not simply as a crop, but as part of a wider operational system linking production, transport, mechanization, labor, markets, finance and household consumption. The findings should therefore be understood as indicative rather than statistically representative. However, the sequential nature of the monitoring provides important insight into how pressure is evolving across the rice system and whether current adaptation mechanisms remain sustainable under continued economic, environmental and operational stress.

3. Key Developments Since the December 2025 Assessment

Several risks identified during the December 2025 assessment became more visible during the January–March monitoring period. The rice system remained operational across much of the Ayeyarwady Delta, but increasing pressure is now affecting farmer profitability, trader confidence, mechanization mobility and household purchasing power more directly. Lower farmgate prices combined with high production costs emerged as one of the most significant developments following the monsoon harvest, reinforcing concerns that continued rice availability does not necessarily indicate economic resilience within the wider system.

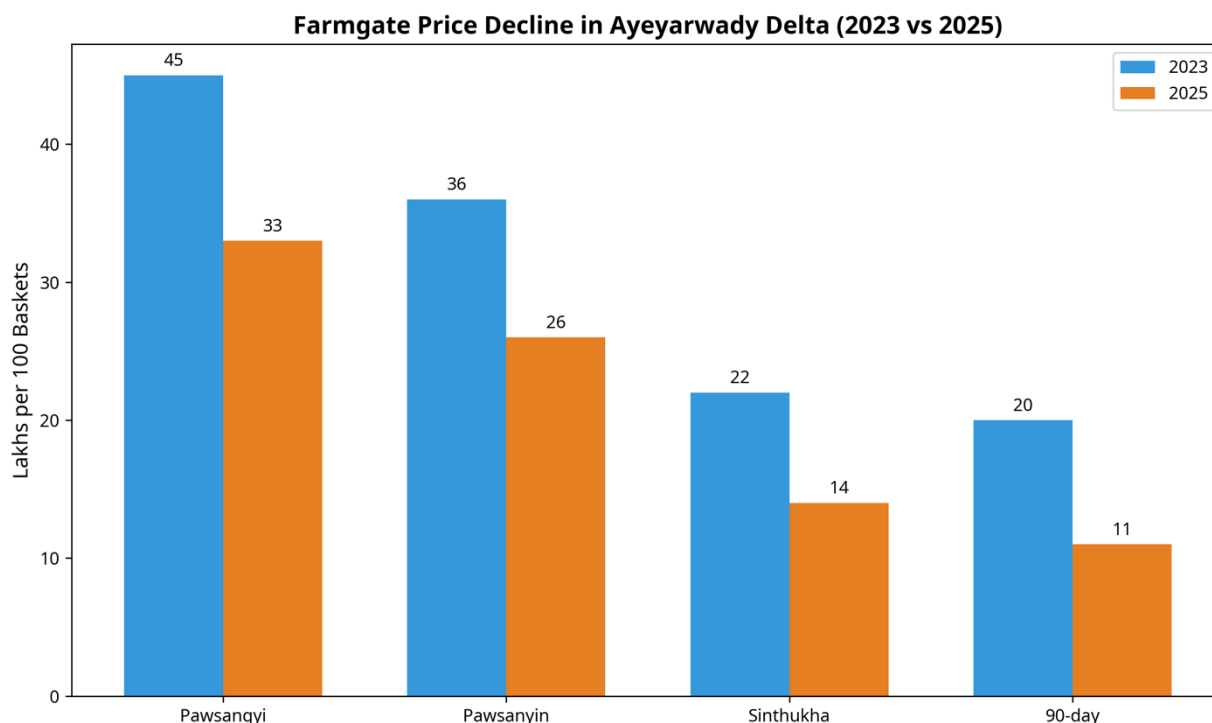
Trader behavior also became more cautious during the post-harvest period. Farmers reported fewer buyers visiting villages directly and greater difficulty negotiating prices, particularly where grain moisture and discoloration affected quality. At the same time, fuel shortages became more operationally significant. Tractor service providers and combine harvester operators reduced movement between townships because fuel remained expensive and difficult to access, affecting harvesting schedules, machinery availability and land preparation in several Delta areas.

Environmental pressure also intensified during the monitoring period. Delayed harvesting reduced preparation time before saline conditions strengthened, while unstable drying conditions contributed to elevated grain moisture and lower market prices. Despite these pressures, the monitoring showed that the rice system continues functioning through flexible market arrangements, informal credit systems and private sector delivery networks that remain critical for maintaining production and market continuity.

4. Market Dynamics and Price Transmission

Market pressure intensified during the post-harvest period and became one of the main channels through which stress moved through the rice system. The sharp decline in farmgate prices following the monsoon harvest was particularly significant in the Ayeyarwady Delta, where farmers consistently reported weaker prices across both

premium and common rice varieties. Although partly seasonal, the decline was also linked to weaker international rice prices and increasingly cautious trader behavior. At the same time, fertilizer, labor, fuel and mechanization costs remained high, increasing pressure on farmer margins and reducing profitability.



Trader behavior became increasingly defensive during the monitoring period. Farmers reported fewer buyers visiting villages directly and more selective purchasing practices linked to grain quality and moisture concerns. Poor drying conditions and elevated grain moisture frequently resulted in deductions or lower purchasing prices, particularly for farmers requiring immediate cash after harvest. Transport costs and checkpoint-related payments further reduced effective farmgate returns and increased dependence on local brokers and traders.

Rice markets remain operational, but increasingly cautious and short-term. Rice continues moving through traders, brokers and mills, yet growing uncertainty and weaker margins are transferring more operational and financial risk toward producers.

5. Movement, Fuel and Mechanization Constraints

Movement, fuel and mechanization became increasingly important pressure points during the January–March monitoring period. Rice production in the Delta depends heavily on machinery mobility, fuel availability and timely transport between farms, roads, mills and township markets. When these systems slow down, the effects spread quickly across harvesting, land preparation, grain quality and market pricing.

Fuel shortages became one of the clearest operational constraints affecting the rice system. Farmers and machinery operators reported that official fuel supplies remained

limited, forcing many actors to rely partly or fully on expensive informal fuel channels. As a result, tractor service providers and combine harvester operators reduced movement between townships because fuel remained costly, difficult to access and operationally risky. This affected harvesting schedules, machinery availability and land preparation across several Delta areas.

FUEL SCARCITY IMPACTING MYANMAR RICE SYSTEM



Mechanization costs also increased sharply during the monitoring period. In some cases, machinery operators required farmers to provide fuel separately, while in others fuel costs were incorporated into significantly higher service charges. Transport-related payments further increased operational costs and reduced effective farmgate returns. The monitoring suggests that mechanization systems remain functional, but increasingly fragile, particularly for smaller service providers operating under rising fuel costs and repayment uncertainty.

6. Credit, Farmer Economics and Production Viability

Farmer economics remain one of the main sources of stress within the rice system. Although the monsoon harvest was generally completed successfully across much of the Delta, declining farmgate prices significantly reduced profitability at a time when fertilizer, labor, fuel and mechanization costs remained high. Many farmers reported that acceptable yields no longer guaranteed reliable income once production expenses and repayment obligations had been deducted.

Rice production across the Delta continues depending heavily on seasonal borrowing, informal credit and deferred payments. Farmers commonly relied on input retailers, microfinance institutions and informal lending systems to finance cultivation before harvest income became available. Lower post-harvest prices made repayment more difficult and increased pressure for immediate sales despite weak market conditions.

Liquidity pressure therefore became a major factor shaping farmer behavior during the monitoring period.

The monitoring also suggested that economic pressure is beginning to influence cultivation decisions. Some farmers reduced fertilizer application because of cost concerns, while others reconsidered summer rice cultivation because of uncertainty regarding fuel availability, irrigation costs and salinity exposure. Production continuity has therefore been maintained, but under increasingly narrow margins and rising financial pressure across farming households.

7. Climate, Post-Harvest Quality and Environmental Stress

Climate and environmental pressure increasingly affected the rice system through timing, quality and economic value rather than through production failure alone. Weak La Niña conditions contributed to unstable drying conditions, intermittent rainfall and elevated grain moisture during the monsoon harvest period. In many areas, farmers lacked sufficient drying space, storage capacity or financial flexibility to delay sales, resulting in lower prices and quality deductions linked to moisture and discoloration.

Post-harvest quality problems became an important channel through which environmental stress translated into weaker producer margins. Farmers facing debt repayment pressure frequently sold paddy immediately despite knowing that high moisture content would reduce prices. Incentives for improved drying and storage also remained weak because many farmers reported limited advantages from delayed sales under unstable market conditions.

Salinity intrusion became increasingly important during the monitoring period, particularly in areas where delayed harvesting reduced preparation time before saline conditions intensified. Farmers in several Delta townships reported growing concern regarding summer rice cultivation, declining soil productivity and increasing dependence on expensive agricultural inputs.

DELAYED HARVESTING DRIVES SALINITY INTRUSION IN THE AYEYARWADY DELTA



Environmental pressure is therefore becoming increasingly systemic within the rice economy. Climate stress now affects drying conditions, grain quality, market returns, production timing and future cultivation decisions simultaneously, increasing pressure across the wider food system.

8. Household Food Access, Diet Quality and Coping

Rice availability continued across much of the Ayeyarwady Delta during the monitoring period, but declining farm income and rising debt increasingly affected household purchasing power and diet quality. Many farming households continued consuming their own rice while simultaneously reducing expenditure on vegetables, pulses, fish and other nutritionally important foods. Food insecurity therefore became increasingly linked to declining income and weaker dietary diversity rather than staple rice shortage alone.



Debt pressure strongly influenced household coping behavior during the post-harvest period. Many farmers sold paddy immediately after harvest because repayment obligations, labor costs and mechanization expenses required immediate cash. Some households also reduced fertilizer use, delayed land preparation or reconsidered summer rice cultivation in order to manage financial risk under uncertain market conditions.

Women continued carrying a significant share of post-harvest management, food budgeting and household coping responsibilities. At the same time, vulnerability became increasingly uneven across farming communities. Better-connected households with stronger trader relationships or diversified income sources appeared better able to absorb market shocks, while highly indebted households and environmentally exposed communities remained more vulnerable to declining prices and rising operational costs.

9. Governance, Trade and Political Economy

Rice continues occupying a strategic position within Myanmar’s economy as both a staple food and an important export commodity. The monitoring period showed that market behavior, fuel access and movement systems remained strongly influenced by wider governance and political economy dynamics, particularly within a context of macroeconomic instability and foreign exchange pressure.

Traders and exporters continued operating under uncertain regulatory conditions and changing foreign exchange arrangements. This uncertainty filtered downward through the rice system and contributed to increasingly cautious trader behavior, lower stockholding and more selective purchasing practices. Farmers frequently reported fewer buyers visiting villages and greater difficulty negotiating prices during the post-harvest period.

Movement governance also remained an important operational issue. Farmers and traders described transport-related payments and uneven movement conditions affecting rice, fuel and agricultural inputs. Fuel access became particularly uneven because official supplies remained limited compared with actual agricultural demand, increasing dependence on black-market fuel channels and informal arrangements.”

The monitoring also reinforced the importance of local brokers, traders, machinery operators and input retailers in maintaining operational continuity across the rice system. These actors continue functioning as the operational infrastructure connecting farmers to markets, machinery, transport and finance despite increasing uncertainty and fragmentation across the wider operating environment.

10. Systemic Interpretation and Emerging Risks

The January–March monitoring suggests that Myanmar’s rice economy is entering a period of prolonged structural stress rather than experiencing a single isolated shock. The system remains operational across much of the Ayeyarwady Delta, but increasing pressure is now affecting production viability, market confidence, mechanization systems and household resilience simultaneously.

One of the clearest emerging risks concerns the growing pressure placed on Hidden Middle actors such as traders, brokers, tractor service providers and input retailers. These actors increasingly sustain the operational continuity of the rice system through flexible arrangements, informal credit systems and localized problem-solving. If these actors reduce service coverage, stockholding or credit provision, the effects could spread rapidly across the wider system.

Fuel shortages also emerged as a major systemic risk because they affect harvesting, machinery mobility, transport costs, post-harvest timing and market access simultaneously. Climate stress is interacting with these operational pressures in similar ways. Delayed harvesting, unstable drying conditions and salinity exposure increasingly reinforce one another and reduce the ability of farmers and market actors to recover between production cycles.

The monitoring therefore does not suggest immediate collapse, but rather gradual erosion. The rice system continues functioning because local actors continue adapting and absorbing risk under increasingly fragile conditions. The key question for future monitoring is whether this adaptive capacity remains sufficient under continued economic, environmental and operational pressure.

11. Monitoring Priorities for 2026

Future monitoring should focus less on production volumes alone and more on the evolving behavior of farmers, traders, machinery operators and households operating

under increasingly uncertain conditions. Reduced fertilizer application, delayed land preparation and hesitation regarding summer rice cultivation may provide early warning signs that economic pressure is beginning to weaken production confidence across the Delta.

Fuel access and mechanization mobility should remain central monitoring priorities because machinery operators and tractor service providers now play a critical role in maintaining production continuity. Future monitoring should examine whether service coverage continues shrinking, whether mechanization costs continue increasing and whether repayment arrangements between farmers and machinery operators remain sustainable.

Greater attention should also be given to farmgate prices, trader confidence, transport costs, grain quality deductions and household dietary diversity. Many rice-producing households continue consuming rice while reducing access to vegetables, pulses, fish and other nutritious foods. Monitoring should therefore continue examining the relationship between household income, debt pressure and changing coping behavior across rice-producing communities.

12. Conclusions and Strategic Implications

The January–March monitoring confirms that Myanmar’s rice system remains operational, but increasingly fragile. Rice continues moving through markets, farmers continue cultivating and local service providers continue adapting under highly unstable conditions. However, declining farmgate prices, rising production costs, fuel shortages and environmental pressure are weakening the economic foundations supporting continued production across the Ayeyarwady Delta.

The principal challenge increasingly concerns profitability, liquidity and operational continuity rather than production alone. Lower paddy prices combined with high fertilizer, labor, fuel and mechanization costs are reducing farmer margins and weakening confidence regarding future cultivation. At the same time, fuel shortages and movement constraints are affecting harvesting schedules, machinery mobility and post-harvest operations, while unstable drying conditions and salinity exposure continue increasing environmental pressure.

Despite these challenges, the monitoring also highlights the continued importance of local adaptation and private sector functionality within the wider rice system. Traders, machinery operators, transporters and input retailers continue sustaining production and market continuity through flexible arrangements, informal credit systems and localized problem-solving. However, much of this resilience depends on actors continuously absorbing rising levels of financial and operational risk.

The findings suggest that future food systems programming should focus not only on production support, but also on the operational systems that sustain production continuity under fragile conditions. Fuel access, post-harvest management,

mechanization mobility, drying systems and Hidden Middle resilience increasingly matter as much as seed and fertilizer availability. The overall picture emerging from the monitoring is therefore not one of immediate collapse, but of a system functioning through increasingly fragile forms of adaptation under continued economic, environmental and operational stress.

Annex 1. Indicative Market and Price Developments

The January–March monitoring confirmed a significantly weaker post-harvest market environment across the Ayeyarwady Delta. Farmers consistently reported sharp declines in farmgate prices compared with both the previous season and earlier expectations during the monsoon growing period. Lower international rice prices, increased harvest supply and cautious trader behavior all contributed to weaker producer returns.

Several rice varieties, including Pawsangyi, Pawsanyin, Sinthukha and 90-day rice, experienced noticeable price reductions during the monitoring period. Farmers also reported fewer buyers visiting villages directly and more selective purchasing practices linked to grain moisture and discoloration. Transport costs and checkpoint-related payments further reduced effective farmgate income and increased dependence on local brokers and traders.

Although summer rice prices recovered slightly because of lower production volumes, most farmers did not interpret this as improved profitability because fuel shortages, irrigation costs and salinity exposure continued increasing operational risk.

Annex 2. Farmer Cost Structure and Production Economics

Production costs remained high across the rice system during the 2025–2026 agricultural cycle despite declining paddy prices. Farmers consistently identified fertilizer, labor, fuel and mechanization as the main operational pressures affecting profitability and future cultivation confidence.

Fuel became one of the most significant cost constraints during the monitoring period. Limited official supplies forced many farmers and machinery operators to rely partly or fully on informal fuel channels, substantially increasing harvesting, land preparation and transport costs. Mechanization service charges also rose sharply, particularly where machinery operators incorporated fuel costs directly into service fees.

The monitoring suggests that affordability and liquidity have become more significant challenges than physical access to agricultural inputs alone. Some farmers reduced fertilizer application, delayed purchases or reconsidered investment decisions because of uncertainty regarding future returns and repayment capacity.

Annex 3. Stakeholder Roles within the Rice Food System

The monitoring reinforced the importance of the “Hidden Middle” actors operating between farmers and final markets. Traders, brokers, transporters, tractor service providers and input retailers continue functioning as the operational infrastructure connecting production, machinery, finance and market access across the Delta.

Tractor service providers became particularly important during the monitoring period because labor shortages and unstable harvest conditions increased dependence on mechanized harvesting and land preparation. At the same time, these actors faced growing operational pressure linked to fuel shortages, rising costs and repayment uncertainty.

Input retailers and traders also continued providing informal credit, market coordination and transport support despite increasing financial and operational risk. The continued functionality of these actors remains central to maintaining production and market continuity across the wider rice system.

Annex 4. Environmental and Climate Signals

Environmental pressure became increasingly visible during the January–March monitoring period. Weak La Niña conditions contributed to unstable drying conditions, intermittent rainfall and elevated grain moisture during the monsoon harvest, increasing post-harvest quality risks and reducing farmer bargaining power within local markets.

Salinity intrusion emerged as one of the main long-term concerns affecting the Delta rice system. Farmers in several townships reported earlier saline intrusion, declining soil productivity and increasing uncertainty regarding summer rice cultivation. Delayed harvesting further reduced preparation time before saline conditions intensified.

Some households also expressed growing interest in lower-cost and potentially more resilient agricultural approaches, including compost systems, green manure and rice–fish systems, although these practices remain limited in scale.

Annex 5. Monitoring Indicators for 2026

Future monitoring should focus increasingly on behavioral and operational indicators rather than production volumes alone. Key indicators include:

- Farmgate price trends across major rice varieties
- Fertilizer application levels and input affordability
- Machinery mobility and service coverage
- Informal fuel dependence
- Trader confidence and stockholding behavior
- Grain moisture and post-harvest quality deductions

- Household dietary diversity and debt pressure
- Salinity exposure and summer rice cultivation decisions
- Functionality of local brokers, traders and machinery operators

Monitoring should continue examining how operational pressure moves across production, transport, mechanization, markets and household food access during different agricultural periods.

Annex 6. Conceptual Rice Food System Map

The monitoring confirmed that Myanmar's rice system functions through highly interconnected relationships linking production, mechanization, fuel, transport, markets, finance and household food access. Farmers increasingly depend on mechanized services, while machinery operators themselves depend heavily on fuel access, spare parts, transport mobility and farmer repayment capacity.

Rice movement also depends on brokers, traders and transport systems connecting villages to mills, township markets and export channels. Fuel shortages, transport costs, movement restrictions and climate stress affect these systems simultaneously and influence harvesting schedules, grain quality, market prices and household income.

The rice system therefore remains functional largely because local actors continue adapting through informal arrangements, flexible negotiation and localized problem-solving despite increasing operational and financial pressure.

Annex 7. Areas for Further Research

Future analysis should continue examining the long-term viability of rice cultivation under conditions of rising production costs, declining producer margins and increasing operational uncertainty. Particular attention should be given to debt systems, reduced fertilizer use, mechanization sustainability and the resilience of Hidden Middle actors operating under fuel shortages and repayment pressure.

Additional research is also needed regarding salinity progression, lower-input agricultural systems, household dietary diversity and the role of informal systems in shaping both resilience and exclusion within rice-based food systems across the Ayeyarwady Delta.

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