POLICY REVIEW

APP WILEY

One policy but different interpretations: A case of agricultural policy implementation in Indonesia

Muhammad Yamin¹ 💿 | Meitry F. Tafarini¹ 💿 |

¹Department of Agribusiness, Faculty of Agriculture, Universitas Sriwijaya, Indralaya, South Sumatra, Indonesia

²Faculty of Social Science and Political Science, Universitas Sriwijaya, Indralaya, South Sumatra, Indonesia

Correspondence

Muhammad Yamin, Department of Agribusiness, Faculty of Agriculture, Universitas Sriwijaya, Jalan Palembang-Prabumulih KM 32, Indralaya, South Sumatra, Indonesia. Email: yamin@unsri.ac.id

Funding information

Lembaga Penelitian dan Pengabdian Kepada Masyarakat, Grant/Award Number: 0022/UN9/ SK.LP2M.PT/2021

Abstract

The Indonesian governments developed the Upsus Pajale policy to achieve a goal and solve the problem of food self-sufficiency. Rice, corn, and soybean were the main commodities in the plan of Upsus Pajale Policy implementation. UPSUS Pajale improve rice, corn, and soybean production for food self-sufficiency. This study examined UPSUS Pajale policy implementation at the province, district, subdistrict, and farmer levels. This study examined rice growing in Banyuasin's tidal lowlands, Ogan Komering Ilir's swamplands, and East Ogan Komering Ulu's irrigated rice fields. The research method used a combination model of quantitative and qualitative (mixed method). Sampling data used purposive sampling. NVivo 12 software examined provincial, district, subdistrict, farmer interviews, and group discussions. Results affected typology management constraints differently. Production input costs were the most common issue. This study found that policy was differently implemented at various levels. It would be impacted to the success of the policy.

KEYWORDS

food self-sufficiency, Indonesia, policy implementation, special effort, UPSUS Pajale

WILEY-

Agriculture policies cover various issues, including production improvement, food availability, farmer welfare, agricultural support infrastructure, and local agricultural development based on a region or landscape (Lencucha et al., 2020). The current agricultural policy and objectives result from historical events and political decisions. Agricultural policies are based on three fundamental principles called the "trilemma of agricultural policy." The trilemma of agricultural policies discusses the impact of the objectives of policy evolution on increasing productivity, stabilizing production levels, and stabilizing agricultural or farm structures (Pawlak & Kołodziejczak, 2020; Vik, 2020). Agricultural policy needs to be integrated in a way that considers infrastructure development, production management, and the structure of institutions.

APP

The Indonesian Ministry of Agriculture has developed a roadmap strategy for the 2045 global food barn. Its mission is to become a global food barn by improving local production capacity to enhance food security and competitiveness to achieve food self-sufficiency (FSS). The policy was written in Minister of Agriculture Regulation No.03/Permentan/OT.140/2 of 2015 on accelerating rice, corn, and soybean self-sufficiency and Minister of Agriculture Regulation No.14 of 2015 on integrated escort and mentorship made up of extension workers, academia, and non-commissioned officers (IFPRI, 2019; Ministry of Agriculture of Republic of Indonesia, 2011). This policy is congruent with the economy's current status, which has begun to recover from the global financial crisis of 2008–2009. Thus, the development plan for the agricultural food sector is highly significant and fundamental (Viana et al., 2022).

In 2015, the Agricultural Ministry of Indonesia implemented a strategy focused on enhancing its ability to produce sufficient quantities of rice, corn, and soybean. The plan included an aspect called Upaya Khusus Padi, Jagung, Kedelai (Special Effort in Rice, Corn, and Soybean), usually called UPSUS Pajale. The three crops provide a significant proportion of the Indonesian diet. The goals of UPSUS Pajale are to achieve sustainable FSS in rice and corn commodities. Efforts to maximize agricultural productivity are predicated on the availability of land as the primary factor of production (Emran et al., 2021; IFPRI, 2019). Supporting policies such as policies on agricultural development have been established to maintain the self-discrimination policy. The policies contained in Minister of Agriculture Regulation No.56/ Permentan/RC.040/11/2016 (Ministry of Agriculture of Republic of Indonesia, 2016b). Decree No.830/Kpts/RC.040/12/2016 by Indonesia's Agricultural Minister established the national agriculture area's location. This decision details the national focus commodity areas of food crops, horticulture, plantations, and livestock (Ministry of Agriculture of Republic of Indonesia, 2016a).

The agricultural policy literature review provided additional studies on policy results or impacts. Unfortunately, studies have shown that UPSUS Pajale has not increased food security at a subnational level in the Malang regency (Hidayatulloh & Koestiono, 2021). The initiative did not contribute to rice, corn, and soybean output growth (Juhandi & Enre, 2019). Additional studies have confirmed these unfortunate findings (Rangga & Syarief, 2018). Why have we yet to see the impact of this policy? What obstacles exist for Indonesia as it pursues self-sufficiency in food production? Implementing the UPSUS Pajale policy might cause challenges such as resource constraints, climate change, associated risk management, farmers' insufficient knowledge and skills, lack of infrastructure and market access, community engagement, and policy and political changes.

However, policies are not always advantageous, and agricultural projects that directly affect farmers sometimes have significant constraints and might cause issues. The program sometimes encourages social competitiveness and community conflicts (Hamyana & Romadi, 2017; Hullman & Kwiatkowski, 2022). Agricultural policies also marginalize farmers. Policy implementation, minimal outcomes, negative repercussions of the program, and farmer and stakeholder perceptions are common keywords in agricultural policy research. Some extended studies focused on effects or perceptions rather than policy concerns, although most research was limited to village or subdistrict case studies (Ehlers et al., 2021; Gebska et al., 2020; Pradhan et al., 2017).

Furthermore, not all studies integrate agricultural policy into researchers' expertise (Alaerts, 2020). The studies examined policy responses to socioeconomic changes between 1999 and 2018, including irrigation reform policies. This study adopted provincial, district, subdistrict, and farmer-level policies. We addressed the questions and problems in this essay by drawing on field research in South Sumatra. This research comprehensively examines of the interpretation or explanation capabilities that would identify policy gaps at each level. The Indonesian government should re-evaluate the implementation of its agricultural policies to reflect program effectiveness, socioeconomic impacts, and the extent to which policies support the adoption of innovative agricultural technologies.

THE POLICY PROBLEM

The Indonesian Agricultural Ministry aims toward making sustainable food production a global food barn. However, the Minister of Agriculture Regulation No.03/Permentan/OT.140/2 of 2015 and the Minister of Agriculture Regulation No.14 of 2015 (Ministry of Agriculture of Republic of Indonesia, 2015a, 2015b) incurred numerous challenges. Due to UPSUS Pajale's inefficiency, agricultural policies had changed. UPSUS was well-implemented but needed to improve agricultural productivity (Rangga & Syarief, 2018).

When the UPSUS Pajale program was implemented, the following operational strategy or technical effort was made to achieve sustainable self-sufficiency in rice and corn: Table 1.

The UPSUS Pajale policy's limited land availability also affected planting expansion. This was caused by urbanization, land degradation, and inconsistent land usage (Rustiadi et al., 2021; Seifollahi-Aghmiuni et al., 2022). Irrigation and storage systems could affect rice, corn, and soybean production and postharvest management. Water management and postharvest losses depended on infrastructure (Kumar & Kalita, 2017; Tafarini et al., 2021). Indonesia's rice, corn, and soybean production was also threatened by climate change's unpredictable rainfall patterns, long-term droughts, and extreme weather. Pests and diseases might harm rice, corn, and soybean (Donatelli et al., 2017; Amirah Ajani Dzulhidany & Sigit Andhi Rahman, 2022; Skendžić et al., 2021). Prevention of climate impacts and pest control also needed to be considered to implement the UPSUS Pajale policy effectively. Thus, this policy did not only focus on expanding the planting area.

The provision of subsidies and incentives usually follows policies. Seeds, fertilizers, machineries, and irrigation systems had not been distributed properly (Hatta et al., 2021; International Food Policy Research Institute, 2019). The UPSUS Pajale program also focused on providing extension services, technical training, and farmer capacity-building initiatives. The UPSUS Pajale programs' aimed to increase farmers' knowledge and skills in crop management, postharvest handling, and the effective use of agricultural inputs (Setiyanto, 2021). Omotesho

TABLE 1 UPSUS Pajale operational strategy.

⊥WILEY-

No	Government level	Strategy
1	National	 (a) Developing technical guidelines (b) Inventorying and verifying proposals from the regions (c) Performing calculations and preparing the budget preparation (d) Facilitating budget availability (e) Coordinating and consolidating internally and with agencies (f) Socializing (g) Guidance training of companions and guardians (h) Coaching, monitoring, evaluation, and reporting
2	Province	 (a) Preparing implementation instructions (b) Recapitulating the results of data identification and verification (c) Verificatying and validating proposed farmers and prospective locations (CPCL) (d) Coaching, monitoring, and evaluating joint activities with the coordinating body for extension workers, researchers, students, universities, and the Indonesian National Military (TNI) (e) Coordinating with relevant agencies (f) Signing statements of commitment and facts of integrity
3	Regency	 (a) Preparing technical instructions (b) Recapitulating the results of data identification and verification (c) Verificatying and validating proposed farmers and prospective locations (CPCL) (d) Supervising the implementation of UPSUS activities (e) Recapitulating the minutes of the handover of the work (f) Coaching, monitoring, and evaluating UPSUS activities (g) Composing progress reports and final reports of activities (h) Signing statements of commitment and facts of integrity

Source: Attachment to the Minister of Agriculture of the Republic of Indonesia No.03/Permentan/OT.140/20/2015.

et al. (2021) found that extension workers improved farmers' knowledge and abilities, but agricultural outputs did not. This means that the method applied still needs to be appropriate. Therefore, this study was conducted to provide a suitable method for implementing the Pajale UPSUS policy to be more effective and efficient in achieving sustainable food security and self-sufficiency.

RESEARCH METHODOLOGY

This study was conducted in three locations in South Sumatra: Ogan Komering Ilir (OKI) Regency for lebak swamplands typology, Banyuasin Regency for tidal lowlands typology, and East Ogan Komering Ulu (OKU) Regency for irrigated land typology. These places are in rural areas where rice farmers live. The three study locations were chosen to represent South Sumatra's land typologies. Additionally, this area contains a sizable area of rice fields, which serves as a food storage facility for South Sumatra.

The research method used in this research was a combination model of quantitative and qualitative (mixed method). A descriptive quantitative approach was applied to compare farmers' incomes before and after implementing the UPSUS Pajale policy. Qualitative research

was used to understand informants' experiences, perceptions, opinions, or perspectives regarding implementing the UPSUS Pajale program. This study focused on mentoring variables applied in three research locations. Assistance included applying technology such as hybrid seeds, water gates, tractors, pesticides, fertilizers, water pumps, harvesters, and irrigation.

Primary data were collected using a survey technique with essay questions (open) through in-depth and structured interviews. The quantitative and qualitative sampling in this study was carried out purposively. Samples were selected in focus group discussions (FGD) at each stakeholder level: provincial, district, subdistrict, and farmer. Naturally, the informants selected were knowledgeable about agriculture: competent agricultural service employees, extension workers, farmer groups, combined farmer groups (*GAPOKTAN*), and village government. The sample size was 180 farmers. Secondary data were gathered from agricultural agencies and the Bureau of Public Statistics at the national and local levels. Both primary and secondary data were analyzed using a qualitative-descriptive approach with NVivo 12. NVivo 12 is qualitative methods software that can determine the boundaries or characteristics of the issue being investigated in detail (Jackson & Bazeley, 2019). Additionally, the analysis used literature from various related research findings and government-mandated regulations to provide a more detailed and in-depth dialogue.

RESEARCH FRAMEWORK

See Figure 1.



FIGURE 1 Research framework.

-WILEY

YAMIN ET AL.

DISCUSSION

Farmers' income

This study conducted a comparison of the income of farmers before and during/after the implementation of the UPSUS Pajale scheme. The income has declined before and during/after the implementation of the UPSUS Pajale program. This indicates that the implementation of this application still has to be done in a suitable and focused manner. Therefore, farmers must continue to derive advantages from this initiative. Before the implementation of UPSUS Pajale, the mean income of farmers stood at IDR 3,395,136. However, following the program, the mean income of farmers decreased to IDR 3,267,644. There was a reduction of 3.75%.

APP

Comparative analysis of typologies and agricultural constraints in three research locations

The typologies of the three research locations represent the most popular types of rice farming in South Sumatra, namely lebak swamplands, tidal lowlands, and irrigated rice fields. A complete discussion of the typology of the research area follows (Table 2).

Farmers' land management constraints depended on the typolgies of the three research locations. South Sumatra obtained UPSUS PAJALE from 2015 to 2018 in six villages in three districts, combining lebak swamplands with Tanjung Serang Village and Seri Menanti in OKI Regency: rivers or rainwater-filled lebak swamplands. Lebak swamplands have three categories: deep, medium, and shallow. Farmers prefer these lands because they overflow during the rainy season (Mawardi & Khairullah, 2022; Mulyana et al., 2021; Paiman et al., 2020). Farmers began cultivating when the dry season was established and the water started to drain. Extended drought, rainy season, dried fires, and climate change affected farmers in the two villages. However, company canalization caused land flooding due to an agricultural drainage system developed by a company regarding land management authority. The high cost of fertilizers was another issue farmers identified. This result confirmed a previous study that found the swamp rice producers' most significant problem was hard-tomanage water levels (Armanto et al., 2018; Irmawati, 2015; Irmawati et al., 2015). Drought and flooding often affect crop failure in lebak swamplands (Ratmini & Herwenita, 2021).

Meanwhile, Kualo Puntian and Telang Sari Banyuasin's topology consists of tidal lowlands. The tides highly influenced water management in tidal lowlands. Most of the population was constrained to adopt the IP 100 (one cropping season in a year) due to this problem. Proper water management could be augmented with two cropping seasons, particularly rice and other secondary crops such as corn, as many of Banyuasin's tidal farmers did. However, Purba et al.'s (2021) research demonstrated that tidal lowlands farmers in typology A had applied the IP 200 (two cropping seasons in a year). The second season suffered numerous crop failures and decreased production. In tidal lowlands, water management issues are a critical concern.

Consequently, effective management is necessary (Suryadi, 1996; Tafarini & Yazid, 2018). If properly managed, tidal lowlands will provide significant potential and advantages for rice cultivation, which will support sustainable production (Tafarini et al., 2021). Rat pests, insufficient fertilizer, and unstable prices were the barriers to cultivating in the two village regions' tidal lowlands rice fields. Irrigation, rat pests, weeds, and droughts were the principal TABLE 2

-WILEY

No	Regency	Village	Land typology	Technical problem	General problem
1	Ogan Komering Ilir	Tanjung Serang	Lebak swamplands	Drought	High fertilizer price
				Company channel	
				Rainy season	
		Seri Menanti		Fire and drought	
				Climate change	
2	Banyuasin	Kualo Puntian	Tidal lowlands	Rat pest	Uncertain price of fertilizer
		Telang Sari		Insufficient fertilizer	
3	Ogan Komering Ulu Timur	Karang Sari	Land or irrigation	Fire and drought	High fertilizer price
		Pandan Sari		Insufficient fertilizer	

Source: Primary data analysis (2021).

constraints to restoration in tidal lowlands. Purba et al. (2020) found that most farmers in South Sumatra's tidal lowlands needed to be more efficient in applying production inputs. Farmers' participation in tidal lowlands will undoubtedly be able to expand sustainable rice production through numerous efforts to solve these problems with government policy intervention in the UPSUS Pajale program (Purba et al., 2021; Tafarini et al., 2022).

East OKU, South Sumatra, the third location, is one of the locations for irrigated rice growing, contributing to food production. Since the New Order Era, when the Komering Dam was established, irrigated rice fields have increased rapidly. The villages of Karang Sari and Pandan Sari received assistance from the UPSUS Pajale program in irrigated rice fields. According to Pratiwi et al. (2022) and Ricks (2017), during program implementation, the UPSUS Pajale program faced natural and technical constraints. Farmers encountered approximately equivalent problems, including high fertilizer prices, resulting in insufficient fertilizer, drought, and fires.

Farmer organizations as the program's foundation

From 2015 to 2018, farmer groups benefited from various agricultural programs, including UPSUS Pajale (Pratiwi et al., 2022; Sari & Sjah, 2016). The following describes the farmer groups at the research location that were beneficiaries of the UPSUS Pajale program (Table 3).

OKI Regency was the program's largest beneficiary, with 920 ha and 20 beneficiary farmer groups. East OKU Regency covered 452 ha and was home to 17 distinct groups of program beneficiaries. Meanwhile, Banyuasin Regency covered 902 ha. According to the findings of the FGD, farmer groups were formed using the following mechanism: "Before UPSUS, farmer groups were formed based on domicile, neighbourhood associations, and hamlet; however, after UPSUS, farmer groups had to be formed based on the expanse" (2021, OIC Tanjung Serang FGD).

No	Regency	Village	Land typology	Land area (ha)	Number of farmers' groups
1	Ogan Komering Ilir	Tanjung Serang	Lebak swamp	320	8 groups
		Seri Menanti	Lebak swamp	600	12 groups
2	Banyuasin	Kualo Puntian	Tidal lowlands	302	8 groups
		Telang Sari	Tidal lowlands	600	12 groups
3	Ogan Komering Ulu Timur	Karang Sari	Irrigation	272	11 groups
		Pandan Sari	Irrigation	180	6 groups

TABLE 3 Farmer organizations in research areas.

Source: Primary data analysis (2021).

Initially, farmer groups in Tanjung Serang and Seri Menanti were organized according to domicile. While this reduced the administrative procedure, it could have been more effective for program execution, specifically regarding assistance plugging distribution to groups. Therefore, it was modified to be overlay-based. In contrast to other farmer organizations in Banyuasin and East OKU, their structure was based on expenses. The UPSUS Pajale program assisted eight groups in Tanjung Serang, 12 in Seri Menanti, 14 in Kualo Puntian, 11 in Karang Sari, and 6 in Pandan Sari.

Examining the different experiences of government interventions and those of the private sector indicated that each program was fundamentally group-oriented. Furthermore, agricultural policies were impacted. Local farmer groups, often at the village level, have developed as a significant factor in improving agricultural productivity. Frequently, farmer groups were regarded as a resource for farmers, a venue for collaboration, and production units (Kangogo et al., 2020; Noviani et al., 2021). On the other hand, farmers' groups were usually employed primarily for administrative purposes to obtain program assistance such as fertilizers, tools, and agricultural technologies. Also, farmer organizations could be more efficient in increasing output, frequently resulting in conflicts of interest (Lencucha et al., 2020).

Farmers' knowledge of the UPSUS Pajale program

Knowledge and rationality are important factors in farmers' adaptability. The variety of skills assists in improving adaptation. In Talcott Parson's system theory, perfect adaptation could be separated into the following four dimensions: adaptation, goal, integration, and latency (Treviño & Staubmann, 2021). As a first step toward policy adaptation mapping, the characteristics of farmers' policy knowledge should be investigated.

Objectives of the program

At the farmer level, the beneficiaries and the community needed help to understand the purpose of the UPSUS Pajale programme. According to field data exploration, only Pandan Sari Village provided information relevant to the programme's policy objectives, as mentioned in the following interview (FGD Pandan Sari Village, 2021).

* WILEY-



FIGURE 2 Coding analysis of interview transcripts using NVivo 12 (2021).

Additionally, when examined substantively, these farmers' comprehension needed to be improved when examined substantively. Indeed, in other research locations, the community was unaware of the program's name and was only aware of the assistance they received from the government via agricultural extension workers and the local agriculture office. This indicated that public understanding of the program still needs to be improved; this condition will almost certainly result in less than the maximum program acceptance and achievement level. Another study discovered that farmers needed to learn about the UPSUS Pajele program (Setiyanto, 2021; Setiyanto & Pabuayon, 2020) (Figure 2).

Assistance: its types and applications

The knowledge aspect of farmers was explored in identifying the types of assistance received in the UPSUS Pajale program at the research location. Knowledge about the type of assistance was relatively the same, despite variations in the answers from informants in the research location. The results of aid identification were as follows (Table 4).

Farmers' knowledge of programs is always linked to the type of assistance they receive. For example, with the UPSUS Pajale program, farmers were more likely to recall and understand the type of assistance they received than the program's name. According to Istriningsih et al. (2022), a high degree of knowledge did not ensure that farmers would implement this

TABLE 4	Identification of types	of assistance for 1	UPSUS Paiale at	the farmer level
	racintification of types	or approximet for	or bob rujule ut	the further level.

No	Regency	Village	Assistance types	Assistance use	Mechanism
1	Ogan Komering Ilir	Tanjung	1. Rice seeds	Individual	Share evenly
		Serang	2. Fertilizer	Individual	Share evenly
			3. Pesticide	Individual	Share evenly
			4. Water pump machine	Group	Take turns
			5. Harvest tool	Group	Rent
		Seri Menanti	1. Hand tractor	Group	Rent
			2. Seeds	Individual	Share evenly
			3. Fertilizer	Individual	Share evenly
			4. Pesticide	Individual	Share evenly
			5. Sluice building	Group	Self-management
			6. Water pump machine	Group	Take turns
			7. Harvest tool	Group	Rent
			8. Hand tractor	Group	Rent
2	Banyuasin	Kualo	1. Seeds	Individual	As per recipient
		Puntian	2. Fertilizer	Individual	As per recipient
			3. Water pump machine	Group	Take turns
			4. Hand tractor	Group	Rent
			5. Harvest tool	Group	Rent
		Telang Sari	1. Ditch wash	Group	Equipment rental
			2. Seeds	Individual	As per recipient
			3. Fertilizer	Individual	As per recipient
			4. Water pump machine	Group	Take turns
			5. Hand tractor	Group	Rent
			6. Harvest tool	Group	Rent
			7. Water channel construction	Group	Self-management
3	Ogan Komering Ulu	Karang Sari	1. Seeds	Individual	As per recipient
	Timur		2. Fertilizer	Individual	As per recipient
		Pandan Sari	1. Hand tractor	Group	Rent
			2. Water pump machine	Group	Take turns
			3. Grass-cutting machine	Group	Take turns

Source: Primary data analysis (2021).

11

knowledge effectively. This condition was unquestionably one of the indicators that the program's transformation at the farmer level had been less than profound. In the field, program materials were group-based and by name and address, with a sharing mechanism to minimize conflict and resistance from groups that did not receive the program. This form of local government policy aimed to minimize conflict and resistance from groups not receiving the program. This most emphatically differed from the program's increasing agricultural productivity objective. Policymakers frequently overlook these cultural barriers. Indeed, it was only considered casuistic, which did not harm the program's national accomplishments. On the other hand, the program was believed to benefit only local elites and not small farmers (Darwis et al., 2020; Indratanaya et al., 2019; Nasikh et al., 2021).

Assistance at the farmer level involved several types of management. First, the recipient used individual assistance, such as seeds, fertilizers, and pesticides. However, in OKI Regency, it was divided equally with other farmers who did not receive the program, as conveyed by the following informants: "However, because it should be divided equally, the amount of fertilizer used is not consistent" (Sri Menanti Village FGD, OKI 2021).

The second mechanism, rental, was typically used with group-based assistance such as hand tractors and harvesting machines. The third type was a rotating system that assisted with water pump machines and lawnmowers. Meanwhile, farmer groups worked independently to assist in physical developments such as floodgates. The following information pertains to the management of farmer assistance at research locations.

If the tool sustains damage during use, it is typically repaired, and the person responsible is the last person to use the tool. (FGD Tanjung Serang, 2021)

Currently, assistance from the UPSUS programme is being used by rotational groups. (Kualo Puntian Village FGD, 2021)

Treatment is typically carried out by group members using their tractor, and once the planting season is over, it is stored in the farmer group's head. (FGD Karang Sari Village, 2021)

Assistance with programs

Farmers' awareness of available assistance was also critical for program implementation at the farmer level. The facilitator's role was critical in the implementation of each program. According to field data findings, not all farmers in the research villages had the same knowledge about program assistance from various program elements following the program's general provisions (Bagagnan et al., 2019). This condition indicated that the program should be widely known among residents or farmers. Indeed, only three villages, Pandan Sari Village OKU Timur, Seri Menanti Village OKI, and Telang Sari Village Banyuasin, stated that they were accompanied in implementing the program by agricultural extension workers, Military Regional Command officers called Babinsa, and students. At the same time, the remaining three villages needed to be made aware of the assistance and program escort. These findings suggested that the program's communication pattern must be more ingrained in farmers as beneficiaries. This was also due to the need for more stakeholder interaction during program implementation (Astuti et al., 2021) (Figure 3).





FIGURE 3 Coding analysis of interview transcripts using NVivo 12 (2021).

The following information was provided by farmers regarding the assistance of the UPSUS Pajale program at the research location:

In the implementation of the UPSUS Pajale programme, assistance is carried out by PPL, assistance from students, and Babinsa, especially in escorting. (Seri Menanti Village FGD, 2021)

...Programme assistance by students from Universitas Sriwijaya (Unsri) Faculty of Agribusiness Agriculture. Its activities are informing the administration, and managing groups... (Telang Sari Village FGD, 2021)

Program constraints and impact

According to the data, implementing the UPSUS Pajale program in the research area had several problems. First, the program did not agree with the land's characteristics. For example, the results in Banyuasin, the IP 200 rice program, differed from the land's conditions. Second, assistance could have been more appropriate, which was a problem for lowlands and tidal lowlands. Third, assistance was distributed equitably, a common problem in many other local programs. Fourth, pests such as rats, birds, and grasshoppers were frequent technical agricultural problems. The informants provided the following information regarding program constraints:

Once the programme assistance was late, the planting season was over, new assistance arrived, so the assistance was less effective. (FGD Pandan Sari Village, 2021).

The arrival of seeds and fertilizers has been late but has also been too early, but it does not matter as long as it does not occur in June. (Seri Menanti Village FGD, 2021)

Often one to two months late, especially assistance in the form of seeds, but if it is too late, it is planted in the lebak rice fields. (Tanjung Serang Village FGD, 2021)

The farmers also consider the distribution system a problem:

The number of groups proposed was 15, but only eight groups were approved for the UPSUS Pajale programme for the realization of the division based on the chairman's deliberation and divided equally into 15 groups. All received assistance so that one person received one assistance. (Tanjung Serang Village FGD, 2021)

In addition, the program's applications schedule was not fully accurate:

When the UPSUS programme came in, it was setting the cropping pattern, so at the time it wanted to be programmed, the situation was not under the soil pattern. (FGD in Karang Sari Village, 2021)

Several technical and nontechnical problems were related to a need for application field implementation preparation. Coercion was found in the program. For example, the IP 200 rice needed to be corrected, thus harming farmers who were already accustomed to the IP 200 rice and corn. In addition, because the agricultural program was very generalized, it did not highlight exceptional cases. Hence, generalized inaccuracies occurred when the program was implemented in the field. This condition also often arises because of the macro perspective used to assess the program's success; hence, these cases are considered normal, and no proper solution is sought. This case will continue to be found in future agricultural programs.

Many obstacles in the program, of course, were noted in the field findings. However, the program was considered to contribute significantly to farmers' increasing productivity. In one location, namely Pandan Sari Village, production increased when the program was implemented. An important impact for farmers in Banyuasin Telang Sari, namely the construction of waterways, has had a positive impact. Integrating IP 200 rice and corn can successfully increase farmers' productivity, although it differs from the initial IP 200 rice plants program scheme.

CONCLUSION

The findings indicated a gap in knowledge between the regulations/policies behind the UPSUS Pajale program and the results from several research locations. This is an important matter that policymakers and program implementers at national, provincial, and local policy levels must take seriously and explain to farmers. Relevant theoretical analysis of agricultural program adaptation was an approach for assessing program implementation at the local level. The various typologies of the three research locations influenced the constraints farmers

-WILEY

WILEY-

experience while managing agricultural land. From 2015 to 2018, six villages in three districts in South Sumatra were shareholders of the UPSUS Pajale program. In the case of this program, farmers were more likely to recognize and interpret the type of assistance. This was one of the indications that awareness of the program's at the farmer level needed to be increased. Awareness of various other programs among farmers was also significant for program adaptation at the farmer level. The facilitator's role was essential for the proper implementation of each program. According to the data collected, not all sample farmers were aware of the existence of program assistance from different aspects following the program's general parameters. Climate change resilience by investigating and developing strategies to increase the resilience of rice, corn, and soybean crops to the effects of climate change; sustainable intensification to increase crop productivity while minimizing negative environmental impacts; and empowering small farmers by strengthening smallholder participation in the UPSUS program, including increasing access to credit, are policy implications for further research on UPSUS Pajale in Indonesia.

ACKNOWLEDGMENTS

The authors wish to thank the Institute for Research and Community Services (LPPM) of Universitas Sriwijaya through the research grant programme and community service with grant letter number 0022/UN9/SK.LP2M.PT/2021.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

ORCID

Muhammad Yamin D https://orcid.org/0000-0003-2357-320X Meitry F. Tafarini D https://orcid.org/0000-0002-9857-1367 Nurilla Elysa Putri D https://orcid.org/0000-0003-0982-0577 Abdul Kholik D http://orcid.org/0000-0002-2198-3144 Siti R. Andelia D https://orcid.org/0000-0003-0184-9359

REFERENCES

- Alaerts, G. J. (2020). Adaptive policy implementation: Process and impact of Indonesia's national irrigation reform 1999–2018. World Development, 129, 104880. https://doi.org/10.1016/j.worlddev.2020.104880
- Amirah Ajani Dzulhidany, A., & Sigit Andhi Rahman, M. (2022). Cultivating food sovereignty in the time of the pandemic: An analysis of Jokowi's agricultural policy. *KnE Social Sciences*, 7(4), 173–197. https://doi.org/ 10.18502/kss.v7i4.10523
- Astuti, T. B., Wijianto, A., & Rusdiana, E. (2021). Farmer's perception on the role of babinsa in program of upsus pajale. *E3S Web of Conferences*, *232*(14), 01017. https://doi.org/10.1051/e3sconf/202123201017
- Bagagnan, A. R., Ouedraogo, I., & Fonta, W. M. (2019). Perceived climate variability and farm level adaptation in the Central River Region of The Gambia. *Atmosphere*, 10(7), 423. https://doi.org/10.3390/atmos10070423
- Darwis, V., Muslim, C., & Hangga Saputra, Y. (2020). The benefits and problems in the implementation of the special effort of rice, corn, soybean production enhancement program. SOCA: Jurnal Sosial, Ekonomi Pertanian, 14(3), 410–420. https://doi.org/10.24843/soca.2020.v14.i03.p03
- Donatelli, M., Magarey, R. D., Bregaglio, S., Willocquet, L., Whish, J. P. M., & Savary, S. (2017). Modelling the impacts of pests and diseases on agricultural systems. *Agricultural Systems*, 155, 213–224. https://doi.org/ 10.1016/j.agsy.2017.01.019
- Ehlers, M. H., Huber, R., & Finger, R. (2021). Agricultural policy in the era of digitalisation. Food Policy, 100, 102019. https://doi.org/10.1016/j.foodpol.2020.102019

- Gebska, M., Grontkowska, A., Swiderek, W., & Golebiewska, B. (2020). Farmer awareness and implementation of sustainable agriculture practices in different types of farms in Poland. *Sustainability*, 12(19), 8022. https://doi.org/10.3390/su12198022
- Hamyana, H., & Romadi, U. (2017). Pembangunan dan konflik sosial (studi etnografi implementasi program upaya khusus peningkatan produksi padi, jagung, dan kedelai di kabupaten Bondowoso-Jawa Timur). Agriekonomika, 6(2), 108–119. https://doi.org/10.21107/agriekonomika.v6i2.1959
- Hatta, M., Fahmid, I. M., Salman, D., & Kurniaty. (2021). Strategy to increase the effectiveness of subsidized fertilizer distribution: A case study in Indramayu regency, West Java. *IOP Conference Series: Earth and Environmental Science*, 1012(1), 012032. https://doi.org/10.1088/1755-1315/1012/1/012032
- Hidayatulloh, W., & Koestiono, D. (2021). Impact of special efforts rice, corn, and soybean program on level of food security in Malang regency. *Jurnal Ekonomi Pertanian Dan Agribisnis*, 5(4), 1059–1068. https://doi. org/10.21776/ub.jepa.2021.005.04.9
- Hullman, G. A., & Kwiatkowski, M. J. (2022). Social constructions of conflict and mediation as factors in mediation program decisions. *Conflict Resolution Quarterly*, 39(3), 211–220. https://doi.org/10.1002/crq. 21325
- IFPRI. (2019). Policies to support investment requirements of Indonesia's food and agriculture development during 2020-2045 (*Issue October*). Asian Development Bank. https://doi.org/10.22617/TCS190447-2
- Indratanaya, I. G. N. S. D., Suardi, I. D. P. O., & Dewi, I. A. L. (2019). Persepsi Petani terhadap Program Upaya Khusus Peningkatan Produksi Padi, Jagung, dan Kedelai (Kasus Teknologi SRI di Subak Lungatad, Desa Peguyangan Kangin, Kecamatan Denpasar Utara, Kota Denpasar). Jurnal Agribisnis Dan Agrowisata (Journal of Agribusiness and Agritourism), 8(2), 225–232. https://doi.org/10.24843/jaa.2019.v08.i02.p11
- International Food Policy Research Institute. (2019). Policies to support investment requirements of Indonesia's food and agriculture development during 2020-2045. https://doi.org/10.22617/TCS190447-2
- Irmawati. (2015). Improvement of swamp rice cultivation for stable production. Mie University.
- Irmawati, Ehara, H., Suwignyo, R. A., & Sakagami, J.-I. (2015). Swamp rice cultivation in South Sumatra, Indonesia: An overview. *Tropical Agriculture Development*, 59(1), 35–39. https://doi.org/10.11248/jsta.59.35
- Istriningsih, Dewi, Y. A., Yulianti, A., Hanifah, V. W., Jamal, E., Dadang, Sarwani, M., Mardiharini, M., Anugrah, I. S., Darwis, V., Suib, E., Herteddy, D., Sutriadi, M. T., Kurnia, A., & Harsanti, E. S. (2022). Farmers' knowledge and practice regarding good agricultural practices (GAP) on safe pesticide usage in Indonesia. *Heliyon*, 8(1), e08708. https://doi.org/10.1016/j.heliyon.2021.e08708
- Jackson, K., & Bazeley, P. (2019). Qualitative data analysis with NVivo (3rd ed.). Sage Publications Ltd.
- Juhandi, D., & Enre, A. (2019). Upsus Pajale policy: Is it able to increase the pajale production base province? *Habitat*, 30(3), 123–131. https://doi.org/10.21776/ub.habitat.2019.030.3.15
- Kangogo, D., Dentoni, D., & Bijman, J. (2020). Determinants of farm resilience to climate change: The role of farmer entrepreneurship and value chain collaborations. *Sustainability*, 12(3), 868. https://doi.org/10.3390/ su12030868
- Kumar, D., & Kalita, P. (2017). Reducing postharvest losses during storage of grain crops to strengthen food security in developing countries. *Foods*, 6(1), 8. https://doi.org/10.3390/foods6010008
- Lencucha, R., Pal, N. E., Appau, A., Thow, A. M., & Drope, J. (2020). Government policy and agricultural production: A scoping review to inform research and policy on healthy agricultural commodities. *Globalization and Health*, 16(1), 11. https://doi.org/10.1186/s12992-020-0542-2
- Mawardi & Khairullah, I. (2022). Anticipate the impact of climate change at tidal swamplands through water management technology. IOP Conference Series: Earth and Environmental Science, 950(1), 012014. https:// doi.org/10.1088/1755-1315/950/1/012014
- Ministry of Agriculture of Republic of Indonesia. (2011). Guidelines For Development of Daily Personnel For Agricultural Achievement Assistants (Pedoman Pembinaan Tenaga Harian Lepas Tenaga Bantu Penyuluh Pertanian), Pub. L. No. No.03/Permentan/OT.140/1/2011.
- Ministry of Agriculture of Republic of Indonesia. (2015a). Regulations of The Minister of Agriculture: Guidelines for integrated supervision and assistance of extensions, students, and village supervisors in the framework of special efforts to increase rice, corn, and soybean production. Pub. L. No.14/Permentan/OT.140/3/2015.

we WILEY

- Ministry of Agriculture of Republic of Indonesia. (2015b). Regulations of The Minister of Agriculture: Guidelines for special efforts (Upsus) to increase rice, corn and soybean production through the improvement of irrigation network and its supporting facilities for fiscal year, Pub. L. No.03/Permentan/ OT.140/2/2015.
- Ministry of Agriculture of Republic of Indonesia. (2016a). Decree of the Minister of Agriculture concerning Locations for the Development of National Agricultural Areas (Keputusan Menteri Pertanian tentang Lokasi Pengembangan Kawasan Pertanian Nasional), Pub. L. No. No.830/Kpts/RC.040/12/2016.
- Ministry of Agriculture of Republic of Indonesia. (2016b). Regulation of the Minister of Agriculture concerning guidelines for the development of agricultural areas (Peraturan Menteri Pertanian tentang Pedoman Pengembangan Kawasan Pertanian), Pub. L. No. No.56/Permentan/RC.040/11/2016
- Mulyana, E., Januarti, I., Syaiful, F., & Damayanthy, D. (2021). The identification of local wisdom in lebak swampland management (shallow and middle type) and its relation on rice farmers' household income in Ogan Ilir Regency. Proceedings of first international conference on sustainable agricultural socio-economics, agribusiness, and rural development (ICSASARD) (pp.151–157). https://doi.org/10.2991/aebmr.k.211214.021
- Mustika Edi, A., Elisa, W., & Bella, S. (2018). Dynamics, degradation and future challenges of wetlands in South Sumatra Province, Indonesia. E3S Web of Conferences, 68, 04001. https://doi.org/10.1051/e3sconf/ 201868040
- Nasikh Kamaludin, M., Narmaditya, B. S., Wibowo, A., & Febrianto, I. (2021). Agricultural land resource allocation to develop food crop commodities: Lesson from Indonesia. *Heliyon*, 7(7), e07520. https://doi.org/ 10.1016/j.heliyon.2021.e07520
- Noviani, N., Wahyuni, S., Handayani, L., & Hermanto, B. (2021). Role of farmers groups in increasing sustainable rice paddy farming business in Lubuk Bayas Village of Perbaungan Subdistrict. *The International Journal of Social Sciences*, 2(4), 9–14. https://doi.org/10.51612/teunuleh.v2i4.69
- Omotesho, K. F., Akinola-Soji, B., Adesiji, G. B., & Owojaiye, O. B. (2021). Knowledge and competence of agricultural extension field workers in farmer-group facilitation in Kwara state, Nigeria. Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis, 69(2), 231–239. https://doi.org/10.11118/actaun. 2021.020
- Paiman, I., Ardiyanta, I., Ansar, M., Effendy, I., & T. Sumbodo, B. (2020). Rice cultivation of superior variety in swamps to increase food security in Indonesia. *Reviews in Agricultural Science*, 8, 300–309. https://doi.org/ 10.7831/ras.8.0_300
- Pawlak, K., & Kołodziejczak, M. (2020). The role of agriculture in ensuring food security in developing countries: Considerations in the context of the problem of sustainable food production. *Sustainability*, 12, 5488. https://doi.org/10.33642/ijhass.v5n1p1
- Pradhan, N. S., Su, Y., Fu, Y., Zhang, L., & Yang, Y. (2017). Analyzing the effectiveness of policy implementation at the local level: A case study of management of the 2009–2010 drought in Yunnan province, China. *International Journal of Disaster Risk Science*, 8(1), 64–77. https://doi.org/10.1007/s13753-017-0118-9
- Pratiwi, A. K., Muktasam, M., Lestari, D., & Sjah, T. (2022). Study on implementation of special efforts to increase production of rice, corn, soy (Upsus Pajale) in Cakranegara district, Mataram city. *Prisma Sains: Jurnal Pengkajian Ilmu Dan Pembelajaran Matematika Dan IPA IKIP Mataram*, 10(3), 719–725. https://doi. org/10.33394/j-ps.v10i3.5479
- Purba, K. F., Yazid, M., Hasmeda, M., Adriani, D., & Tafarini, M. F. (2020). Technical efficiency and factors affecting rice production in tidal lowlands of South Sumatra province Indonesia. *Potravinarstvo Slovak Journal of Food Sciences*, 14, 101–111. https://doi.org/10.5219/1287
- Purba, K. F., Yazid, M., Hasmeda, M., Adriani, D., & Tafarini, M. F. (2021). The sustainability of rice farming practices in tidal swamplands of South Sumatra Indonesia. *Potravinarstvo Slovak Journal of Food Sciences*, 15, 9–17. https://doi.org/10.5219/1473
- Rangga, K. K., & Syarief, Y. A. (2018). Paddy farmer households' participation and food security level in special effort program in Seputih Raman sub-district of Central Lampung Regency. *IOP Conference Series: Earth* and Environmental Science, 142(1), 012060. https://doi.org/10.1088/1755-1315/142/1/012060
- Ratmini, N. P. S., & Herwenita. (2021). The characteristics of swampland rice farming in South Sumatra: Local wisdom for climate change mitigation. *IOP Conference Series: Earth and Environmental Science*, 724(1), 012033. https://doi.org/10.1088/1755-1315/724/1/012033

- Rustiadi, E., Pravitasari, A. E., Setiawan, Y., Mulya, S. P., Pribadi, D. O., & Tsutsumida, N. (2021). Impact of continuous Jakarta megacity urban expansion on the formation of the Jakarta-Bandung conurbation over the rice farm regions. *Cities*, 111, 103000. https://doi.org/10.1016/j.cities.2020.103000
- Sari, M., & Sjah, T. (2016). Implementation of special program of pajale (rice, corn and soybean) in Terara District, East Lombok regency. *International Research Journal of Management, IT & Social Sciences*, 3(9), 49–60. https://doi.org/10.21744/irjmis.v3i9.171
- Seifollahi-Aghmiuni, S., Kalantari, Z., Egidi, G., Gaburova, L., & Salvati, L. (2022). Urbanisation-driven land degradation and socioeconomic challenges in peri-urban areas: Insights from Southern Europe. *Ambio*, 51(6), 1446–1458. https://doi.org/10.1007/s13280-022-01701-7
- Setiyanto, A. (2021). The performance of the upsus program implementation on rice production and farmers' income. Forum Penelitian Agro Ekonomi, 39(1), 27–47. https://doi.org/10.21082/fae.v39n1.2021.27-47
- Setiyanto, A., & Pabuayon, I. M. (2020). Impacts of upsus program on the cost efficiency and competitiveness of rice production in Indonesia. Forum Penelitian Agro Ekonomi, 38(1), 29–52. https://doi.org/10.21082/fae. v38n1.2020.29-52
- Skendžić, S., Zovko, M., Živković, I. P., Lešić, V., & Lemić, D. (2021). The impact of climate change on agricultural insect pests. *Insects*, 12(5), 440. https://doi.org/10.3390/insects12050440
- Suryadi, F. X. (1996). Soil and water management strategies for tidal lowlands in Indonesia. IHE Delft.
- Tafarini, M. F., & Yazid, M. (2019). Sustainable water management in tidal lowland agriculture: A research agenda. *Sriwijaya Journal of Environment*, 3(3), 102–107. https://doi.org/10.22135/sje.2018.3.3.102-107
- Tafarini, M. F., Yazid, M., Prayitno, M. B., Faizal, M., Suryadi, F. X., & Purba, K. F. (2021). Willingness to pay for water management to support sustainable food production in tidal lowlands of South Sumatra, Indonesia. *Emirates Journal of Food and Agriculture*, 33(12), 1008–1017. https://doi.org/10.9755/ejfa.2021.v33.i12.2789
- Tafarini, M. F., Yazid, M., Suryadi, F. X., Prayitno, B., Faizal, M., & Purba, K. F. (2022). The development of instruments for farmers' participation in water management in tidal lowlands using confirmatory factor analysis. *Emirates Journal of Food and Agriculture*, 34(9), 773–783. https://doi.org/10.9755/ejfa.2022.v34. i9.2936
- Treviño, A. J., & Staubmann, H. (2021). The Routledge international handbook of Talcott Parsons Studies (1st ed.). Taylor and Francis. https://doi.org/10.4324/9780429321139
- Viana, C. M., Freire, D., Abrantes, P., Rocha, J., & Pereira, P. (2022). Agricultural land systems importance for supporting food security and sustainable development goals: A systematic review. *Science of the Total Environment*, 806, 150718. https://doi.org/10.1016/j.scitotenv.2021.150718
- Vik, J. (2020). The agricultural policy trilemma: On the wicked nature of agricultural policy making. Land Use Policy, 99, 105059. https://doi.org/10.1016/j.landusepol.2020.105059

How to cite this article: Yamin, M., Tafarini, M. F., Putri, N. E., Kholik, A., & Andelia, S. R. (2024). One policy but different interpretations: A case of agricultural policy implementation in Indonesia. *Asian Politics and Policy*, 1–17. https://doi.org/10.1111/aspp.12756

-WILEY