IMPACT OF FMSRB PROGRAM POLICIES IN BANTEN PROVINCE

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Abstract

Multipurpose plants are an excellent prospect to be used as part of a rehabilitation plant program. The central government, through the *ADB Loan* 3440-INO loan, has implemented the *Flood Management InSelectedd River Basins* (FMSRB) program in the Ciujung watershed, distributing assistance to farmers in the DAS 3 CIS area of Banten Province. The *Profitability Coefficient* (PC) is the ratio between actual economic net profit. The PC value describes the combined effect on output. The PC ratio is used to see the impact that can cause differences in private (*financial*) and economic (*social*) benefits. The PC value obtained in the multipurpose crop business in durian commodities at the research location is 1.45, which can be interpreted as the producer's mean of it if there is a policy intervention from the government, which is 1.45 times the social benefit. Producers will benefit 145% of their profits if the government intervenes in police y. *The subsidy ratio to producer (SRP)* is between net transfers and receipts at shadow prices. The SRP value at the study site was 0.43. It can be interpreted that government policy in implementing an organic farming system causes organic coffee farmers at the research site to pay production costs lower than 43% of the *opportunity cost* to produce. FMSRB durian crop commodities, the government has provided a policy in the form of assistance, maintenance, and seed of help.

Keywords: Impact; Policy; Multipurpose Crop; FMSRB

INTRODUCTION

The *Flood Management In Selected River Basins* (FMSRB) program is implemented in the Ciujung River watershed, which is one of the three main rivers in the Cidanau-Ciujung-Cidurian river basin, which has an area of 5,000 km2. Some problems that occur in the Ciujung watershed, if not managed through water and environmental conservation mechanisms will af, will affect the mixture along the Ciujung River (Asmarantaka et al., 2018). In the Ciujung watershed, flood management techniques that refer to integrated water management are needed because the river provides water supply for agricultural areas in three upstream districts. Mid-downstream, one of them is Pandeglang district. Managing agricultural land on these unique lands is one alternative solution besides forest preservation to protect the area from erosion and flooding. In the rainy season, water capacity is often abundant and will submerge the planting area (Downey. et al., .1992)

On the other hand, in the dry season when irrigation water tends to be unavailable, water collected either in water storage ponds or stored underground can be used effectively and efficiently to irrigate the cultivation of rice or other crops (crops, horticulture) as an alternative to additional irrigation water (Hordofa, Jalata D. 2021). These activities require good water management, managed directly by farmers as water

users. The added value of agricultural development in the Ciujung watershed can increase the income of communities and farmers through soil and water conservation techniques needed in agricultural land management. Investment in rural infrastructure is urgently required to support land and water management in the region. To overcome the situation, the Indonesian government proposes that land and water management development activities follow conservation efforts along the Ciujung watershed watershed watershed through Flood Management in Ciujung watershed conservation activities.

Multipurpose plants are various types of plants that have dual functions. Diverse from multipurpose plants such as wood fruit to leaves (Abdulwahab, S. 1991). Multipurpose plants have an essential role in supporting the community's economy because most of these plants are seasonal crops so they can be used as a source of income (Rahman, 2017). In addition, multipurpose plants are an excellent prospect for use as part of the rehabilitation plant program (Arta, 2009). The community generally cultivates multipurpose plants on garden lands, such as cloves, nutmeg, avocado, durian, and lacinia. The Banten Province region has a relatively high potential for producing multipurpose crops.

RESEARCH METHODOLOGY

Research Location and Time

Farmer groups implementing the FMSRB program in the Ciujung Watershed 3 area spread across Pandeglang Regency, Lebak Regency, and Serang Regency, Banten Province, carried out this research. The research is conducted from August 2022 – March 2023.

Data Types and Sources

The data used is primary data, and secondary data is only supporting data (Abidin, 2012). Preliminary data are generated from questionnaires, interviews with several heads of families as respondents, observations, and surveys directly at the research location. In this study, the research sample was determined purposively, namely Lebak Regency as many as 6 (six) farmer groups, Pandeglang Regency as many as 3 (three) Farmer Groups, and Serang Regency as many as 3 (three) Farmer groups.

Data Analysis

The PAM matrix or Policy Analysis Matrix can identify three analyses, namely: (1) the level of profit or competitiveness or the price paid by farmers, which is placed in the first line, (2) the level of social benefit or calculation based on social prices (*shadow price*), which is a price that describes the true sociactualalue for the element of cost or yield, which is placed in the second line and (3) determination of the impact oTransferer or the difference in the calculation of private prices with social prices as a result of policy impacts, which is placed on the third line.

Table 1 Policy Analysis Matrix (PAM)

Information	Acceptance	Cost		Advantage
		Input Tradable	Input nontradable	
Private Pricing	A	B	C	D=A-BC
Social Pricing	E	F	G	H=E-F-G
Price Policy	I=A-E	J=B-F	K=C-G	L=D-H = I-J-K

Source: Monkey and Pearson, 1989

Information:

Multipurpose farming revenue at private price	= A
Total cost of tradable multipurpose farming at private price	= B
Total nontradable multipurpose farming at private price	= C
Profit rate on private price	= D
Multipurpose farm revenue at social prices	= E
Total cost of tradable multipurpose farming at social price	= F
Total non-trade multipurpose farming at social price	= G
Social gain	= H
(OT)	= I
Transfer input (IT)	= J
Transfer Factor (TF)	=K
NeTransferer (NT)	= L
Private expense ratio (PCR)	= C/(A-B)
Domestic resource cost ratio (DRCR)	= G/(E-F)
Nominal output protection coefficient (NPCO)	= A/E
Nominal input protection coefficient (NPCI)	= B/F
Effective protection coefficient (EPC)	= (A-B)/(E-F)
Profit coefficient (PC)	= D/H
Subsidy to producer ratio (SRP)	= L/E

RESULTS AND DISCUSSION

The Impact of Government Policy in the FMSRB Program on the Development of Multipurpose Crops

A program is said to be successful if the conformity of the form of infrastructure with the plan that has been determined, the suitability of the actors involved, obtaining policy recommendations, and building a monitoring system for the subsequent development program. Government policy can impact the decrease or increase of an economic activity's production and productivity.

The PAM method can be used to determine the impact of government policies on inputs, outputs, and inputs' outputs in multipurpose crop farming. The following are the constituent components of organic coffee production costs at social and private prices and are divided into tradable and tradablents into units per hectare:

Table 2. Constituent Components of Durian Multipurpose Plant Cost in Hectares on Social and Private Pricing

Component	Tradable		Non Tradable	
	Social	Private	Social	Private
Bibit	3,600,000			
Maintenance	650,000			
NPK	750,000			
Alert Fee			100,000	150,000
Harvesting Cost			3,000,000	
Fertilization cost			320,000	400,000
TOTAL	5,000,000	300,000	3,420,000	550,000

Source: Processed Data, 2022

This study did not include durian seed components because the program was carried out on existing plantations (it had been attempted before) (Basu, Swastha. 1996). By the time this program entered, durian plants were already being produced.

Revenue data on private and social prices are required to compile the PAM matrix. The following are the components of farmers' income receipts at secret and social prices per hectare.

Table 3. Matrix Calculation of PAM Policy Analysis in Commodity Multipurpose Crop Business Durian FMSRB Program Recipients

INFORMATION	ACCEPTANCE	COST		ADVANTAGE
		INPUT TRADABLE	INPUT NON TRADABLE	
Private Pricing	250,000,000	300,000	3,420,000	246,280,000
Social Pricing	175,000,000	5,000,000	550,000	169,450,000
Policy Impact	75,000,000	-4,700,000	2,870,000	76,830,000

IMPACT OF OUTPUT TRANSFER	OT	75,000,000	
	NPCO	0.014	
IMPACT OF INPUT TRANSFER	IT	-4700000	
PC	D/H		1.45340808
SRP	L/E		0.43902857
	NPCL	0.06	
IMPACT OF OUTPUTS	EPC	(A-B)/(E-F)	249,700,000
			170,000,000
	EPC		1.46882353
NT	L		76,830,000

Source: Primary Data,2022

Impact of Government Policies on Output

PAM analysis can obtain the OT value in multipurpose crop farming. The durian crop commodity is IDR. 75,000,000 means that the private price of durian multipurpose crops is higher when compared to social costs. OT values > 0 describe the transferer from society (consumers) to producers.

The *Nominal Protection Coefficient on Output* (NPCO) is the ratio between receipts calculated based on financial prices and tickets calculated based on shadow prices. Based on Table 1, the NPCO value obtained from commodity multipurpose crop farming at the study location is 0.014, meaning that no government policy intervention results in private prices being greater than shadow or social costs that impact multi-crop farmers (Nasir, M. 1989.

Impact of Government Policy on Inputs

The indicators used to see government policy interventions on production inputs are the value of Transfer Input (IT), Transfer Factor (TF), and Nominal *Protection Coefficient on Tradable Input* (NPCI). The PAM method can obtain an IT value of hostile IDR. -4,700,000. Using the Transfer Input (IT) value, the policy on tradable production inputs can be described. The negative IT value in multipurpose farming of durian plants illustrates that there are policy interventions from the government, tradable production inputs (fertilizers and pesticides and seeds) and non-tradnontradableion inputs (labor costs)

Impact of Government Policy on Input-Output

PAM can obtain an EPC value of 1.46, meaning that the impact of intervention from government policies on inputs and outputs in the durian commodity multipurpose crop business at the research location has been running effectively, or current government policies have supported or protected durian farmers. The EPC value of 1.46 can be interpreted as government incentives through the FMSRB program, resulting in a 1.46% higher added value received by multipurpose commodity crop farmers when compared to without government intervention. This government policy occurs in developing durian plants so that durian farmers get durian prices like private prices.

Table 4. Policy Impact on I-O

Policy Impact	Symbol	Nilai
Effective Protection Coefficient	EPC	1,46
Net Transfer	NT	76.830.000
Profitability Coefficient	PC	1,45
Subsidi Ratio to Producer	SRP	0,43

Source: Primary Data,2022

Net Transfer in the durian commodity multipurpose plant business amounted to IDR 76,830,000. A positive NT value illustrates that the additional producer surplus is caused by government policies applied to inputs and outputs or vice versa. The surplus value of durian production is charged to the input costs of the FMSRB program at the research site.

The PC value obtained in the multipurpose crop business on durian commodities at the research location is 1.45, as shown in Table 15. It can be interpreted that producer profits if there is policy intervention from the government are 1.45 times social benefits.

Manufacturers will benefit from 145% of the profits that producers will receive if the government intervenes in policy; it can be concluded that the value of more than one PC means that overall government policies incentivize producers.

The subsidy ratio to producer (SRP) is between net transfers and receipts at shadow prices. The SRP value in organic arabica coffee farming at the study site was 0.43. It can be interpreted that government policy in implementing an organic farming system causes organic coffee farmers at the study site to pay production costs lower than 43 percent of the *opportunity cost* to produce. In the FMSRB for durian crop commodities, the government has provided a fertilizer, maintenance, and seed assistance policy.

CONCLUSION AND SUGGESTIONS

Most FMSRB beneficiary farmers own less than 1 hectare of land, cultivate their land, rent it, and have experience as multipurpose crops. The FMSRB program impacts the output produced by farmers in the form of revenue from multipurpose crops higher than social prices because social prices must go through intermediaries and the market chain system so that they require price difference costs (OT>0 and NPCO >1). The FMSRB program for multipurpose farmers of durian commodities impacts farmers' production inputs. Without government incentives for tradable production inputs (chemical fertilizers and pesticides), nontradable paid by farmers at private prices are higher than social prices. The policy impact on the input-output of the FMSRB program for the multipurpose crop business of durian commodities has an effect, namely, the added value at the farmer level, the surplus of farmers (producers) increases, the profits of farmers (producers) increase and the efficiency of farming.

FMSRB recipient farmers have formal education only until they finish elementary school; related to this, the government should facilitate appropriate capacity building for organic arabica coffee farmers, with technical guidance and assistance from extension workers intensively. The policy impact of the FMSRB program has provided interventions in the form of production inputs and tradable costs. Farmers actively participate in capacity building organized by the government or other parties. It is hoped that there will be further research related to this program so that this initial research can be used as a reference for the basis of research.

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