

Policy Paper

The Enhancement of Cocoa Productivity in Sikka Regency



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POLICY PAPER

The Enhancement of Cocoa Productivity in Sikka Regency

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A. BACKGROUND

Cocoa (*Theobroma cacao*) which means Meal for the Gods is a strategic commodity as besides an international trade commodity with high value, 95 % of its business activity also involves Cocoa smallholders (*Theobroma cacao*). In Sikka Regency, the community has come to know cocoa since the 1960s. In the early 1970s, cocoa production centers were only found in the sub-Regencys of Kewapante and Bola, but now cocoa has been developed into a major plantation crop in 17 of 21 sub-Regencys (with the exception of Alok, Alok Barat, and Magepanda sub-Regencys). Sikka then went on to become the largest cocoa producer in NTT province.

Cocoa is the major commodity revenue contributor to cocoa farmers. Cocoa farmers in Sikka number as many as 33,278 families (Department of Agriculture, Forestry, and Plantation - Distanbun: 2011). However, cocoa plantation business in Sikka is still of traditional agriculture business scale. On average, ownership of land for private (family) cocoa cultivation is less than 0.5 hectares. Only 7% of farmers have more than 1 land, and only 10% of farmers have land of 1 ha or more. Total land used for the cultivation of cocoa until 2012 reached 22,257 ha.

Extensive land holdings by cocoa farmers keep on contracting as a result of demographic pressure. Expansion of cocoa farms is no longer possible, except through the replacement of other types of crops that already exist with cocoa trees. The local government did not have a clear policy to maintain the size of the cocoa business, or provide land for cocoa development in Sikka. Thus cocoa production in Sikka tends to stagnate and even decline.

Until 2003 average cocoa production in Sikka reached 14,333.2 tonnes/year with a nominal value of Rp.372,663,200,000. However commencing 2004, cocoa production continued to decline to 54% or only 7,739.93 tonnes. In 2012 of a total land area of 22,257 ha, total production amounted to only 7,151 tonnes. However Sikka's total land area and cocoa production is still the highest in NTT. NTT's cocoa production in 2012 reached 12,978 tonnes (ranked 5th nationally), with a total land area of 46,245 ha. This means that Sikka contributed 55.1% to cocoa production, while Sikka's land area is 48.1% of the total land area in NTT. Although its contribution to cocoa production in NTT is the largest compared to other regions, average cocoa productivity in Sikka is only 321 kg/ha/year which is far below the national average of 900 kg/ha/year.

The decline in cocoa production is equal to a GDP loss of Rp.201.2 billion per year. This GDP loss results in decreased multiplier effect activity of the economy in Sikka in the form of decrease in consumption of goods

and services, decreased production, decreased labor uptake and raw materials, income distribution and ultimately the community at cocoa centers slumped. The impact of the decline in cocoa productivity in Sikka is enormous due to the contribution of this commodity to the GDP of Sikka at 8.46% (along with other plantation commodities).

Early identification of several causes of the decline in productivity of the cocoa crop included the old age factor as most cocoa trees are more than 30-45 years old. In addition there had also been an outbreak of plant pests (OPT), and cropping patterns that did not follow good farming practices (Good Agricultural Practices - GAP).

The local government has so far launched cocoa farming business as one of the region's economic powerhouse, but did not have many concrete programs in cocoa farming development. Coordination among agencies involved in cocoa development has also not been optimal resulting in minimal implementation of the program thus less effective. Cocoa business is allowed to develop on its own without significant support from the local government. As a result, cocoa business development is less than optimal and likely to continue to decline. For that there must be concrete policies and programs of activities to encourage cocoa business growth in Sikka.

B. FORMULATION OF PROBLEMS

Of the many problems in cocoa business development in Sikka, generally the main problem is **low productivity which tends to decline further**. Following consultations with cocoa stakeholders in Sikka, the roots of the problem of low cocoa productivity in Sikka can be grouped into two main factors, namely: (1) Old cocoa trees; and (2) Pests and diseases. Problems associated with low cocoa productivity in Sikka can be described with a problem tree as the next page.

Each of these factors has occurred because of several inter related aspects, and there are those whose behavior may trigger the occurrence of problems. More details can be seen in the table in the next page on the formulation of problem

C. IDENTIFICATION OF GOALS

Based on the problems that have been described in the previous section, the general goal to be achieved is **"Improving Cocoa Productivity in Sikka"**. Meanwhile, some specific goals to achieve this common goal among others are through behavior changes of stakeholders/actors who play an important

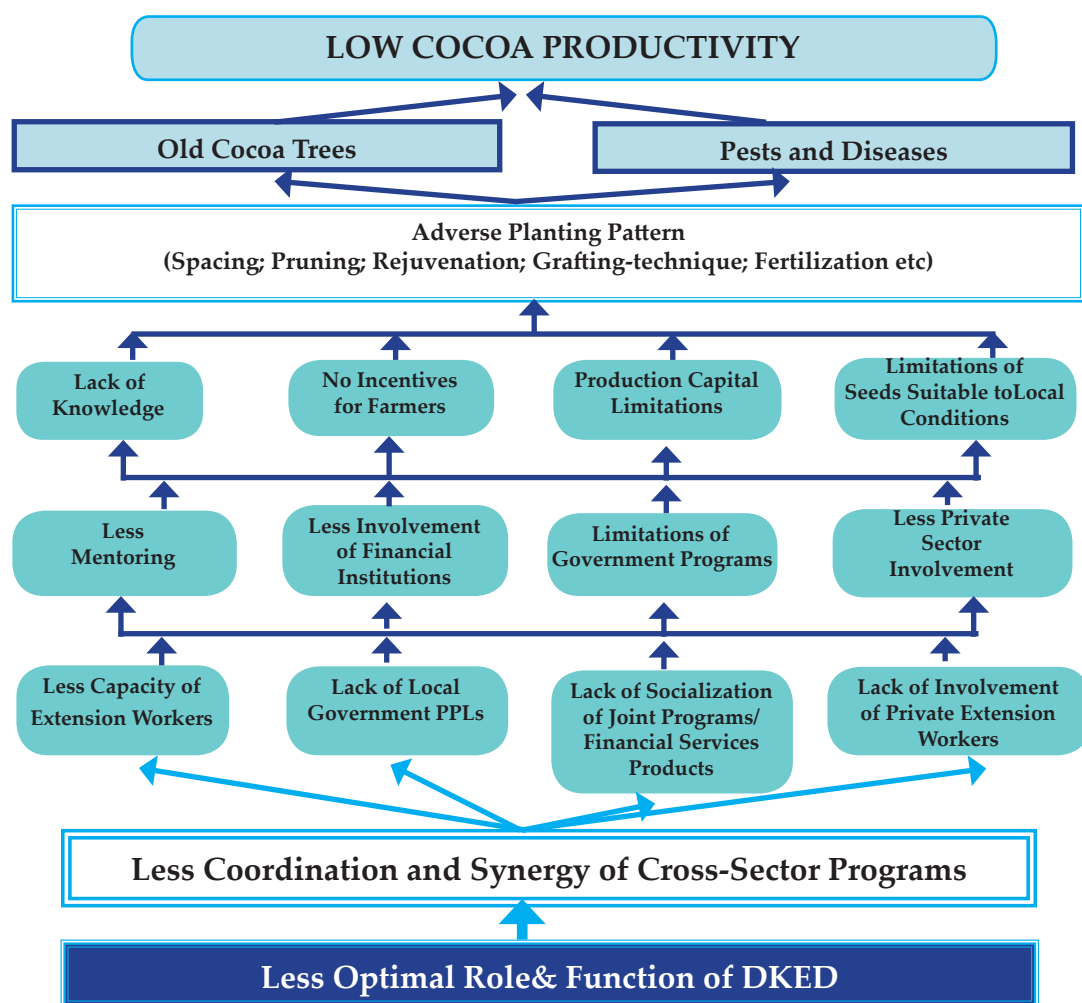


Table 1. FORMULATION OF PROBLEMS

Table 1. FORMULATION OF PROBLEMS				
1) Problem	Low cocoa tree productivity			
2) Identifying the Roots of the Problem:	Causes	Party/Behavior/Motivation with Impact		
		Actors Involved	Contributing Behavior	Motivation
2.1 Old cocoa trees	1. Farmers did not treat well of their farms (Good Agricultural Practices-GAP). 2. Lack of farmers' knowledge to replant and manage farms. 3. Lack of incentives/ subsidies from the local government for farmers cutting down trees, thus concern for loss of income source after their trees have been cut down. 4. Trouble getting seeds in accordance with Sikka conditions. 5. Shortage of production infrastructure and facilities and working capital.	1. Farmers 2. Department of Agriculture, Forestry and Plantation (Distanbun) 3. Agency for Food Security and Agricultural Extension (Badan Ketahanan Pangan dan Penyuluhan, BKP2) 4. Regional Economic Cooperation Council (Dewan Kerjasama Ekonomi Daerah, DKED) 5. Department of Cooperatives and SMEs 6. Banking financial institutions.	1. Distanbun mentoring program limitations. 2. PPLs at BKP2 are minimal in terms of capacity and number. 3. Limited number of Distanbun PPLs. 4. Lack of program synergy between Distanbun and BKP2. 5. Institutional design which handles plantations is only one element in Distanbun along with agricultural crops, fisheries, forestry, etc. which are generally considered less supportive	1. Farmers consider it a taboo to cut down trees because of strong emotional bond with trees that have given life to them, other than worries about losing income when cutting down trees because new trees are not yet productive. 2. Mentoring done by PPLs is adapted to the limitations of the number and capacity of PPLs and PPLs' general polyvalent nature and budget constraints. 3. Distanbun institutional design causes less flexibility to cocoa development especially in terms of preparation of programs and allocation of the budget.

2.2. Pests and diseases	<ol style="list-style-type: none"> 1. Majority of cocoa trees are old. 2. Adverse planting pattern 3. Low awareness of farmers in taking good care of farms and apply fertilization. 4. Lack of farmers' knowledge of good crop cultivation. 5. Lack of mentoring to farmers by PPLs because of limited capacity (availability and ability/knowledge due to existing PPLs of general nature). 6. Less capacity and number of PPLs so that side-grafting and shoots-grafting programs experienced several failures. 7. Production capital limitations 	<ol style="list-style-type: none"> 1. Farmers 2. Distanbun 3. BKP2 4. DKED 5. Non-Governmental Organizations (NGOs) 6. Department of Cooperatives and SMEs 7. Banking Financial Institutions 8. Cooperative Financial Institutions 	<ol style="list-style-type: none"> 1. Farmers did not take good care of farms, including improper use of fertilizers. 2. The absence of special fertilizers for cocoa in Sikka, while special formula fertilizers for cocoa are not sold freely. 3. Mentoring by BKP2/PPLs to farmers to produce organic fertilizers is not optimal. 4. Lack of implementation of program coordination among Distanbun, BKP2, NGOs (in DKED), as for example in the case of using PPLs. 5. Non-optimal coordination between the local government and financial institutions in providing production capital leads to socialization program ineffectiveness and absence of information to farmers. 6. Institutional weakness of the farmers' economy both in the form of farmer groups and cooperatives and both capacity and legal strength (formal legal). 7. Lack of guidance and training conducted by Distanbun and BKP2 on assistance programs undertaken by the government. For example, production facilities and infrastructure assistance without adequate training. 	<ol style="list-style-type: none"> 1. Most farmers did not take good care of their farms because they do not have the knowledge and ability to buy input. 2. Some farmers did not apply fertilizers in an appropriate manner, both in terms of the dose and time of execution, so that the results are less optimal. 3. Farmers grow cocoa with no regard of spacing between trees, pruning, and farm sanitation maintenance on a regular basis so that cocoa is susceptible to pests. 4. Farmer mentoring program conducted by Distanbun and BKP2 is subject to budget constraints and limited capacity of existing PPLs. 5. Lack of coordination between Distanbun and BKP2 is partly due to sectoral ego persistence. For a certain matter, on the one hand each party feels competent while for another matter one party considers it the authority of the other party. 6. Implementation of mentoring is limited for the project so that there is no program sustainability, for example providing assistance along with mentoring. 7. Financial institutions are less confident in the ability of farmers to manage finances sourced from loans. This behavior happened due to lack of coordination between financial institutions and the Local Government as well as lack of collateral and guarantors.
3) Impact on cocoa farmers	<ul style="list-style-type: none"> • Cocoa bean produced is less satisfactory in terms of quality and quantity. • Farmers do not have a good bargaining position in relation to cocoa selling price. • Low-income farmers and less farmers' welfare. • Reduced interest of the younger generation to become cocoa farmers (less regeneration). 			
4) Stakeholder perceptions	<ul style="list-style-type: none"> • Farmers do not have good knowledge to replant and take care of cocoa trees. Farmers' awareness is still limited as well as limited mentoring program. There is still a taboo to cut down old trees, but the reluctance also happens because there is no guarantee (subsidy) for immature cocoa trees. • Distanbun and BKP2 are still not optimal in assisting farmers due to the limited number of PPLs and the absence of a good program synergy between SKPDs in relation to Distanbun and BKP2. In addition, coordination between the two agencies is also lacking because of sectoral ego. • The institutional design of Distanbun is considered less flexible in program preparation and budget implementation. This also has an impact on coordination flow between Distanbun and BKP2. • Financial institutions have still not given much trust to farmers to access loans due to the absence of collateral and guarantors. In addition, the socialization of programs or products and services from financial institutions to farmers is less well performed. • DKED has not been optimal in carrying out its role as coordination forum for cocoa stakeholders. Only certain sections of the DKED have been running well. 			

role in the cocoa business. The specific goals expected to change the behavior of stakeholders to encourage increase in cocoa productivity in Sikka, are as follows:

1. Increase awareness of farmers in conducting better treatment of cocoa trees,
2. Encourage farmers to be active and involved in farmer groups and farmer economic organizations (cooperatives),
3. Encourage financial institutions (Banks) to facilitate loans (scheme) to farmers and intensively socialize programs to cocoa farmers,
4. Encourage cooperation between financial institutions and the local government in providing production capital to farmers as an incentive for them to plant cocoa well,
5. Increase the role of BKP2 to more intensively counsel and assist farmers in practicing GAP (Good Agricultural Practices),
6. Increase the role of Distanbun in serving planning and implementation of programs to empower cocoa farmers better through good coordination with BKP2,
7. Encourage KUKM Department to create a program or become avalist/guarantor for cocoa farmers,
8. Optimize the role of DKED in carrying out coordination functions among stakeholders especially to increase cocoa productivity.

Here is the identification of policy formulation objectives to increase cocoa productivity:

Table 2 Identification of Goals	
1) Problem to be solved: LOW PRODUCTIVITY OF COCOA PLANT	
2) Target to be achieved: INCREASE IN PRODUCTIVITY OF COCOA TREES	
3) Actors and Behavior:	
a). Key players	1.Farmers 2.Financial Institutions/Banks 3.Cooperatives 4.Department of Agriculture, Forestry, Agriculture, Fisheries 5.Agency for Food Security and Agricultural Extension(Badan Ketahanan Pangan dan Penyuluhan, BKP2) 6.KUKM Department 7.DKED 8.NGOs
b). Behavior demanded	1.Farmers take good care of cocoa trees, 2.Farmers join and actively involved in farmer groups and farmer economic organizations (cooperatives) 3.Financial institutions (Banks) to make easy loans (scheme) to farmers and intensively socialize programs for cocoa farmers. 4.Financial institutions in collaboration with the Local Government provide production capital to farmers as an incentive for farmers to cut down trees and replant cocoa. 5.BKP2 to more intensively counsel and assist farmers for practicing GAP (Good Agricultural Practices) 6.Distanbun to execute functions of planning and implementation of programs to empower cocoa farmers better through good coordination with BKP2 7.KUKM Department to become avalist/guarantor for cocoa farmers. 8.DKED to be more optimal in exercising its coordinating functions among stakeholders particularly to increase cocoa productivity.
4) Encouraging and Inhibiting Factors:	
a) Parties that may help	1.Central Government Programs/Funds 2.NTT Provincial Government Programs/Funds 3.Commitment of Regents 4.DKED: can be more optimized in serving coordination among cocoa stakeholders in an effort to empower cocoa farmers. 5.NGOs 6.Church: Provides an understanding and awareness of the importance of caring for the farm.
b) Parties that may inhibit	1. Banking, strict formal requirements in lending to cocoa farmers (making it difficult for farmers to comply with administrative/formal terms and conditions). 2. Traders and/or wholesalers who offer lighter requirements than banks and cooperatives.
c) Driving factors	1.Strong desire by the vast majority of farmers to improve their living standards and source of income. 2.Commitment of the Regent and Vice Regent: as reflected in the Vision and Mission: "One Sikka and Independent and Prosperous " and coinciding with the preparation of the RPJMD so that it can be used as one of the materials in the RPJMD. 3.Support bythe Local Parliament (DPRD) 4.DKED existence as a forum for communication and coordination for cocoa stakeholders. 5.Existence of NGO activity programs for training, capacity building, and mentoring of cocoa farmers.
d) Inhibiting factors	1. Farmers voicing objection to cutting down, replanting old cocoa trees because of emotional ties and values (culture) on the part of cocoa farmers against the cocoa plant as a legacy and contributor to their lives. 2. Urgency of farmers' need for cash (money) 3. Formal requirements to access capital from financial institutions (banks). 4. Lack of assurance on the part of farmers to access banking facilities. 5. Budgeting capacity of Sikka Regency Government to be allocated for development and extension activities.

D. ALTERNATIVE MEASURES

In order to achieve the policy objective of improving cocoa productivity in Sikka, various alternatives have been formulated in terms of regulatory and non-regulatory measures. Alternative non-regulatory measures that are relevant to be taken include designing activity programs for capacity building of farmers and farmer groups, increasing the capacity and number of field extension workers (PPLs), and optimize coordination of various relevant agencies through the DKED. While regulatory alternatives considered relevant are strengthening/formulating the legal umbrella for sustainability of any cocoa development program and strengthening institutional capacity of DKED to be more optimal in carrying out its role and function.

Under the existing alternative measures each cost and benefit option is then analyzed, which is as follows:

I. Do Nothing/Leaving existing conditions:

If this option is selected, cocoa plantation business in Sikka cannot thrive, cocoa productivity remains low, many rural workers who are unemployed cannot be absorbed and farmer and trader incomes will not improve. In the end, there will be no acceleration of the economic turn around in an optimized manner.

II. Capacity building of Farmers and Institutional Farmers:

Capacity building of farmers and institutional farmers has become an alternative given that causes of low productivity of cocoa trees are planting pattern and low level of farmers' knowledge. Farmers also have less financial capabilities and access to business/production capital. This happens due to institutional economic weaknesses of the farmers which need to be strengthened in both ability and legality. This requires policies and programs for capacity building of farmers and institutional farmers. Several activities or programs to be done to strengthen farmers and institutional farmers include:

- Training farmers to farm cocoa better (GAP); among others through establishing a budget for training and comparative studies;
- Strengthening institutional capacity of farmers in terms of legal capacity and power (legal entity);
- Strengthen and sharpen programs for the empowerment of farmers and farmer groups; and so on.

III. Strengthening capacity and number of PPLs:

One cause of the low capacity of farmers is lack of assistance from extension workers (PPLs) both located in BKP2 and Distanbun.

Another problem is lack of existing PPLs, both in number and ability. This is also because of the polyvalent nature of existing PPLs and budget constraints of the local government. Thus strengthening capacity and number of PPLs is believed by stakeholders to be one of the solutions to overcome the problem of low cocoa productivity in Sikka.

Several activities or programs to do in order to strengthen the ability and number of PPLs include:

- Strengthening capabilities of existing PPLs optimally and functionally at all levels of the local government;
- Strengthening and institutional restructuring of Distanbun, and so on;
- Improving coordination between Distanbun and BKP2;
- Training of Trainers (TOT) and field education for PPLs and addition in number of PPLs of at least one person per village;
- Optimizing the role of extension workers in each village.

IV. DKED revitalization through changes in legal basis:

From public consultation results, one of the root causes for low productivity of cocoa trees in Sikka is lack of coordination between program development and its implementation among stakeholders. Improvement and optimization of coordination among the parties is necessary as an effort to increase cocoa productivity in Sikka. Actually in Sikka there is already one agency that serves to coordinate the stakeholders from the government, private sector, farmers, NGOs and so on in the context of economic development, which is the DKED. DKED was established by Decree of the Regent No.245/HK/2012 on the establishment of Regional Economic Coordination Council (DKED) of SikkaRegency. The Sikka Cocoa Forum in the DKED works to find solutions to the problems affecting cocoa business. Given the strategic role of the DKED, revitalizing DKED by strengthening its legal basis has become urgent.

As an illustration, the following is the role of the DKED:

- Provide feedback, proposals and suggestions on regional economic issues and play a role in formulating development policy and economic empowerment of the community;
- Coordinate, organize, facilitate studies of local economic potential and opportunity for follow-up by the local government in the context of economic empowerment of the community;
- Becoming mediator among state/local

enterprises, the private sector and stakeholders in the context of regional economic development and;

- Conduct monitoring, evaluation and control of the implementation of general programs on regional economy.

DKED revitalization can be done by issuing local regulations/Perbub to include among others: Clarifying, Reinforcing, and Extending the scope/function, structure, authority of the DKED.

Of the alternative measures defined above, there are two non-regulatory policies and one regulatory action that can be implemented. Screening process on the three alternatives above has not been done because they can be implemented by way of one regulation, namely:

1. Increase government spending on legal aspects of financing, development of farmers, farmer groups, extension workers (socialization, counseling, training, education, and so on), and microfinance business development at the farm level.
2. Budgeting allocation by the local government or related agencies as well as facilitation so that cocoa farmers can more easily obtain loans from financial institutions.
3. Other policies, both in the form of local regulation/Perbub as well as programs are prepared based on two alternative measures combined as follows: The government establishes a development process mechanism for cocoa farmers, farmer groups through the provision of information, business development (management, marketing and technology), training and subsidies. In addition a program on capacity building and number of PPLs should also be implemented. The rules of the game is then used as basis for the rules of the game of each stakeholder involved and incorporated in the DKED.

E. COST BENEFIT ANALYSIS

In the RIA method, an important step to determine the selected alternative for action will be done using the cost benefit analysis. Cost benefit analysis is undertaken to see the variety of goodness that comes from the practice of an action. Meanwhile, cost analysis is conducted to identify the component of whatever costs/losses are incurred as an impact of the adoption of an action/regulation. Cost benefit analysis is done against each predetermined alternative action. Cost benefit analysis serves as a tool to clarify the accuracy of problems and objectives that have been previously

identified.

The pattern of benefits and costs occurring in the three options for action above are relatively uniform and consistent every year, thus cost benefit analysis is done by way of calculating annual benefits and costs (on average). In such an analysis, the RIA process does not need to be discounted to get the present value. The best option is yielding positive annual benefits/ costs (on average).

Based on identification results of problems and objectives to be achieved, the following cost benefit analysis is performed on each selected alternative for action.

First Alternative: Do Nothing

Second Alternative: Capacity and Institutional Strengthening of Farmers

Third Alternative: Capacity Building and Additional PPLs

Fourth Alternative: Revitalizing Role and Function of the DKED

Cost benefit analysis should be conducted to select the best alternative for action. The first step in cost benefit analysis is to determine the indicators of costs incurred and benefits earned by each stakeholder if each alternative action is taken. The amount of benefits or costs indicated / measured by index score at a scale of -3 to 3. Where a positive number indicates the benefits earned by a stakeholder, a negative number indicates the costs/losses incurred by the stakeholder. While number 0 (zero) indicates neither costs nor benefits (neutral), or an unchanged condition. The larger the number means greater benefits earned, and the smaller the number means greater costs incurred, as shown in the table.

Table3.Index Score of Benefits and Costs

Benefits	Neutral	Costs
3 = Large benefits	0 = Neutral/ No Effect /No Change	-3 = Large costs
2 = Moderate benefits		-2 = Moderate costs
1 = Small benefits		-1 = Small costs

Calculation and comparison of cost benefit analysis of the four alternative measures is outlined in the table next page.

Here is a summary of the costs and benefits for each alternative based on the above analysis:

FIRST ALTERNATIVE: DO NOTHING

Benefits:

- For the government there is no additional budget allocation which means that the government does not add or reduce its budget related to the development of the cocoa business sector.
- For traders, in the absence of measures and

GROUPS/ STAKEHOLDERS	BENEFITS/COSTS	Alternative Measure			
		I	II	III	IV
Local Government (Distanbun)	1. Optimization of tasks and functions of the organization (Distanbun).	-1	3	3	2
	2. Ease of coordination between SKPDs and stakeholders.	-1	1	2	3
	3. Distanbun program performance efficiency.	-1	1	3	2
	4. Implementation of mentoring to farmers.	-1	3	3	2
	5. Capacity and number of PPLs in Distanbun.	-1	3	3	1
	6. Efficiency of aid delivery to farmers by Distanbun.	-1	3	1	2
	7. Budget allocation (local budget) for the preparation of regulations and/or programs.	0	-2	-2	-1
	Cooperative financial institutions	0	-1	-1	-1
	Sub-Total Benefits/Costs of Local Government (Distanbun)	-6	11	12	10
BKP2	1. Optimization of tasks and functions of the organization.	-1	2	3	3
	2. Ease of coordination between SKPDs.	-1	1	2	3
	3. Optimizing the implementation of mentoring.	-1	3	3	2
	4. Efficient implementation of mentoring.	-1	1	2	3
	5. Knowledge and skills of PPLs.	-1	3	3	2
	Banking financial institutions	-1	1	3	2
	7. Program targeting accuracy.	-1	1	3	3
	8. Operational costs of activities (fulfillment of facilities and infrastructure).	0	-2	-2	-1
	9. Mentoring costs (need for companions).	0	-3	-3	-1
	Sub-Total Benefits/Costs of BKP2	-7	7	14	16
KUKM Department	1. Coordination and synergy of the program.	-1	1	0	3
	2. Program targeting accuracy.	-1	1	0	1
	Local and International NGOs	-1	3	0	2
	4. Socialization and dissemination of aid programs.	-1	1	1	2
	5. Addition to budget allocation.	0	-2	0	-1
	Sub-Total Benefits/Costs of KUKM Department	-4	4	1	7
DPPKAD	1. Local Revenue (Pendapatan Asli Daerah, PAD) from cocoa trading business activities.	-1	2	2	2
	2. Operational costs.	0	-1	-1	-1
	Sub-Total Benefits/cost of DPPKAD	-1	1	1	1
DKED/Bappeda	1. Sustainability of the program.	-1	1	1	2
	2. Optimization of program coordination and synergy with SKPDs and other stakeholders.	-1	1	1	3
	3. Program targeting accuracy.	-1	1	1	2
	4. Operational costs of coordination and activities.	0	0	0	-1
	5. Technical team requirements.	0	0	0	-1
	Sub-Total Benefits/Costs of Bappeda/DKED	-3	3	3	5
Local Parliament (DPRD)	1. Distribution of Constituent Aspirations	0	1	1	3
Farmers	1. Increased knowledge and skills of farmers.	-1	3	3	2
	2. Capacity building of key farmers.	-1	3	2	2
	3. Sustainability of training and mentoring programs to farmers.	-1	3	3	2
	4. Advocacy of farmer problems.	-1	3	3	3
	5. Cocoa quality and quantity levels.	-1	3	3	2
	6. Access to capital/finance.	-1	3	2	2
	8. Cocoa price stability and standardization.	-1	2	2	2
	9. Level of income and welfare.	-1	3	2	2
	10. Production capital costs.	0	-3	0	0
	11. Access to price information and other information.	-1	3	0	2
	Sub-Total Benefits/Costs of Farmers	-9	23	20	19
Collecting traders	1. Ease of getting cocoa beans.	-1	1	1	1
	2. Cocoa quality and quantity.	-1	3	2	1
	3. Cocoa price standards.	1	-1	-1	-2
	4. Profitability/profit.	1	-1	-1	-2
	5. Operational costs.	-1	-1	-1	-2
	Sub-Total Benefits/Costs of Traders	-1	1	0	-4

Entrepreneurs from outside Sikka	1. Convenience (access to information) and certainty of getting raw materials.	-1	3	2	3
	2. Cocoa quality and quantity.	-1	3	3	3
	3. Standard information on the cocoa price.	0	0	0	0
	4. Profitability/profit.	-1	3	2	2
	5. Operational costs.	-1	1	1	1
	6. Access to other information.	-1	0	0	2
	Sub-Total Benefits/Costs of Entrepreneurs from outside Sikka	-5	10	8	11
Cooperative financial institutions	1. Confidence of cooperatives towards farmers.	-1	3	1	3
	2. Cooperative capital/assets.	0	2	1	2
	3. Number of cooperative members.	0	3	1	3
	4. Socialization/Program promotion/Products and services.	-1	0	0	3
	5. Operational costs.	0	-1	-1	1
	6. Risk of bad debts.	-1	3	1	2
	Sub-Total Benefits/Costs of Cooperative financial institutions	-3	10	3	14
Banking financial institutions	1. Confidence of financial institutions towards farmers.	-1	2	1	2
	2. Socialization/Program promotion/Products and services.	-1	0	0	3
	3. Success of program/products and services (number of clients/creditors).	-1	1	1	2
	4. Guarantor's certainty if problems occurred.	-1	2	1	2
	5. Operational costs.	0	-1	-1	1
	6. Risk of bad debts.	-1	2	1	2
	Sub-Total Benefits/Costs of Banking financial institutions	-5	6	3	12
Local and International NGOs	1. Commitment and support from the local government.	-1	3	0	3
	2. Sustainability of the program.	0	2	2	3
	3. Coordination and synergy of the program with the local government.	-1	1	2	3
	4. Optimizing implementation of mentoring programs.	-1	3	1	3
	5. Program targeting accuracy.	0	2	1	3
	6. Operational costs of activities.	0	-2	1	0
	Sub-Total Local and International NGOs	-3	9	7	15
TOTAL BENEFITS/COSTS		-47	86	73	109

efforts for the development and settings of the cocoa business sector, they can earn a large profit margin because of their bargaining power in cocoa price formation (standard price) is much stronger than cocoa farmers.

Costs:

- For the government, by not doing anything means less optimization of tasks and functions of the organization. Coordination between SKPDs is not optimal. PPL's knowledge is also not well developed in terms of capacity and availability. Consequently target programs are inaccurate.
- Low bargaining power of farmers has resulted in an ongoing reduction of their incomes while their welfare decreases even more.
- For financial institutions there is an increased risk of bad debts due to reduced income of farmers.
- The availability of raw materials for traders and whole salers is reducing, due to decline in cocoa productivity.

SECOND ALTERNATIVE: CAPACITY AND INSTITUTIONAL STRENGTHENING OF FARMERS

Benefits:

- For the Local Government/Department concerned, the program on capacity and institutional strengthening of farmers means optimization of functions, role and performance of the related Departments (Distanbun & BKP2). Optimization of performance will indirectly improve the technical ability of field extension workers. Program follow-up will require capacity building and an additional number of PPLs.
- Capacity and institutional strengthening of farmers means improving farmers' knowledge and skills both in terms of cultivation and post-harvest processing up to marketing. By increasing the knowledge and skills of farmers it will change the mindset of farmers to take good care of their farms and implement good cultivation practices (Good Agricultural Practices) so as to minimize pest and disease attacks.

- For large entrepreneurs and traders, capacity and institutional strengthening of farmers will result in benefits such as ease to get cocoa beans and guarantee of the availability of cocoa beans raw material supply with quality in accordance with the desire of companies (according to desired quality standards).
- For financial institutions, although indirect they get real benefits from capacity and institutional strengthening of farmers and their institutional improvement will enhance bank confidence towards them, reducing the risk of bad debts, thus facilitating them with ease to access capital.

Costs:

- For the local government the implementation of this second alternative will require budget allocation support for the preparation of regulations and/or programs, as well as operational costs incurred (staff, facilities and infrastructure, socialization) of Distanbun and BKP2 due to the implementation of activities.
- In terms of farmers associated with this program, production capital required by them will increase automatically. However, through collaboration with various stakeholders, the provision of production capital can be pursued together thus less burden some to farmers.

THIRD ALTERNATIVE: CAPACITY BUILDING AND ADDITIONAL PPLS

Benefits:

- For the local government, capacity building and additional PPLs is very useful to improve performance of related departments (Distanbun & BKP2). Through capacity building and additional PPLs, the coaching programs of related departments can facilitate the achievement of performance targets of each agency.
- Increasing the number of PPLs will help implement development activities for farmers easier, work outreach will be more extensive, and the workload of PPLs will be more evenly distributed so that achievement of target programs can be better reached.
- With the increase in capacity of extension workers, they will be able to perform coaching and mentoring to farmers optimally.
- Extension workers will be able to provide transfer of knowledge and skills about good agricultural practices (GAP) that indirectly help farmers in improving their skills of good crop cultivation which in turn can improve the quality and quantity of cocoa beans.

- For entrepreneurs and traders, the indirect benefits from increased capacity and additional PPLs can be earned through the availability of an adequate supply of cocoa beans with better quality.

Costs:

- The local government will be affected by additional operational costs of the related departments, particularly due to allocation of additional training to PPLs, cost of additional PPLs, and operational costs of implementing assistance programs to farmers.

FOURTH ALTERNATIVE: REVITALIZING ROLE AND FUNCTION OF THE DKED

Benefits:

- The existence of DKED established with a strong legal basis is binding on all local government stakeholders to work together and increase the intensity of coordination among stakeholders better.
- With better coordination, a good program synergy can be created among related departments, banks, cooperatives, NGOs, and other stakeholders, so that coaching programs can be implemented in an integrated manner.
- In terms of farmers, strengthening of DKED, in which there are multiple stakeholders from both local government and non-local government will provide benefits that are directly felt by farmers. Such benefits are earned through farmer education programs in a more comprehensive manner starting from down stream and up stream. Farmer coaching programs can be implemented in a more integrated, sustainable and non-overlapping manner.

Costs:

- For the local government, this fourth alternative requires financial support, meaning that there is need for additional special budget allocation for the smooth operations of DKED programs. Although the local government has to incur a supplementary budget, the benefits are greater than the additional budget spent.

F. SELECTED ALTERNATIVE

Based on cost benefit calculation results, the costs incurred and benefits earned by the government and farmers, and each stakeholder can be concluded that the **fourth alternative (Revitalizing the Role and Function of DKED)** provides the greatest net benefit compared to the other three alternatives. The parties who suffer losses the most from the fourth

alternative are traders/middlemen. Meanwhile, other stakeholders earn greater benefits than costs to be borne. In terms of the government the costs to be borne are in formulating regulations and the implementation of policies and programs. However, when viewed from positive externalities generated they consist of:

- 1) Increased productivity of cocoa will increase the value and volume of trade, thus there will be an increase in GDP of Sikka Regency;
- 2) Economic activities increase thus creating a multiplier effect for socio-economic activities;
- 3) Public income increases thus increasing purchasing power;
- 4) GDP increases;
- 5) People's income increases which has an

impact on payment of taxes as revenue for the government.

The combination of alternatives 2, 3, and 4 will of course further maximize the benefits and the achievement of the goal of improving productivity of cocoa trees in Sikka. In the process of this implementation of activities should be considered to combine or implement programs simultaneously from the three options that have been formulated.

G. IMPLEMENTATION STRATEGIES

To streamline the development of cocoa business through revitalizing the role and function of DKED, implementation strategies worth considering are described in Table 5 below:

Table 5. Implementation Strategies

IMPLEMENTATION STRATEGIES	
1) What is the mechanism used to select alternative measures	
a) Regulatory or Non-Regulatory	<ul style="list-style-type: none"> Combination of Regulatory and Non-Regulatory Recommend RIA results (RIA Statement - RIAS) to be one of the materials in the RPJMD being prepared by the Regional Government.
b) How is the perception of compliance level analysis	<ul style="list-style-type: none"> Compliance of the parties (stakeholders) toward a policymade can be realized because the policy is derived from the aspirations of the stakeholders (Bottom-up). Common consciousness to solve problems in the cocoa business as a commodity that has made a major contribution to the regional economy and involve many parties.
c) How about cost benefit analysis	Policies are based on cost benefit analysis in a qualitative and rational manner, and made based on benefits out weighing costs.
2) How is analysis of possible reasons for non-compliance	
a) Identification of supportive groups and groups that are less supportive	Stakeholders who are less likely to support are: traders/middlemen, and banking financial institutions (because of formal terms), while other stakeholders are supportive.
b) Identification of stakeholder knowledge of alternative measures to be taken	Several possible non-compliance with regulations/policies made are, among others: <ul style="list-style-type: none"> Degree of knowledge and understanding of target groups on regulations to be implemented; Degree of willingness of target groups to comply either because of economic incentives, awareness as good citizens, acceptance of regulatory objectives, or pressure from regulators, and Degree of target group's ability in meeting regulatory demands.
3) What kind of sanctions or measures are used to encourage compliance	<ul style="list-style-type: none"> Recommending RIA results to become one of the materials in the RPJMD which is being prepared by the Local Government. Recommending the RIA team to be appointed by Regent decree as the party to implement any process and oversee this policy papers that the options selected can be acted upon. Persuasive approach; Verbal or written warning; MoU between the parties concerned; Administrative sanction; Increase in workload such as more rigorous report generation demands, more intensive inspection , etc.
4) What are the forms of socialization done to encourage adherence	<ul style="list-style-type: none"> Public consultations (FGD, Informal meetings)with stakeholders Presentation of results/hearing to the Regent and the Local Parliament Publication is done through print media and public discussion in the area.
a) How effective has socialization been carried out	Effective
b) How is the intensity of socialization carried out	9 times

H. PUBLIC CONSULTATION

Public consultations are carried out on every stage in the RIA process. Consultations are carried out to various stakeholders, such as: farmers, farmer groups, traders, financial institutions (Banks and Cooperatives), the local government (Regent and related SKPDs, local parliament, academics, media, and community leaders.

Public consultations are carried out in several formats, such as focus group discussions (FGDs), interviews with relevant stakeholders to verify the assumptions

that have been used, publicity through print media (leaflets) and interactive dialogues on the radio. Public consultations are equipped with minutes of meetings or interviews.

The table below describes the methodological framework used to plan public consultations that have been and to be carried out in different stages of the policy-making process. It should be noted that a public consultation plan should be regarded as a flexible document that can be changed in accordance with the development of information obtained from the participants.

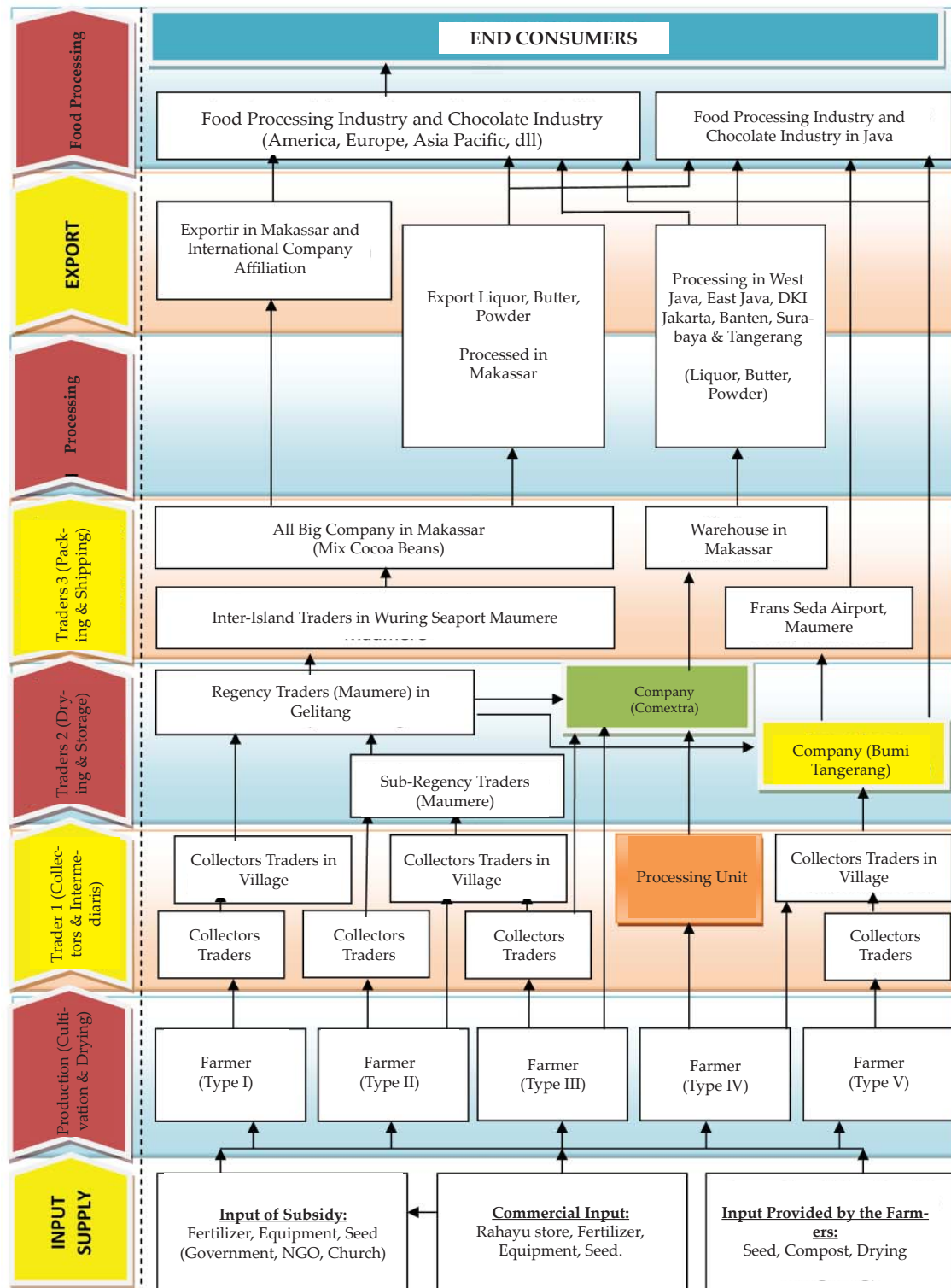
Table 6. Public Consultation Methodology

Public Consultation Methodology	
1) Identify the relevant parties to be consulted	
a) Which party has greater influence in the policy made	1. Regent and Vice Regent 2. Local Parliament 3. Bappeda (DKED) 4. BKP2 5. Distanbun
b) Which party has extensive knowledge of the problems being discussed	1. Farmers/Farmer groups 2. Traders (Buyers) 3. NGOs assisting cocoa farmers 4. Academics; Researchers/Cocoa observers
2) What is the appropriate mechanism in holding public consultations	<ul style="list-style-type: none"> • Meetings with stakeholders, expert observers, parties who will be affected by the regulation, and the general public. The meetings are held in a variety of forms such as: small informal meetings, formal (FGD) and large gatherings such as seminars and symposia. • Appointment of consultation bodies to be consulted on an ongoing basis throughout the RIA process. • Publication of draft RIA by asking readers to provide input. • Publication of draft regulation by requesting readers to provide feedback on the draft. • Publication of the relevant draft RIA on the internet by requesting readers to provide comments via email.
3) How to use public consultation results	
a) Are the results of public consultation available in the form of statements made	Publications are done in the form of "RIA Statement" and research reports in the form of hard copy draft policy published through print media, distributed in public discussion both directly and in softcopy format on electronic media in the area (internet/local government website).
b) Can public consultation results change the contents of a regulation or problem being discussed	Treated as a flexible document that can always be changed in accordance with the development of information obtained from participants.



APPENDIX

APPENDIX 1: MAP OF COCOA VALUE CHAIN IN SIKKA DISTRICT



APPENDIX 2: Matrix of Problems and Action Plan of Cocoa Value Chain Development in Sikka District

FACTS – OBJECTIVE CONDITIONS	SOURCE OF PROBLEM	ROOTS OF THE PROBLEM	FOLLOW-UP PLAN	RESPONSIBLE PARTY
PRODUCTION FACILITIES:				
<ul style="list-style-type: none"> • There are only two commercial stores providing fertilizers and inputs. • Limitations of fertilizers for farmers • Limitations of organic pesticides for farmers. • Limitations of inputs/ tools such as sprayers (pesticides spraying tool), scissors for farmers. • Scarcity/no cocoa seeds suitable to the climate in Sikka. 	<ul style="list-style-type: none"> • Supply of inputs comes mostly from Java. • Fertilizers are perceived still expensive by farmers. • Suitable fertilizers are not yet available; Fertilizers are generally used for food crops. • Excellent inputs are not available nearby. • Farmers' access to capital/commercial loans for working capital is still lacking. 	<ul style="list-style-type: none"> • In the provision of means of production such as fertilizers, seeds, and others, farmers are still relying on subsidies from the government, NGOs and church programs. • Low financial capacity of farmers to buy fertilizers. • Farmers can get fertilizers at subsidized price from Dirgahayu Store with a letter of recommendation from Distanbun but against a difficult procedure. • Lack of coordination between government agencies and stakeholders in the provision of means of production. 	<ul style="list-style-type: none"> • Provision of other sources in the supply of inputs so that the price is more competitive. • The need for cooperation between provincial/city governments and Litbang and Puslit Cocoa (coffee and cocoa research center) for the development of local seeds. • The need for cooperation with financial institutions in terms of capital, for instance collective loans through farmer groups. • Creating and using organic fertilizers. • Coordination among stakeholders both in the government and outside the government in the provision of means of production through DKED. 	<ul style="list-style-type: none"> • Provincial government • District government (Distanbun, BKP2). • UPH • Banking • DKED

FACTS - OBJECTIVE CONDITIONS	SOURCE OF PROBLEM	ROOTS OF THE PROBLEM	FOLLOW-UP PLAN	RESPONSIBLE PARTY
CULTIVATION/PLANTATION BUSINESS:				
Production: <ul style="list-style-type: none"> • Low Cocoa Productivity: the quantity and quality of cocoa production has decreased by about 30-40% from 1,500-1,700 kg/ha to 300-400 kg/ha; • Cocoa production in Sikka until 2003 = 14,333.2 tonnes with a nominal value Rp.372.663.200.000 → Starting in 2004, cocoa production continued to decline to 54% or 7,739.93 tonnes, equivalent to a GDP loss of Rp.201.2 billion per year. • Cocoa quality is low (about 30-35 % moisture content) 	<ul style="list-style-type: none"> • Most cocoa trees are old (>20 years). • Pests and diseases attacking cocoa fruit: HPT (rotten fruit, PBK, and cancerous stem). • Not many farmers take good care of their farms (Good Agricultural Practicess-GAP). • Lack of awareness of farmers to manage and take care of their farms with optimal fertilization. • Replanting is scarce and currently performed by way of side-grafting and shoots-grafting techniques. The success rate of side-grafting and shoots-grafting techniques has been recognized as more successful than seeding. • Reluctance of farmers to cut down and replant cocoa trees. 	<ul style="list-style-type: none"> • HPT control techniques, sanitation, and waste management have not been fully understood and implemented by farmers. • Farmers did not know the correct replacement (rehabilitation) system. • Non-utilization of proper fertilization techniques. • Lack of knowledge of farmers to replant and take care of farms. • Lack of incentives/subsidies from the local government for farmers who rehabilitate cocoa trees, so that they are worried about losing their source of income due to immature trees. • Difficulty of getting seeds in accordance with Sikka conditions. • Lack of production infrastructure and working capital. • Lack of coordination among the authorities. 	<ul style="list-style-type: none"> • Conduct intensive coaching to farmers to implement GAP. • The need to increase farmers' knowledge how to use fertilizers. • Replanting by farmers through side-grafting/shoot-grafting. • Institutional strengthening & capacity building of extension workers in a sustainable manner. • Optimizing coordination among stakeholders by DKED. 	<ul style="list-style-type: none"> • Local government (Distanbun) • Extension workers (BKP2) • DKED • Farmers/ farmer groups. • NGOs

FACTS - OBJECTIVE CONDITIONS	SOURCE OF PROBLEM	ROOTS OF THE PROBLEM	FOLLOW-UP PLAN	RESPONSIBLE PARTY
<p>Institutional:</p> <ul style="list-style-type: none"> • Modern farmer groups are still scarce. • There is already a Field School (FFS) with teachers who are local farmers selected by the local government as well as Buyers, but their role have not been optimized. 	<ul style="list-style-type: none"> • Farmers are generally cooperative members, but involved in savings and loan activities only. • There are no business service and production cooperatives, which can be used as agencies for marketing cocoa. 	<ul style="list-style-type: none"> • Farmer groups have not been functioning optimally. • Limited capital provider agencies. • Lack of coordination and cooperation among parties (government, farmer groups, private sector, NGOs). 	<ul style="list-style-type: none"> • Establishment of modern farmer groups, as an effort to empower farmers to be more focused and ongoing mentoring by the local government. • Strengthening of UPH as a forum of farmers to conduct joint marketing. • Strengthening of farmer groups through facilities and capital so that they can jointly buy wet cocoa to be dried and fermented in a better and more efficient manner. • Optimization of the role and function of the DKED in coordinating competent stakeholders. 	<ul style="list-style-type: none"> • Local government (DKED) • NGOs • Farmer groups • UPH

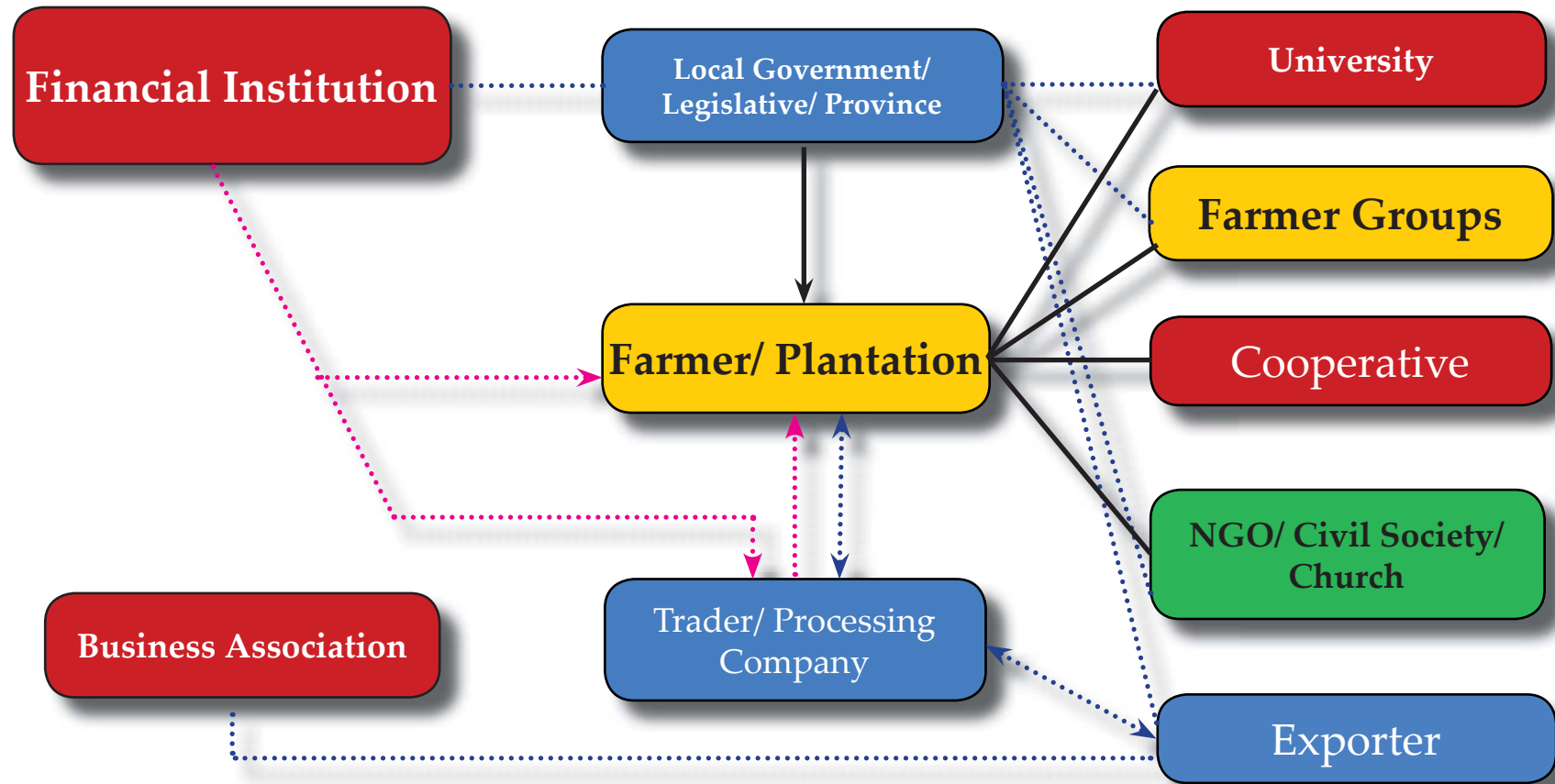
FACTS – OBJECTIVE CONDITIONS	SOURCE OF PROBLEM	ROOTS OF THE PROBLEM	FOLLOW-UP PLAN	RESPONSIBLE PARTY
<p>HUMAN RESOURCES</p> <ul style="list-style-type: none"> • Farmers' knowledge and skills are limited. • Limited capacity (ability) and number of extension workers(PPLs) • Capacity building of farmers is mostly done through NGO programs that exist in Sikka with limited coverage and sustainability level in accordance with the duration of the program. 	<ul style="list-style-type: none"> • Less awareness of farmers to use fertilizers. • Cultivation of cocoa is carried out in a traditional manner and farmers' knowledge is low in terms of cultivation, sanitation, fermentation, marketing, and quality of cocoa beans that the market demands. • Lack of awareness of farmers to take good care of their farms. • Farmers' dependence to get help from the government / local government. • Group culture to jointly grow "<i>sakoseng</i>" begins to decrease. • Farmers are reluctant to undertake joint marketing thus farmers' bargaining power is low. • Farmers are reluctant to come to training and prefer to come to meetings just to get attendance money. 	<ul style="list-style-type: none"> • Organizingl and group benefit is yet to be understood. • Imperfect farmer organizations. • Cooperatives are not functioning optimally. • Marketing agencies are yet to be organized. • Farmer mentoring programs by Distanbun and BKP2 are carried out subject to budget constraints and availability of the number and capacity of existing PPLs. • Existing PPLs are of polyvalent / general nature and subject to budget constraints. • Distanbun's institutional design causes less flexibility for cocoa development especially in terms of program preparation and budget allocation. • Lack of coordination between SKPDs in implementing and optimizing existing resources. 	<ul style="list-style-type: none"> • Improving farmers' knowledge of cocoa bean standards required by manufacturers and the market price of cocoa. • Increasing motivation of cocoa farmers to implement GAP. • Motivation to increase plantation land area for business. • The need for capital support of farmers and to encourage farmers to outright buy wet cocoa for joint production. • Optimizing role of master training and key farmers to be enabled in conducting training to other farmers in one group. • Institutional strengthening and capacity building of cocoa extension workers in a sustainable manner. • The strategy of extension workers can be changed through regularly visiting farmers, in an effort to motivate them and as a means of more effective transfer of technology. • Improvement and optimization of inter-agency coordination in the empowerment of farmers and farmer groups (Distanbun, BKP2, DKED). 	<ul style="list-style-type: none"> • Local government (DKED) • Extension workers/BKP2 • UPH • Church/ Community Leaders • Farmers • NGOs • Financial institutions and banks.

FACTS – OBJECTIVE CONDITIONS	SOURCE OF PROBLEM	ROOTS OF THE PROBLEM	FOLLOW-UP PLAN	RESPONSIBLE PARTY
POST HARVEST MANAGEMENT				
<ul style="list-style-type: none"> • Post- harvest processing, such as drying is done traditionally in front of the house/on asphalt with no regard to sanitary factors. Ideally a drying floor or rack is required. • Most farmers only dry for 1 day and then sell directly to village traders. • Only a small number of farmers uses simple technology for drying, called “<i>tedengkoko</i>” 	<ul style="list-style-type: none"> • The drying machine from the government is not used by UPH, because it takes a longer time, the large capacity engine is not effective because it has to accommodate cocoa from a lot of farmers with different quality and thus incur higher production costs. • The constraints of making <i>tedengkoko</i>, is the expensive UV plastic used for cover. • Large buyers such as PT Mars & Comextra give special fluid used during drying to provide a stronger scent of the cocoa. 	<ul style="list-style-type: none"> • Drying technology is still simple. • Farmers need cash (cash money) immediately to make ends meet. • Not performing fermentation because it takes time and there is no price incentive • Organizing and group benefit is yet to be understood. • Lack of guidance and mentoring from the local government. 	<ul style="list-style-type: none"> • Cocoa quality training is appropriate to market interest and supporting tools. • The local government is collaborating with NGOs, large buyers or financial institutions for the provision of dryers so that each farmer group owns one thus the utilization and use of dryers will be more extensive and better. • Development of sustainable groups: <ol style="list-style-type: none"> 1. Partnership 2. Strengthening of institutional marketing for farmers 	<ul style="list-style-type: none"> • Local government • NGOs • Financial institutions • Buyers • DKED

FACTS – OBJECTIVE CONDITIONS	SOURCE OF PROBLEM	ROOTS OF THE PROBLEM	FOLLOW-UP PLAN	RESPONSIBLE PARTY
MARKETING AND SELLING PRICE				
<ul style="list-style-type: none"> • Price of cocoa is fluctuating following the New York commodity exchange price: Price at farm level is Rp 13 thousand for half wet cocoa (1 day drying); Rp 17-18 thousand for tester 7 (3-4 days drying), while selling price at buyer level is Rp 21thousand. • Farmers prefer to sell directly to village traders, despite the low price due to driven by need for cash. • Knowledge level of farmers about cocoa bean quality in accordance with market standards/needs is still low. • There is still a system of bonded labor from merchant collectors. • Inadequate 	<ul style="list-style-type: none"> • Very low bargaining power of farmers in determining cocoa selling price. There is common practice among traders to manipulate cocoa price. • Farmers' access to price information is very limited. Despite the possibility of short texting (sms), not all farmers have made use of this facility to ask about current international and local prices. • Volume of cocoa beans produced by individual farmers is significant, thus inhibiting direct access to whole salers. • Quality of cocoa beans produced (post-harvest) is low thus the selling price is also low. • Traders come every morning and afternoon, thus many farmers are interested in selling on the spot. • UPH has not been optimized 	<ul style="list-style-type: none"> • Organizing and group benefit is yet to be understood • Lack of cooperatives that serve to do marketing for cooperative members. • Lack of incentives for farmers to manage cocoa beans better. • Lack of mechanisms to ensure the economic security of farmers' subsistence. • Lack of support/government budget constraints of road construction and improvement. 	<ul style="list-style-type: none"> • Enhancing the role of the local government in facilitating and encouraging farmers to undertake joint marketing efforts to increase their bargaining power. • Enhancing the role of the local government in encouraging and guiding farmers to improve cocoa quality with GAP and better post- harvest processing, and to sell perfectly dried quality cocoa beans in accordance with international market standards in order to get higher prices. • Conduct joint marketing both through farmer groups and cooperatives. • Strengthening of UPH to accommodate farmer yield. • Enhancing the role of the local government to develop alternative strategies through existing regulations such as: <ol style="list-style-type: none"> 1. Warehouse receipt system: to accommodate farmer yield as value hedging measure if the price goes down (adopting practices in Ghana and the Ivory Coast). 2. Develop joint marketing systems as maintained by state enterprises 3. Implementing forward auction of 	<ul style="list-style-type: none"> • Local government • DKED • Farmers • Local traders • Wholesalers • Banking financial institutions • Cooperatives • Farmers • NGOs

FACTS – OBJECTIVE CONDITIONS	SOURCE OF PROBLEM	ROOTS OF THE PROBLEM	FOLLOW-UP PLAN	RESPONSIBLE PARTY
<p>infrastructure in most areas of cocoa production centers.</p>	<p>in the marketing chain. Fermentation and drying should be done collectively with traders/farmer groups; UPH's role should be further enhanced to outright buy cocoa beans in wet condition.</p> <ul style="list-style-type: none"> • Broad distribution of cocoa crop areas so that pursuing joint marketing is technically difficult, and narrow land ownership causing insignificant production. 		<p>cocoa.</p> <ol style="list-style-type: none"> 4. Determination of the minimum selling price of cocoa, strengthening the role of the local government by way of establishing agencies like Bulog or a policy that requires the private sector to buy cocoa at the minimum price, etc <ul style="list-style-type: none"> • Capacity building of farmers in the use of communications media and access to information related to cocoa development. • Interventions from consumption industry stakeholders outside Sikka. • Increased efficiency at trader's level. • Development of road infrastructure linking production centers to the market. 	

APPENDIX 3: Map of Cocoa Business Stakeholders in Sikka District



Keterangan :

— : Supporting Activities

..... : Supervision

..... : Partnership/Cooperation

APPENDIX 4: Matrix of Cocoa Development Stakeholders Analysis in Sikka District

PARTIES CURRENTLY INVOLVED	CURRENT ROLE	ROLE EXPECTATIONS
Ministry of Agriculture	<ul style="list-style-type: none"> Assist in increasing cocoa productivity through the Gernas Pro Cocoa Program (Cocoa Gernas). 	<ul style="list-style-type: none"> More sustainable programs and programs that are not only physical but more focused on capacity building of farmers.
NTT Provincial Government (NTT Province Plantation/Estate Department)	<ul style="list-style-type: none"> Support the Gernas Pro Cocoa program, such as procurement and distribution of replanting activities (SE seeds, fertilizers, fungicides), rehabilitation (fertilizers, insecticides, fungicides) and intensification (fertilizers, insecticides and pheromones) Conducting the “Red Wine” program of which one of the programs is to improve the quality of life of cocoa farmers. → Implemented by Bappeda. Assist the local government in getting/proposing projects from/to the Government. 	<ul style="list-style-type: none"> Encourage the local government in creating cocoa development programs, such as giving incentives to cocoa farmers who want to develop the cocoa sector. Provide mentoring and coaching programs to the District/City Governments in developing the cocoa sector. Programs can be both physical assistance program and policy program Provide clear direction of coordination flow between SKPDs associated with the development of the cocoa sector, in this case Distanbun and BKP2 so that they can provide guidance in an integrated manner to cocoa farmers in the area. Reduce dependency on central government assistance programs.
SIKKA DISTRICT GOVERNMENT	<ul style="list-style-type: none"> Funding support to cocoa business empowerment activities in a limited portion. Responding to cocoa empowerment activities made by the Central Government or NGOs, although limited to the customization of the program. Currently there are no sustainable programs so that cocoa development programs have not been running optimally. 	<p>Increase commitments to cocoa business development, through:</p> <ul style="list-style-type: none"> Increased budget allocation from the local budget in the context of cocoa business development. Regulatory support to cocoa business development, according to the needs of each aspect of the value chain (Aspects of Input

PARTIES CURRENTLY INVOLVED	CURRENT ROLE	ROLE EXPECTATIONS
		Availability; Production; Business Administration/Marketing, etc)
REGIONAL ECONOMIC COOPERATION COUNCIL (<i>DEWAN KERJASAMA EKONOMI DAERAH, DKED</i>)	<ul style="list-style-type: none"> • Establish Cocoa Stakeholders Forum. • Capacity building of farmers in terms of crop cultivation and processing, including marketing. • Coordination between stakeholders, to discuss and advocate cocoa issues. 	<ul style="list-style-type: none"> • Optimizing the function of each cocoa stakeholder forum member in fostering cocoa business development, according to the value chain in which they participate.
BAPPEDA OF SIKKA DISTRICT	<ul style="list-style-type: none"> • Implement the “Red Wine” program as a delegation of tasks from provincial programs. • Being secretariat (with SwissContact - SC) in the coordination of the Regional Economic Cooperation Council (DKED). • Through the stakeholders forum, the mobilization of PPLs and provision of operational budget for BPK and PPLs (Transportation and Fee). • Selection of Master Trainers (MT), Key farmers (KF), and mobilization of farmer groups. • Provide direct support both morally and materially to the SL and provide budget allocations for the SL • Monitoring implementation of the SL 	<ul style="list-style-type: none"> • Restore the function of Bappeda as planner rather than implementor of programs. • Coordinate the tasks and authority of SKPDs in accordance with their <i>tupoksi</i>. • Strengthen the coordination across SKPDs (Distanbun & BKP2). • Strengthen the role of Distanbun in every activity associated with their <i>tupoksi</i>.
Department of Agriculture, Forestry and Plantation (DISTANBUN) of Sikka District	<ul style="list-style-type: none"> • Implement Gernas programs through providing fund sharing to finance the implementation of field operations. • Provide fertilizers at subsidized prices to farmer groups. • By way of the Gernas program select prospective farmers and land area as the location of activities. • By way of the Gernas program provide equipment assistance and carry out capacity empowerment of farmers. 	<ul style="list-style-type: none"> • Create cocoa sector development programs intensively and continuously. • Actively participate in stakeholders forums. • Coordinate with BKP2 and other SKPDs in creating program development. • The local government has a role in marketing and market pricing, thus farmers get a better selling price. • Provide information on cocoa market price. • Provide regulatory framework for integrated

PARTIES CURRENTLY INVOLVED	CURRENT ROLE	ROLE EXPECTATIONS
		development of the cocoa sector → including coordination framework with BKP2 or across other SKPDs.
Agency for Food Security and Agricultural Extension (<i>Badan Ketahanan Pangan dan Penyuluh Kabupaten Sikka</i>, BKP2)	<ul style="list-style-type: none"> • Supporting Gernas through the provision of agricultural extension workers(PPL s). PPL works less optimal → not optimal, most PPLs are contract workers • Conduct education, training and guidance to farmers. • Together with SC conduct mentoring and training through the SL (Field School) 	<ul style="list-style-type: none"> • BKP2 coordinates with Distanbun in mentoring and training farmers. • Strengthen coordination between BKP2 and Distanbun • Enabling BKP2 as extension agency in charge of assisting the Technical Department.
NGOs: <ul style="list-style-type: none"> • Swisscontact • WVI • Caritas • YPMF • Plan 	<ul style="list-style-type: none"> • Instrumental in increasing cocoa productivity, on farm → off farm • Capacity building of farmers through the Field School (FFS). • Improving quality of life of farmers, education and health. • Promote marketing of cocoa. • Establishment of modern farmers. 	<ul style="list-style-type: none"> • Involving SKPDs associated with program implementation. • Program coordination between NGOs and the local government.
Farmers/Farmer groups	<ul style="list-style-type: none"> • Conduct cultivation and post-harvest activities • Farmers have not been too motivated to participate in training activities (not at a maximum) 	<ul style="list-style-type: none"> • Farmers do not keep on hoping on aid programs from central government/local government. • Farmers' capacity and knowledge has improved thus motivated to take good care of their farms. • Farmers are motivated to undertake joint marketing.
Master training	<ul style="list-style-type: none"> • Conduct training, coaching and mentoring to farmers related to cultivation, production, post-harvest and marketing activities. 	<ul style="list-style-type: none"> • Increase the number of master training in order to optimize farmers' empowerment activities. • Training and guidance to farmers is strived to be more intensive and sustainable.

PARTIES CURRENTLY INVOLVED	CURRENT ROLE	ROLE EXPECTATIONS
Key farmers	<ul style="list-style-type: none"> • Conduct training and mentoring to farmers related to cultivation, production, post-harvest and marketing activities. 	<ul style="list-style-type: none"> • The local government needs to pursue more training for farmers thus assisting the local government in farmer capacity building and mentoring. • Coaching and mentoring intensively by farmers in order to improve the quality of cocoa and always give motivation to them to always take good care of their farms.
Local traders (Village/Sub-district traders)	<ul style="list-style-type: none"> • Currently traders go directly to the homes of farmers to buy cocoa beans in wet or half dry condition from them. • The traders will dry the cocoa beans again, and generally drying of cocoa beans lasts about 3-4 days. • The traders sell cocoa to sub-district collectors or to district merchants. 	<ul style="list-style-type: none"> • Local traders quote cocoa price according to market price and quality. • Local traders provide correct market price information to farmers. • Increased knowledge capacity of local traders on good quality cocoa.
District traders (-/+ 20 actors)	<ul style="list-style-type: none"> • Receive cocoa yield from local traders. • District merchants sometimes provide capital support to local traders to buy cocoa directly from farmers. • District merchants resell their cocoa to wholesalers in Makassar or Surabaya (PT. Mars & Comextra Majora). 	<ul style="list-style-type: none"> • Provide cocoa price to match with the quality. • Increased knowledge capacity of local traders on good quality cocoa. • Give guidance to farmers on crop cultivation and marketing.
PT. Mars, Comextra Majora, PT. BumiTangerang	<ul style="list-style-type: none"> • Training and mentoring to MT and KF at the time of SL implementation, including transfer of knowledge about quality • Price and purchasing information • In cooperation with certification bodies to socialize "Cocoa Sustainability Certification" to all stakeholders. 	<ul style="list-style-type: none"> • Conduct intensive training to local traders related with cocoa quality in accordance with quality standards as required by the market.
Farmer Groups Yield Processing Unit (Unit Pengolahan Hasil, UPH)	<ul style="list-style-type: none"> • Accommodate cocoa yield from farmers/farmer group members with pricing according to the quality and volume → farmers get better bargaining price (tester 7 	<ul style="list-style-type: none"> • Establish joint marketing programs • Encourage farmers to sell their cocoa at UPH, for example by seeking return of <i>buliran</i> funds (cooperation with financial institutions/local

PARTIES CURRENTLY INVOLVED	CURRENT ROLE	ROLE EXPECTATIONS
	<p>Rp 17-18 thousand).</p> <ul style="list-style-type: none"> • Provide education to farmers on good quality cocoa for sale. • Perform fermentation and drying of cocoa beans again. • Sell dry cocoa beans to Comextra (minimum 1 tonne). 	<p>government).</p>
Dirgahayu Store	<ul style="list-style-type: none"> • Supply of agricultural equipment and fertilizers→Most fertilizers are used for food crops 	<ul style="list-style-type: none"> • The local government is expected to seek several other stores so that in terms of distance they can facilitate farmers and cocoa price can be more competitive. • Dirgahayu store may contribute further to accommodating agricultural products from farmers thus able to assist farmers in terms of marketing.
Expedition companies	<ul style="list-style-type: none"> • Transportation of inter-island freight of commodities (Makassar and Surabaya). 	<ul style="list-style-type: none"> • Goes according to market mechanisms.



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