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DRAFT

INVENTORY OF DIVERSIFICATION PRACTICES ON COCOA FARMS

Note by the Secretariat:

The attached document containing an inventory of diversification practices on cocoa farms has been prepared by the Secretariat as a first draft, based on comments made by Members of the Consultative Board on an earlier document on diversification.

INVENTORY OF DIVERSIFICATION PRACTICES ON COCOA FARMS

INTRODUCTION

1. Diversification at the farm level is the adoption of multiple production activities with the aim of spreading the risk from heavy dependence on a single or few commodities and to take advantage of market opportunities of new high value products. It involves introducing new activities into the farm enterprise (for example, new crops, horticulture, livestock, fisheries, agro-forestry, eco tourism or new processing methods). Diversification requires a reallocation of resources and inputs as well as a change in production methods and the outputs generated. It could also be the result of the response to changes in market demand. Hence diversification should be market-driven and initiated by private sector agents. However, public sector involvement is also a critical component in the implementation of diversification programmes as a result of the impact of regulatory and legal provisions adopted and enforced by the relevant authorities and in the provision of helpful policies such as infrastructure, extension services, research, fiscal incentives, etc.

2. Horizontal diversification refers to efforts made by commodity producers to move into or to mix the existing crop with other crops, horticulture, fisheries, and livestock. In such an approach, farmers would still be involved in the existing activity or they could move out of it completely. Mixed farming can improve biodiversity, replenish soil nutrients and reduce production risks associated with declining yields, droughts and pest infestations.

3. Vertical diversification involves graduating to a higher value-adding activity by going further downstream in the value chain. This can generate large multiplier effects, creating off-farm employment opportunities in downstream and upstream economic sectors.

4. Although the concept appears simple in itself, a clear understanding of the objectives and performance requirements between the major stakeholders is absolutely necessary. It requires multi-disciplinary expertise and proper coordination in the implementation of a successful diversification programme. The complexity and interdependence of actors in diversification requires good leadership, strong commitment and unity of actions for its success.

5. Diversification experiences have met with varying degrees of success in commodity producing countries. Countries that have successfully diversified include Malaysia and Brazil. Others that have achieved some measure of success in selected commodities include Kenya in horticulture and cut flowers and Côte d'Ivoire in rubber, palm oil, cashew and banana. In Africa, Mauritius is the most successful country in diversification, using savings from its sugar industry to diversify into the production and export of textiles and garments. Many other diversification attempts have met with various constraints. A few decades ago, Malaysia, Thailand, Brazil, and Chile were heavily dependent on primary commodities for export earnings. Today, these countries have successfully diversified their export base, and are no longer dependent on primary commodities for export earnings. This success can be attributed to scientific and technical progress in the production of commodities. Productivity growth in agriculture has allowed manufacturing to draw labour from the agricultural sector without a fall in primary production. In contrast, agricultural productivity in Sub-Saharan Africa has stagnated or even declined in many countries, and agricultural exports have failed to provide the base for further industrialization.

6. In Asia, the agricultural sector was regarded as a key source of growth and employment. Through appropriate pricing policies, agricultural savings were generated and were made available for the private sector to borrow for investment in industry and used for reinvestment in agriculture. By

contrast, in a number of countries in Africa, agricultural savings were extracted through low producer prices offered by state marketing boards, and used to finance government consumption and inappropriate industrialization policies via investment in public enterprises. In East Asia, the emerging private industrial sector boosted government revenues, enabling strong government actions in support of agriculture, including investment in infrastructure, provision of extension services, investment in research, especially end-uses, and in the provision of subsidies for the use of fertilizers and for replanting with improved varieties.

7. Diversification may take the form of intercropping with other cash crops, or with suitable timber/tree/fruit species as shade trees, or with other tree crops in adjacent plots or as hedge plantings. By diversifying into high value products, farmers are able to offset any decline in income by relying on a single crop as their main source of livelihood. To the extent that diversification results in more intensive farming, it will also result in a higher average income for the farm family.

CONSTRAINTS ON DIVERSIFICATION AT THE FARM LEVEL

8. The smallholder nature of cocoa farming poses constraints to farmers in regard to diversification. Farming is often associated with low productivity, low incomes and a high incidence of poverty. Given the uneconomic returns they receive, the farmers have limited options available to spread the risk of relying solely on cocoa farming for their livelihood. The dearth of resources, of credit and of bargaining power, combined with the farmers' limited knowledge, restricted property rights and lack of access to the markets are inhibiting factors in regard to diversification. As a result, the revenue from cocoa farming is barely sufficient to meet the farmers' basic needs. They do not enjoy the luxury of any savings. Consequently they simply do not have the capacity to accumulate agricultural surpluses for investment in improving farm yields or for taking steps towards diversification.

9. In many cocoa producing countries, large numbers of farmers are sharecroppers. Hence they do not have the security of land tenure to make investments on the farm. As they lack financial resources, the farmers have resorted to short term cash crops to reduce the financial burden of making a living. The returns from the cash crop are used to meet their immediate needs or for their own daily subsistence. In many cases, due to the rural remoteness of the farms, and given the cost of transport and the poor quality of public services, farmers have no choice but to rely on farming purely for subsistence.

10. Within the community of smallholder cocoa farmers, the existence of a diverse spectrum of farmers, from the very poor to the better organized, poses constraints for policy makers. In formulating diversification policies for the farms, governments would have to consider the needs of the diversity of farmers as these needs would vary. Farmers in more remote areas have to eke out a daily subsistence, and have problems of accessibility in terms of infrastructure and services, including extension services. Such governmental strategies would have to be devised to engage and to integrate these farmers into the mainstream in order to improve their livelihood.

11. While farmers might be practising diversification to some extent, the issue is whether the resources available are used efficiently to maximize returns. Taking into account the local situation and resources, what could be done to improve their standard of living? How can the adverse impact of relying solely on cocoa as the main source of income be reduced?

INVENTORY OF DIVERSIFICATION PRACTICES

Short term cash crops including horticulture

12. Smallholder cocoa farmers in many cocoa producing countries intercrop cash crops with cocoa. These crops include vegetables, cassava, yam, cocoyam, papayas, plantain, maize, bananas, groundnuts, water melons, etc. By choosing cash crops, the farmers are able to supplement their incomes and to reduce their household food bills. In Ghana, it was reported that incomes from these cash crops could help the farmer to survive during the immaturity period of the cocoa tree. However, the latter example is atypical, as many farmers in producing countries live in remote areas and have limited opportunity to bring cash crops to the markets in urban centres due to poor infrastructure. Indeed, in most cases, diversification into cash crops on the farm is only done to satisfy the farmers' subsistence needs. In many producing countries, there is no advice available as to which crops to select for diversification. Farmers practice what has been handed down from generation to generation. There is no conscious investigation as to which products are demanded by the markets in urban centres, or as to which crops would fetch a high price on the market, to maximize the resources available.

13. Other related issues with regard to short term cash crops include not being able to market the produce, as farmers often plant similar cash crops, resulting in a glut as they all follow the same planting season. Poor infrastructure connecting rural farms to the urban markets is an added constraint as most cash crops are perishable. Farmers also lack the bargaining power to seek better prices for their produce, as they are often not organized into associations or cooperatives. They also lack the necessary extension services and market information.

14. There are some success stories related to diversification. For example, Kenya has often been quoted as being very successful in using diversification into high value horticultural crops, by carving out a niche market for such products, particularly in Europe. Horticulture in this respect would include peppers, okra, eggplants, leafy vegetables, cut flowers and tomatoes. These are high value, tradable items, for which there is strong demand, particularly in export markets. To be able to compete in this market, cocoa producing countries would have to shorten the learning curve very quickly by emulating and implementing supporting policies to enable such diversification processes to take place. Kenya had the advantage of being one of the first to take advantage of this market, as the necessary infrastructure was already in place and, most importantly, it has the reputation for being able to supply horticultural products that meet the requirements of consumers, both in terms of quality and food standards.

15. The horticultural revolution in Kenya has been driven largely by the private sector and by the market. The value chain is characterized by specialized agribusinesses and supermarkets increasing their share in these markets, especially in the urbanized countries. Quality standards and grades make it difficult for smallholders acting individually to participate in such markets. Consequently, this market is dominated by contract farming and by collective action from producer organizations. There is a danger that could translate to cocoa smallholder farmers in respect to diversification that, as in the case of Kenya, some smaller farms have been marginalized as larger, more organized farms have become the preferred suppliers in contract farming. However, it is usually and optimistically envisaged that the smaller farms, on witnessing the success of their fellow, more organized farmers, would follow them to improve their farm practices. Support for the smaller farmers might be required to actually achieve this.

16. The example of Kenya has shown that the country had the foresight to "think outside the box" to target horticulture as a potential diversification crop into which to venture. Similarly, policy makers

in cocoa producing countries could emulate the example to seize market opportunities for potential high value products into which to diversify.

Diversification using Shade trees

Fruit trees

17. Using fruit trees as shade trees is another common practice in many cocoa producing countries. Fruit trees such as plantain, bananas, mangoes, papayas and jackfruit are planted as shade trees. The fruits are either harvested for subsistence or are sold as cash crops in local markets.

18. However, there is the potential to organize farmers into groups to tap into the larger export markets for fresh fruit. A World Bank study¹ has identified the European market for horticulture, including fresh fruits and vegetables, as one which is waiting to be exploited by developing countries, as the countries have the added advantage of being able to supply these fruits all year round to Europe. However, the farmers would have to be adequately trained and prepared for these highly competitive export markets. Smallholder cocoa farmers in Africa face market challenges, such as restricted access to credit, insurance and specialized inputs, as well as limited governmental support. In addition, poor market information and high transaction costs related to weak market integration, make small farmers less competitive in the global market.

Agro-forestry

19. In view of the increasing concerns on climate change and the environment, agro-forestry presents another potential opportunity for cocoa farmers. Historically, developing countries have practiced extensive farming more than intensive farming. This has led to encroachment on forests and degradation of the environment. The role of cocoa farming in agro-forestry to mitigate some of the adverse effects of climate change has provided a new impetus for countries to tap its potential in terms of payments for environmental services.

20. Agro forestry had been overlooked in the past, due to the long gestation period required before the trees can be harvested and the rewards realized. However, the inherent benefits of agro-forestry may provide long term sustainability for cocoa farming, particularly in relation to the conservation of soil nutrients, prevention of soil erosion, the maintenance of biological diversity and, in general, an environmentally sound eco-system of cocoa farming.

21. Diversification using agro-forestry is practiced in particular in Latin American countries and in West African countries. Suitable local species of timber are used in these countries. In more remote areas, maintaining shade trees has been a continuing practice arising from necessity, as farmers rely on local timber species, which serve multiple purposes as firewood, medicine, food and housing.

22. While agroforestry may not be as ideal as natural forest, there is a growing concern over human encroachment on natural forest in many cocoa producing countries, as it poses a threat to biodiversity in tropical landscapes. There is a growing scientific foundation which shows that enhancing shaded cocoa for biodiversity conservation can increase the socio-economic benefits of cocoa farming in terms of soil erosion control, carbon sequestration, watershed protection, seed dispersal and rainfall.

¹ The European Horticulture Market: Opportunities for Sub-Saharan African Exporters, edited by Patrick Labaste, World Bank Working Paper No. 63, 2005.

23. Managing cocoa farms using agroforestry could be exploited to facilitate access to certified niche markets for organic cocoa. Incentives could be devised to reward farmers for conserving biodiversity or for adopting practices which enhance conservation on their farms.

24. Further research is needed to examine the ecological interactions between shade canopies and the cocoa crop in terms of nutrient cycles; light-fertility-yield interactions; microenvironment and pathogens; water-shade-yields; and soil, water and biodiversity (profitability, risk and stability); and the human component: the household life cycle, the family group, community ties, producer associations, technology dissemination and adoption, and aversions and preferences regarding the use of trees on farm.² This would help to better understand the ideas to integrate the timber and fruit industry with cocoa households and the value chain. The objective of any on-farm diversification using agroforestry should consider using species that satisfy the household needs for home consumption and opportunities for market commercialization.

Coconut

25. In Malaysia, coconut has been used successfully as a shade tree for diversification purposes. Coconut has very versatile uses and has been relied upon to generate additional income for farmers. The tree has the advantage that it does not require very much attention and it supplements the farmers' income. However, in recent years, due to the more remunerative returns that can be obtained from other commodities such as oil palm, this practice has become less prevalent. With the rebound in cocoa prices, the Government, through the Malaysian Cocoa Board, has been promoting cocoa farming with other mixed farming practices, though not necessarily intercropping with coconut.

26. It has been reported that the Philippines, with its sizeable coconut acreage, is also promoting cocoa for intercropping at existing coconut plantations.

Diversification in adjacent plots

Other tree crops: Rubber and Oil Palm

27. Diversification in adjacent plots of the smallholder cocoa farms is a practice prevalent among many cocoa producing countries to mitigate the adverse effects of relying on cocoa as the main source of income. For example, in Malaysia, it is common to plant rubber or oil palm apart from the main cocoa farming activity. Hedge or row planting is a variation of this practice, where rows of other tree crops are planted with cocoa trees in between the rows or hedges. This protects the farmers from becoming too heavily dependent on one commodity. The risk of a fall in the price of any one commodity could be hedged by a better price in the diversified crops. It is observed that smallholder cocoa farmers in Malaysia make greater use of oil palm and rubber as there is a ready market in the form of processing mills in the locality. However, this might not be the case in many other cocoa producing countries.

28. Some cocoa producing countries do diversify into oil palm for palm wine and palm oil for domestic consumption. Others have diversified into rubber which requires less attention and is less prone to pests and diseases.

² "Cocoa and shade trees: production, diversification and environmental services" by Eduardo Somarriba, CATIE Newsletter December 2007 No. 29

THE WAY FORWARD IN DIVERSIFICATION ON COCOA FARMS

Understand the farmers' situation, and identify the farmers' needs, constraints and resources available

29. In the course of a survey³ conducted by UNCTAD in developing countries, the following feedback was obtained from NGOs on useful approaches to be adopted to promote successful on-farm diversification:

- i) Contact farmers' groups, not individuals;
- ii) Go to the farmers and learn about their real needs. First listen, then act;
- iii) Fit your knowledge to farmers' practical experience;
- iv) Promote crops and practices that are suitable to local conditions;
- v) Do not propose farming systems that depend on high-cost inputs;
- vi) Introduce not only new varieties, but also the cultivation practices they require;
- vii) If you recommend a new practice, make sure the necessary inputs are available;
- viii) Help farmers to find markets for their produce;
- ix) Since chemical fertilizer is expensive, give training on the use of organic alternatives or advice on integrated pest management.

30. Although the survey may be a little dated, the approach for policy makers remains valid. Farmers cannot be left on their own to fend for themselves. They must be brought into the mainstream to be integrated into the world economy. In order to formulate successful diversification policies, policy makers have to first understand the farmers' situation, identify their needs, constraints and the resources available to map out a suitable diversification strategy. Two way interactions are the way forward for the formulation of any diversification plan for smallholder cocoa farmers. They should be updated on the market driven demand for top quality cocoa including information on the latest regulations on pesticide residues, as well as the increasingly stringent requirements for food safety, social and environmental standards and the best known practices in production, post harvest, storage and transportation methods. New technology, such as the rapid expansion in the use of mobile telephones in most developing countries means that information sharing with small farmers can be made possible. Governments should provide the necessary capacity building through extension services and the proper infrastructure support to ensure an efficient value chain so that farmers can continue to improve their livelihood for a more sustainable cocoa economy.

Prioritize allocation of resources according to farmers' needs

31. A major component of competitiveness in the agricultural value chain is access to affordable infrastructure. This includes infrastructure that supports on-farm production (irrigation, energy, transportation, pre- and post-harvest storage), ensures efficient trading and exchange (telecommunications, wholesale markets), adds value to the domestic economy (agroprocessing and packaging facilities), and enables produce to be moved rapidly and efficiently from farmgate to processing facilities, and on to wholesalers (transportation and bulk storage). In a recent study on agricultural investment in Africa by the United Kingdom Department for International Development

³ Diversification in Commodity-dependent Countries: The role of Governments, Enterprises and Institutions, Report by UNCTAD Secretariat Trade and Development Board Commission on Trade in Goods and Services and Commodities, Second Session, Geneva, 17 November 1997, Item 3 of the provisional agenda.

(DFID)⁴, poor access to infrastructure services was cited as “the greatest impediment to growth of agribusinesses”.

32. With the resources available, the governments would have to prioritize projects in providing the basic infrastructure in a step by step approach and to continue to upgrade the infrastructure when the resources are available to remain competitive.

Clustering farmers into groups for diversification options

33. It has to be noted that economies of scale can only be enjoyed if isolated farmers are grouped in clusters so that access to public goods such as extension services, roads, other public infrastructure and amenities such as health, education, and water can be enjoyed more extensively.

34. There are valid grounds for producer countries to identify the different categories of farmers from the very isolated farmers, to the more accessible and the organized smallholder cocoa farmers in cooperatives. This identification would be useful as the problems and needs are distinct for each category. Subsequently, policy recommendations could be tailored to solve the constraints and to meet the requirements of each category of smallholder cocoa farmers.

35. Research would be required to determine the best crops to be promoted, as the choice of diversification crops depends on suitability in terms of local climatic and soil conditions.⁵ The governments would also have to make strategic decisions on the approach to be taken in terms of support facilities such as supply of high yielding planting material, provision of extension services and marketing of the final products. An efficient value chain has to be in place to lower the transaction costs and derive maximum return from the resources.

36. By way of example, the more remote farmers would need roads and basic infrastructure, education, and health provisions, while other farmers might need assistance in marketing their produce through better representation for a strong bargaining position, improving the efficient functioning of cooperatives and the cocoa value chain. By forming clusters through organizing farmers into groups or cooperatives, the state agency responsible could serve farmers better through extension service agents under its jurisdiction. Extension agents would also have to be well versed with diversification crops apart from cocoa in order to provide transfer of technology and advice. This would mean building a well-functioning value chain for the diversified crops apart from cocoa as the main crop.

37. In a highly competitive globalized market, countries have to compete with the lowest cost producers and therefore need to modernize and constantly upgrade to higher value chains, or cease cocoa farming. In considering the options for diversification, planners would have to bear in mind the phenomenon of “adding up” which could turn into a disadvantage as farmers have to contend with the problem of over supply if the same crop is recommended in many countries for diversification on cocoa farms.

⁴FAO 2008 Agricultural Management, Marketing and Finance Occasional Paper No. 23 entitled “Market-oriented agricultural infrastructure: appraisal of public-private partnerships” by Michael Warner, David Kahan, and Szilvia Lehel.

⁵ See Slide 26 for a list of potential crops classified according to high, medium and lower potential to be evaluated for diversification opportunities in “Exploration of Opportunities West African Cocoa – Summary of Analysis and Workshop Outputs” 31 January 2008 Vienna, Virginia, Bill & Melinda Gates Foundation.

CONCLUSIONS

38. In conclusion, governments have to co-ordinate complementary policies which support diversification at the micro level together with those at the macro level to truly bring benefits to the cocoa farmers from these diversification policies. Policy makers have to identify the issues and constraints facing farmers to diversify successfully, know the resources available and how best to allocate them efficiently, and to ensure proper implementation of effective policies to bring small farmers into the mainstream of development in today's market driven economy. The conclusion of a recent workshop for the least developed countries⁶ aptly described the situation facing policy makers as finding each country's unique combination number to unlock the vast potential and windows of opportunities available to smallholder farmers of individual countries. Diversification strategies cannot therefore be conceptualized at a general level, but they need to take into account the individual country specificities that characterize each one of them.

⁶Trade and Development Board Forty-ninth executive session Geneva, 8-9 June 2010, Item 2 (a) of the provisional agenda. Concluding Summary by Chair, UNCTAD Inter-Divisional Task Force on UN LDC IV.