Implementing the Comprehensive Africa Agriculture Development Programme (CAADP) as the centrepiece of a poverty-reduction strategy implies that agriculture and its individual subsectors must play a primary role as leading sources of pro-poor growth at the national and rural levels. Ghana and the other African countries are not just seeking to accelerate growth but also to maximize and broaden the impact of such growth on poverty reduction. Successful implementation of the CAADP agenda therefore should be guided by a good understanding of the impact of sector-wide growth and growth within individual agricultural subsectors on income and poverty levels among different categories of rural households. In the present case, a better understanding of the possible equity implications of Ghana’s CAADP and middle-income country (MIC) strategies under the Ghana Poverty Reduction Strategy (GPRS) would allow the Government of Ghana to emphasize the options that are more likely to balance growth and maximize its poverty-reduction impact.
AGRICULTURAL SECTOR GROWTH AND ITS CONTRIBUTION TO ECONOMIC GROWTH

If the current MIC strategy were to be successfully implemented to achieve a growth rate of 6.9%, which is above the 6% CAADP target growth rate and were to be complemented by strategies to induce a comparable rate of growth in the nonagricultural sector, the contribution from growth in agriculture to poverty reduction would be higher than that from growth in the nonagricultural sector. For every 1% decline in poverty – rural and national – about 54% would be attributable to growth in the agricultural sector (see Figure 1).

While accelerated growth in agriculture as a whole may be the most promising poverty-reduction strategy currently available to Ghana, such a strategy needs to recognize that not all subsectors contribute to agricultural growth and poverty reduction in the same way. The size of the contribution of individual subsectors is determined by their initial shares in income and employment and their potential for incremental growth. In Figure 2, the axis on the left and the bars show the projected contributions to agricultural GDP growth resulting from an additional 1% annual rate of growth in the individual subsectors. The line and the axis on the right show the corresponding contributions to the reduction in the rate of poverty. The staples and fishery and forestry subsectors exhibit the highest levels of contribution to agricultural incomes and poverty reduction. An additional 1% growth per year to 2015 in either subsector would generate an incremental of around US$130 million and US$80 million, respectively. The corresponding decline in the overall rate of poverty would be 0.9 in the case of the former sector and 0.5 in the case of the latter.

The long-term contributions (to 2015) of alternative growth strategies to poverty reduction are plotted in Figure 3. Each line depicts the decline in poverty that would be achieved if Ghana were to focus on particular sources of growth. The top (current trends) line indicates the decline in poverty rates under the continuation of current trends across all subsectors, which would result in a modest reduction from 28.5% in 2005 to 24.3% in 2008, a level sufficient for Ghana to meet the first Millennium Development Goal (MDG1) of halving the 1990s poverty rate. The second line from the top shows the outcome of successful CAADP implementation across all agricultural subsectors, which would reduce the poverty rate to 15.4%. The lines in between denote the outcomes of alternative isolated strategies that would focus exclusively on two single subsectors: staple crops and export crops. The projected outcomes indicate that such efforts would be less effective than a more comprehensive, sectorwide strategy in terms of reducing overall poverty levels.

The bottom line in Figure 3 illustrates the added contribution of stimulating growth in the non-agricultural sector under the MIC agenda, allowing Ghana to become a middle-income country by 2015. It may be difficult to actually achieve the high rates of agricultural and nonagricultural sector growth that would be required to meet the MIC target, estimated at 6.9 and 8.2%, respectively.
However, the above results suggest that Ghana can make significant progress towards that goal by 2015 – by ensuring successful and sustained implementation of the CAADP agenda, coupled with an effective strategy to stimulate growth in the nonagricultural sector.

An analysis of the alternative growth sources and poverty-reduction outcomes yields the following lessons with respect to efforts to successfully design and implement strategies to meet the CAADP growth target and achieve the MIC goal in Ghana:

1. Agriculture will remain an important source of growth and poverty reduction in Ghana during the next 10 years.
2. Continuation of current trends will be sufficient to reach MDG1 in 2008 and halve rural poverty before 2015 but will not allow Ghana to become a middle-income country by 2015.
3. Isolated strategies targeting any of the major subsectors separately would only marginally lower the poverty rate compared to current trends.
4. Realizing a comprehensive, agricultural sectorwide growth of 6% would allow Ghana to reach MDG1, one year earlier compared to current trends.
5. If a strategy was implemented that would combine accelerated agricultural growth with accelerated growth in the non-agricultural sector, the poverty rate could be reduced to 9.5% by 2015, and Ghana would achieve middle-income status by 2015.

**POTENTIAL EQUITY EFFECTS RELATED TO GOVERNMENT GROWTH TARGETS**

**Impact of Sub-sectoral Growth on the Reduction and Distribution of Poverty among Regions**

Planned strategies under CAADP are projected to generate strong growth across all subsectors and for all rural household categories. The distribution of growth and its impact on poverty is shown, however to vary significantly among regions. Agricultural growth under the CAADP scenario is pro-poor. Income growth in the North starts catching up with the rest of the country as growth in rural households’ income in the Northern Savannah zone gets higher than the average growth rate (Figure 4). This relatively high growth rate for the Northern rural households’ income suggests that poverty reduction in the North might speed up. However, given its high initial poverty rate, the poverty rate will remain at a high level of 40.6% in the North by 2015. This causes the gap between the North’s and the poverty level of other regions (and also the income level) to generally widen and to further exacerbate regional divergence (Figure 5).
Possible Equity Effects and How to Address them under Current CAADP Targets

Implementation of CAADP should take these potential equity effects into consideration. The purpose here is not necessarily to achieve equal outcomes but rather to raise the overall level of income gain and poverty reduction by maximizing the gains among household groups at the lower end of the spectrum. This can be done by putting emphasis in the design and implementation of programs on those subsectors that contribute more immediately and to a greater extent to income growth and poverty reduction among households in the northern regions that would otherwise lag further behind. The benefits from agricultural growth may vary among households in the different regions due to the following factors:

1. The importance of individual sectors as a source of income and employment for different household groups;
2. The scope for incremental growth in individual subsectors, given technological, market, and other conditions affecting demand and supply; and
3. The initial distribution of growth among individual agricultural subsectors, and the fact that growth in some subsectors affects growth in others through adjustments in demand, supply, and price conditions.

The importance of individual subsectors as sources of income growth and poverty reduction among households in the different regions is depicted in Figure 6. The graphs illustrate significant variation in the agricultural structure and the share of non-agricultural income across the four zones. Fishery and forestry constitute the largest agricultural contributor to income growth in the Coastal zone, export and staple crops are the most important agricultural subsectors for growth in the Forest zone; and staple crops are the largest agricultural contributors to growth in the Southern and in the Northern Savannah zones. The various graphs confirm the predominance of the agricultural sector as a source of income growth for households in the rural areas across regions.

Graph d of Figure 6 also highlights the role of the staples subsector as the single most important contributor to income growth and poverty reduction for households in the northern regions. Households in the North tend to have lower average incomes and higher rates of poverty. Although households in these regions do experience higher income growth under CAADP targets (Figure 6), the growth path will lead to greater regional income divergence and further concentrations of poverty in the North. Compared to the rest of the country, the North has fewer opportunities in either agriculture or non agricultural activities. The strong contribution of the non-agricultural sector in most of the regions highlights the importance of complementing current CAADP subsector targets with strategies to stimulate growth in that sector.

The implementation of the CAADP agenda needs to reflect these dynamics in order to ensure that the income and poverty-reduction benefits of future agricultural growth are widely shared and its potential equity effects...
Figure 6: Projected contributions of individual subsectors to income growth and poverty reduction among key household groups by ecological zone (%)
are neutralized. If the design and implementation of future programs under the CAADP agenda are carried out such that they take into consideration the subsectoral and geographic distribution of vulnerable households, it should be possible to balance out the income and poverty-reduction benefits of these programmes and thus avoid outcomes such as the ones projected in Figure 5. For example, to accelerate growth in the North, greater attention should be given to activities that benefit a majority of farmers, such as cereal production and livestock. This is especially important for poorer, smaller-scale farmers. There is also the potential to develop non-traditional cash crops that are typically grown in the North. The same is true for sheanuts and sheabutter production and trade. Increasing inter-regional trade with neighbouring countries provides new opportunities both within and outside of agriculture, which can foster growth and poverty reduction in the North.

The following lessons can be drawn regarding the design and implementation of programs to stimulate growth and reduce poverty under the CAADP agenda:

1. Agriculture remains a key source of growth and a major contributor to poverty reduction nationally as well as across regions.

2. The realization of the CAADP agenda is projected to stimulate growth across agricultural subsectors and across regions.

3. The distribution of income growth and its impact is expected to vary considerably across regions, with differences in annual growth allowing rural household groups in the North to catch up with income growth in the other regions.

4. However, given its high initial poverty rate, the poverty rate will remain at a high level in the North by 2015 and this causes the gap between the North’s and the rest of the country’s poverty level to widen further exacerbating regional divergence.

5. The staple subsector is the major source of future growth and poverty reduction among the poorest households in the North.

6. Consequently, the implementation of the CAADP agenda needs to emphasize this subsector in these regions with a high concentration of the poorest households so as to better balance out and broaden the impact of growth and poverty reduction.

7. The nonagricultural sector can potentially play a critical complementary role, including in the case of the poorest households.

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