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A Critical Assessment of the FAO Report on SADCC Agriculture*

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by

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In September 1983, the Director-General of the Food and Agriculture Organization proposed to SADCC that the FAO undertake an analysis of SADCC's long-term food supply and demand prospects along the lines of FAO's global study Agriculture:Toward 2000 (1981). The Director General of FAO assigned a task force to carry out the study; the completed report was available in six months and published as SADCC Agriculture: Toward 2000 (FAO, 1984).

The purpose of SADCC Agriculture was to provide a framework by which planners can assess available resources and consider two alternative courses of action (strategies) "to promote SADCC's goals of greater food security and self-reliance" (p xiii). Twenty-three policy recommendations were advanced for implementation at both national and regional levels.

The purpose of this note is to provide an independent assessment of the FAO report and to draw some lessons for local researchers and visiting teams preparing future assessments of SADCC agriculture. The methodology used by the Rome-based FAO team examined the historical record of agricultural performance of SADCC countries from 1966-81 (adjusted for external shocks such as weather and

* This is an excerpt from a background paper prepared for a SADCC Meeting of Permanent Secretaries, Chief Economists, Food and Agriculture Sector Coordinators and Ministers of Agriculture, Harare, July 24-26, 1986. (See Eicher and Mangwiro (1986).

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wars) and to project what the agricultural production would be in year 2000 if governments continue the same policies, agricultural yields remain low, etc. In short, the first computer projection traces the consequences of pursuing present food and agricultural policies during the 1980s and 1990s to year 2000. This is described as the trend (T) scenario. But the computer projections for the T scenario were gloomy. For example, in year 2000, population growth rates were projected to be double the food production growth rates.1/ The T scenario was, in effect, a benchmark to compare two alternative food and agricultural strategies: an Improved Performance (IP) and a High Performance (HP) food and agriculture strategy. In sum, three strategies were processed by Rome computers to show expected outputs of SADCC agriculture at various time paths to year 2000. The FAO team took pains to point out that they did not have the time, data and funds to make forecasts of what is likely to happen but instead presented conditional projections of "what could happen given certain policy assumptions" (p. xv).

The improved performance strategy (IP) for year 2000 assumes that the nine governments in the SADCC region would step up public expenditure on agriculture, that agricultural researchers would be more productive and that the annual rate of growth of agricultural production would more than double, from 1.4 to 3.2 percent per year. However, the 3.2 percent production growth would still be less than the 4.0 percent assumed increase in the demand for agricultural products over the 1984-2000 period.

1/ Demand for food arising from income and population growth was estimated to be 3.5 percent per year compared with 1.5 percent annual growth in supply (e.g., agricultural production).

The high performance (HP) strategy assumes that SADCC governments would give higher priority to agriculture than in the IP strategy, and assumes that even higher yields would be forth coming. The results of the computer runs on the HP strategy were favorable and regional food self-sufficiency was projected to be achieved in all food categories, except livestock. However, it was assumed that higher agricultural exports would finance livestock imports into the region.

While one can take issue with the FAO on a large number of details of SADCC Agriculture, space permits us to mention only seven general reservations:

1. Quality of Statistics - the starting point in a study of food and agriculture in the nine countries in the SADCC region is to examine the micro data base with emphasis on crop yields, livestock off-take rates, etc. The FAO team approached this task by examining 27 commodities and constructing commodity balances (demand, production and trade) for each commodity for a base year (the three year average for 1979-81) and two future points: 1990 and 2000. The team then developed production projections on the basis of estimates provided by "authorities" in the region and elsewhere on likely feasible yields, cropping intensity, land development and the allocation of land to crops (for six land-water classes) in the SADCC region. Similar estimates were made for herd growth, off-take rates and carcass weights for cattle, buffalo, sheep, goats, pigs, and poultry. The production estimates were then generated by the computer for the three strategies and checked with projections of demand for food and other commodities at various points along the way to 2000.

"The authors of the FAO report glossed over the stark reality that the data base on SADCC agriculture is extremely weak. The authors should have been candid on this issue and attached a bibliography of data sources (with reservations and adjustments), including names of the authorities" consulted in the region and elsewhere on likely crop yields in 1990, 1995, or 2000.1/ These references would have given the reader a few insights into the weak data base on agricultural production and consumption in the SADCC region.

There are two standard data sets on world agriculture - FAO and the U.S. Department of Agriculture (USDA). But production estimates from these two institutions can vary by a factor of 50 to 350 percent in a given country. For example, Uma Lele and Wilfred Candler of the World Bank report that for 1973/74, the USDA estimate of sorghum and millet production in Tanzania was 3.5 times higher than that of the Ministry of Agriculture while the FAO estimate was 88 percent of the Ministry's. (Lele and Candler, 1984, p.211). Moreover, Lele and Candler contend that:

"data on domestic agriculture in most African countries are too unreliable to ascertain the level of production in any given year. Further, year-to-year production fluctuations in reported statistics are often too large to estimate a trend with any degree of confidence. Judgments about deviations from a trend by amounts as small as five or ten percentage points would be nearly impossible" (Lele and Candler, 1984, p 211).

1/ It is puzzling why the report does not contain a bibliography.

In summary, which production estimates - African states,USDA, or FAO - should be shoveled into the computer? If there are uncertainties about data quality in Tanzania two decades after independence, what about the quality of data on agriculture in Angola, Mozambique and Zimbabwe? In Zimbabwe, there are currently 4200 commercial farmers and around 800,000 communal (smallholder) farmers. But the data base on communal farmers is extremely weak. For example, the prestigious Commission of Inquiry into the Agriculture Industry of Zimbabwe reported after a year of fact-finding that:

> It is salutary to observe that Zimbabwe, in spite of its proud record of agricultural research, has an almost total absence of detailed data on conditions in the communal lands. This country urgently requires a comprehensive data base on socio-economic conditions in the communal lands both to guide agricultural policy and to ensure that resources devoted to agriculture are put to their best use. Without such data the improvement of productivity in communal areas will remain at best a "hit or miss" affair" Zimbabwe 1982, p.9).

In summary, the data base on agriculture in the SADCC region is unreliable. This fact of life should be explicity noted by researchers and visiting study teams, especially a team from one of the two international organizations charged with collecting and maintaining historical data on world agriculture.

2. Terminology. The FAO report uses food self-reliance, food self-sufficiency and food security interchangably. But the main focus of the FAO report is on measures to increase the level of food self sufficiency while assuming that people in the SADCC region will have the ability (land, income or jobs), to acquire a calorie-adequate diet

3. Technology. We believe that the FAO report overestimates the stock of food crop technology on the shelf and overplays measures to close the "technology gap" between what is assumed to be available and what is being used by farmers. The FAO team asserts that "what is missing at both national and regional levels is an examination of why farmers have not accepted technologies" (p. 3.26). We are of the opinion that what is missing is on-shelf food crop technology - especially, sorghum, millet, summer wheat, rice, and grain legume varieties. We believe that the FAO should have given more attention to a country-by-country inventory of present food crop technology and what is needed to strengthen national research services in the region.

There are many mysteries about science, technology and African agriculture. For example, why are some crops more robust in terms of international transfer? Why are some transferred crops such as maize more seriously affected than wheat by differences in local soil temperatures and disease and insect pressures? CIMMYT, the Mexican-based international research center on wheat and maize, reports that 45 million hectares of wheat varieties but only 4 million hectares of maize carry CIMMYT germplasm in developing countries (CIMMYT, 1985). What explains this vast difference in the ability to move maize and wheat germplasm worldwide? This is one of the many puzzles about

technology transfer. If the FAO team had more time, they undoubtedly would have devoted more attention to examining the institutional base - research, training and extension - for agriculture in the SADCC region.

4. Human capital. The report notes that "The main finding is that the principal requirement for greater food self-sufficiency is the effective mobilization of human resources rather than the development of physical resources" (p xix). But the report devotes only three pages to human capital improvement (6.8 -6.11) and informs SADCC that "manpower training is the most effective long-term approach to increasing absorptive capacity" (p. 6.10).

5. Institutional Puzzles. Development economists and agricultural economists, including those from FAO, are generally technocrats who have a singular lack of interest and ignorance about the role of institutions - political, legal, social, technical, and cultural in development. The FAO's ignorance about SADCC institutions surfaces throughout the report.

6. Policy reform. The report lists 21 specific policy measures needed to achieve the Improved Performance (IP) targets by year 2000. But instead of providing specific measures, the measures are so general that they could apply to almost any country in Africa. For example, policy measure No. 16 on livestock improvement follows:

"Measures in this area are also highly dependent on progress in changing the social role of cattle and on attitudes to communal grazing land; they are further constrained by the lack of extension workers. However, possibilities for action do exist. For example, livestock owners can be brought together with local leaders to form livestock associations, or they may be organized through village committees to bring about agreements on the use of communal grazing and to improve contacts with extension services" (p.3.28).

7. Why computer scenarios?

We are puzzled why the team relied so heavily on developing three computer scenarios of SADCC agriculture - especially in light of the weak data base. We are skeptical about placing a heavy emphasis on macro modeling of the entire food and agriculture sector given present statistics.

In summary, the FAO report on SADCC Agriculture is the product of a team that did the best it could given the data base and time (six months). A SADCC, World Bank, USDA, or IFPRI team could have done little better given the data and time constraints.

~~In summary~~, There are no quick fixes on African agriculture. This is the painful lesson that the Food and Agriculture Organization of the United Nation should learn from its maiden publication for SADCC. For donors interested in policy dialogue, there is no substitute for investing in institution building for the next 10 to 15 years in Africa. Policy dialogue on food and agriculture requires a slow and progressive build-up of African

capacity to address African problems. The biggest lesson that SADCC can learn from this assessment is to move slowly, but progressively, with developing indigenous macroeconomic research capacity to deal with problems of food and agriculture in the region.

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