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## ABSTRACT

Since 1986, Guatemala has witnessed a continuous effort to replace interventionist policies with market-oriented policy actions. As this movement to market policies persists, there will be an increasing demand for objective, non-advocacy knowledge of the consequences of an options to various policy alternatives. The real need exists to strengthen the modes for conducting more objective agricultural policy analysis as a substitute, in large part, for the conventional self-serving lobbying efforts of political and advocacy groups.

The need for this strengthening is clear in agriculture as in other sectors. For the agricultural sector the policy focus must be inter-sectorial as well as sectorial and involve both public and private sector actions.

This concept paper addresses issues and alternatives for the strengthening of agricultural policy analysis capacities in Guatemala. Two principles guiding this effort were an emphasis on quality of analyses and sustainability of efforts that may be initiated.

There are four major elements which need to be considered in any effort to improve agricultural policy analysis. These include: enhanced knowledge on inter-sectorial policies impacting agriculture; similar knowledge on sector policies; knowledge to service short-term needs as well as medium-term needs; and a requirement to strengthen human resource capacities in agricultural policy analysis.

The recommendations in this paper are of three types: strengthening the capacity for more objective agricultural policy analysis; enhancing the information system; and establishing criteria for the development of and suggestions on a possible agricultural policy research agenda.

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**GUATEMALA:**

**STRENGTHENING THE  
AGRICULTURAL SECTOR  
INFORMATION BASE  
AND  
POLICY ANALYSIS CAPABILITY**

**FEBRUARY 1990**

**GUATEMALA:**  
**STRENGTHENING THE AGRICULTURAL SECTOR INFORMATION BASE**  
**AND POLICY ANALYSIS CAPABILITY**

Submitted to:  
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FEBRURARY 1990

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We visited extensively with officials in the public sector, private and public university officials, administrators and professionals associated with private sector economic, social and political centers/institutes and with USAID officials. We wish to thank the many persons that were kind enough to take the time to review their activities relating to policy analysis and to share opinions on major issues and on alternative approaches to creating an enhanced policy analysis capability in Guatemala.

## ACRONYMS

ANACAFE	National Coffee Association
ASIES	Association for Research and Social Studies
BANDESA	Board of the Agricultural Development Bank
CACIF	Coordinating Committee for Agricultural, Commercial, Industrial and Financial Associations
CIEN	Center for National Economic Research
CNA	National Cotton Council
CONAPEX	National Council for Promotion of Exports
FADES	Foundation for Analysis and Development of Central America
IFAD	International Foundation for Agricultural Development
IMF	International Monetary Fund
IICA	Inter-American Institute for Cooperation on Agriculture
INDECA	Board of the Agricultural Marketing Agency
UDAPE	Unidad de Analisis de Politicas Economicas (Bolivia)
UNAGRO	Union Nacional Agropecuario de Guatemala
UNDP	United Nations Development Program
USAID	U.S. Agency for International Development
USPADA	Ministry of Agriculture Sector Planning Unit

## EXECUTIVE SUMMARY

Since 1986, Guatemala has witnessed a continuous effort to replace interventionist policies with market-oriented policy actions. As this movement to market policies persists, there will be an increasing demand for objective, non-advocacy knowledge of the consequences of and options to various policy alternatives. The real need exists to strengthen the modes for conducting more objective agricultural policy analysis as a substitute, in large part, for the conventional self-serving lobbying efforts of political and advocacy groups.

The need for this strengthening is clear in agriculture as in other sectors. For the agricultural sector the policy focus must be inter-sectorial as well as sectorial and involve both public and private sector actions.

This concept paper addresses issues and alternatives for the strengthening of agricultural policy analysis capacities in Guatemala. Two principles guiding this effort were an emphasis on quality of analyses and sustainability of efforts that may be initiated.

There are four major elements which need to be considered in any effort to improve agricultural policy analysis. These include: enhanced knowledge on inter-sectorial policies impacting agriculture; similar knowledge on sector policies; knowledge to service short-term needs as well as medium-term needs; and a requirement to strengthen human resource capacities in agricultural policy analysis.

The team visited extensively with public and private sector decision makers, analysis units, professional analysts and researchers, university professors and administrators along with leaders of vested interest groups. These visits were fortified by having access to many reports, assessment papers, position papers and other documentation.

The recommendations herein are of three types: strengthening the capacity for more objective agricultural policy analysis; enhancing the information

system; and establishing criteria for the development of and suggestions on a possible agricultural policy research agenda.

The major recommendations on enhancing agricultural policy analysis capacities involved endowment mechanisms in support of:

1. An effort to establish an agricultural policy research unit in the Bank of Guatemala to focus on the impact of changes in inter-sectorial policies on the agricultural sector;
2. An effort in the office of the Minister of Agriculture to strengthen his senior advisors or policy analysts;
3. An effort in the private sector with ASIES to develop an agricultural policy analysis division with a focus on agricultural sectorial policy; and
4. An effort to establish three endowed chairs at Landivar, Marroquin and San Carlos Universities in support of policy research and human resource development.

The recommendations on the information system involve assessing present and proposed activities of other donors, exploring options for strengthening the National Institute of Statistics and carefully defining the contents of a basic data bank for policy analysis.

Much of the information needs for policy analysis will be highly specialized and should not be components of the basic data bank.

Suggestions on the research agenda relate to a process for developing the initial agenda and for periodic up-dating and some suggestions on the initial research agenda relating to both inter-sectorial and sectorial issues.

## I. INTRODUCTION

Throughout much of the 1980's, Guatemala, like most developing countries in the region, has not experienced favorable economic growth rates. Some significant changes initiated in 1986 may have set the stage for improvement. In 1987 and 1988, growth rates and other economic indicators showed some improvement. Per capita growth rates were slightly positive but still very low. Other issues of low income, low levels of capital formation, high unemployment and underemployment, low nutrition levels and severe poverty were continuing problems.

To sustain higher growth rates, many suggest that conventional governmental intervention strategies be replaced by more neutral and market-oriented approaches. To support this change the policy decision processes should be informed by more objective knowledge of probable consequences of policy alternatives rather than skillful lobbying efforts by vested interests.

Policy choices impacting the agricultural sector, both inter-sectorial and sectorial, appear to be based upon limited policy analysis research (such as at the Bank of Guatemala) with continuous, self-serving input of lobbying efforts by political or advocacy groups. Most of the critical policy decisions seem to be based upon approaches that have been taken elsewhere and adopted without the benefit of any significant amount of objective policy analysis or research on the consequences of changes in policy on goals and constituents.

The lack of objective policy analysis or research is related to a number of factors. There is almost no history of apolitical or non-advocacy policy research. The decision makers have never had the benefit of such research and thus have not created a demand for it. The lack of credibility of and demand for quality policy research is also associated with an inadequate data base, limited human capacities for objective analyses, almost no sources of support for non-advocacy investigations and a general impression that objective analyses are esoteric and irrelevant. These are indeed formidable barriers and any attack on these issues will require patience and persistence.

This concept paper examines the nature of this problem as related to agricultural development in Guatemala. The group examines past and present actions on agricultural policy analyses within public and private institutions; explores the decision making process and solicits opinions on priority issues as well as alternatives to resolve issues of quality, data, sustainability, the process of building a policy research agenda and suggestions for a policy agenda.

As with similar efforts, the group preparing the concept paper has had access to many publications, has tracked policy making processes and has drawn on experiences from other efforts to enhance agricultural policy analysis.

## II. OVERVIEW OF THE AGRICULTURAL SECTOR IN GUATEMALA

Since 1986, the economic environment in Guatemala has gradually acquired a set of more rational policies. The most important price policy relates to exchange rates that have been devalued along with a mechanism structured to maintain movement towards a more neutral exchange rate among sectors of the economy. Equally significant have been agricultural sectorial policies that eliminate many price controls (perhaps by default) and subsidy interventions and a set of policies that gradually align domestic price policy to border prices.

Unlike most Central and Latin American countries, stabilization policies have consistently moved in the direction of a market dominated environment. These are significant accomplishments that could and may have set the stage for a revival of real growth rates.

However, behind these major accomplishments is a recent history of steady economic declines preceded by a robust period of growth throughout the 1970's. During the 70's real GDP growth rates averaged about 4 percent per year including average GDP agricultural growth rates of 3-3.5 percent per year. GDP per capita rates were less favorable because population rates approached 3 percent per year (see Appendix 2 on selected data sets).

Beginning in 1980 and continuing through 1986, the economy declined in

almost all categories. The package included: steady declines in the real GDP (3.7 percent in 1980 to .14 percent in 1986); overvalued exchange rates; increasing rates of inflation (10.7 percent in 1980 to 37 percent in 1986); increased external indebtedness and government deficits; extensive price controls in agriculture; declining agricultural growth rates (1.6 percent in 1980 to a negative .8 percent in 1986); declining real incomes associated with unemployment; and underemployment accompanied by growing nutritional problems. These negative indicators were associated with unfortunate policy choices compounded by the worldwide recession, the collapse of the Central American Common Market, declines in prices for major exports and, among others, high rates of capital flight compounded by political insecurity within the country.

The scene was dismal when the new Cerezo administration took office in 1986. Policy actions were initiated to simplify the overvalued and multiple exchange rates, to eliminate most price controls in agriculture, to reduce the fiscal deficits, to place constraints on credit expansion along with efforts to promote export diversification and to promote increased private investments.

These actions helped to reduce inflation, to stabilize exchange rates and to curtail the declining real growth rates. The National GDP growth rates of 1987 and 1988 (3.1 and 4.0 percent respectively) showed some growth but on a per capita basis were .2 percent for 1987 and 1.0 percent for 1988.

Inflation rates were down to 9-12 percent compared with rates of 20 to 30 percent for previous years. Exchange rates were still overvalued but less so and more stable. More recently, in mid-1989, further actions were taken to overcome exchange and interest rate problems.

This array of policy actions since 1986, engineered by the Monetary Board with IMF interventions and external donor collaboration are quite distinctive for most developing countries. Clearly, the negative terms of trade facing agriculture have begun to be reversed. The actions also signal a policy stance that depends on options other than the conventional industrialized import substitution strategy.

There are favorable expectations for increased real growth rates including those in the agricultural sector. The important agricultural sector has been a major earner of foreign exchange as well as the major source of employment.

The primary importance of the agricultural sector is more completely observed when agricultural input and product processing (now classified as a part of the industrial sector) along with agriculturally related finance and transport components are added to the primary goods production in agriculture. The conventional definition of agriculture suggest a 20 to 25 percent contribution to the GDP, a source of employment for six of every ten active workers and a supplier of about two-thirds of the foreign exchange earnings. However, a characterization of the agricultural sector as suggested above would greatly amplify the role of the agricultural sector in the Guatemalan economy. With this more complete characterization of the agricultural sector the Agriculture GDP contribution might be closer to 40 to 50 percent, employment levels approaching 80 percent and slightly increased levels of foreign exchange. Clearly, agriculture is a dominant sector and perhaps the major engine for economic growth.

With the large number of low income families, open and underemployment approaching 35-40 percent, nutritional patterns below acceptable levels, difficult income distribution problems and very low real per capita growth rates, there are many important policy, technological, investment and population problems facing the economy.

A most interesting policy research goal should focus on the evaluation of the recent policy liberalization. There is a need to monitor the consequences of recent policy changes and to assess what and why some agricultural sub-sectors are growing while other sub-sectors are faltering and what policy and investment changes may be required.

### III. THE SETTING FOR AGRICULTURAL POLICY ANALYSIS IN GUATEMALA

This section assesses some issues for agricultural policy analysis and sets the stage for the concept paper. There are discussions on advocacy and non-advocacy policy approaches, on the scope of policy analysis, the decision processes for agricultural policy analysis in Guatemala, and on distinguishing agricultural policy and planning functions.

#### **Advocacy and Non-Advocacy:**

The process of policy change is embedded in a complex decision process. Agricultural policy analysis is a component of this process and is conducted in a variety of environments. The typical environments might be classified as those efforts directed at the resolution of a specific problem or those broader in scope which focus on a body of subject matter such as agricultural growth strategies. Within these two environments, policy analysis can be designed to support groups with vested interests (political, social and economic) or it can be designed to produce knowledge that is non-advocative in nature.

The latter type of policy analyses are those that evaluate the consequences of alternative policies on specified economic and societal goals as well as the consequences on constituent groups in an economy. Such objective policy analyses, or what some call good positive policy research, can serve multiple ends.

Policy analyses by the vested interest groups or for advocacy purposes is usually conducted in relation to a specific problem or for the advocacy of a specified strategy or target group involving an array of subject matter. For a specific problem, the typical policy researcher completes a diagnostic assessment of the problem (commodity, resource input, etc.) and then proceeds to an analysis in defense of the chosen solution. The reports that emerge are usually very descriptive with more qualitative than quantitative analyses. For most policy analysts or advisors, the sequence of activities described above for the policy researcher is completed in a few days or an even shorter time frame whereas good policy research is usually more quantitative and of much longer duration.

On the other hand, policy researchers are not under immediate pressures. They are given the time to conceptualize a given policy issue, to review the existing literature, to evaluate alternative methodologies, to develop available data bases and to more systematically assess the consequences of policy alternatives. The effective policy researcher benefits from peer reviews, publishes and participates in various dissemination mechanisms.

These functions contrast sharply to those of the professional planner. Typically the planner's functions include pre-investment studies, preparation of project proposals, the prioritization of investment options, development of necessary budgeting proposals, and the monitoring of the results from previous or on-going investment programs. These functions relate to alternative resource allocations or investment options designed to achieve public or private sector objectives.

It is also clear that any set of policy conditions and the consequences of their changes will impact the mix of investment options and the decisions on the investment strategy. The planner can clearly develop more complete and dependable investment strategies given the availability of knowledge on the consequences of policy changes.

#### **IV. OVERVIEW OF AGRICULTURAL POLICY ANALYSIS AND FORMULATION PROCESS**

The formulation of macroeconomic policy is the realm of the Government of Guatemala Junta Monetaria or Monetary Board. The Board consists of the following members:

- President of the Bank of Guatemala (Chairman)
- Minister of Finance
- Minister of Economy
- Minister of Agriculture
- Representative of Domestic Banks
- Representative of CACIF
- Representative of San Carlos University

The Board sets monetary, fiscal, exchange rate and credit policy. Staff work for the Board is done by the Bank of Guatemala. The Minister of Agriculture has traditionally played a relatively minor role in the deliberations of the Board. This is due in part to the fact that most of the

with a very limited quantity of objective, non-advocacy analyses. There is a critical need for greater knowledge of the consequences of inter-sectorial policies on the agricultural sector. This is particularly so when non-agricultural Monetary Board members, both public and private, are much better prepared on inter-sectorial policies.

This same issue of preparedness occurs on decisions relating to agricultural sector policies. Important sectorial decisions such as credit, product prices, public investment allocations and others are major responsibilities of the Monetary Board.

Another major potential contributor to improved inter-sectorial and sectorial policy choices is an aware public. The dominance of politically and economically motivated advocacy analysis has limited public access to an objective information base and has hampered broader participation in discussion of policy decisions. When the general public is well informed on the consequences of policy choices, there is a strong counter balance to acceptance of advocacy policies by default.

#### **Policy Analysis and Planning:**

The functions of agricultural policy professionals (analysts and researchers) differ sharply from the functions of professional planners. Clearly there is an interaction required but too frequently the separate functions are not well perceived.

Policy professionals, including policy analysts (or policy advisors) and policy researchers, typically focus on estimating the consequences of policy alternatives on given goals and client groups. The policy analysts or advisors rely on their experience, training, knowledge of research reports, their solicitation of opinions and their political awareness. The analysts (advisors) reply to policy questions presented to them by public and private decision makers. Such professionals are given little time to respond and are called upon to make difficult short-term projections.

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the existing literature, to evaluate alternative methodologies, to develop available data bases and to more systematically assess the consequences of policy alternatives. The effective policy researcher benefits from peer reviews, publishes and participates in various dissemination mechanisms.

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The Board sets monetary, fiscal, exchange rate and credit policy. Staff work for the Board is done by the Bank of Guatemala. The Minister of Agriculture has traditionally played a relatively minor role in the deliberations of the Board. This is due in part to the fact that most of the Ministers of Agriculture are from the agricultural sector, with limited background in macroeconomic matters. It is also due to the lack of

adequate preparation of the Minister for participation in board meetings. Thus, even though the agricultural sector, including agro-industry and agricultural transportation, services and finance constitutes the most important sector of the economy, its representatives have had limited influence on setting the macroeconomic policy agenda which has enormous impact on the prospects for agricultural investment and growth.

The Minister of Agriculture generally calls upon personal advisors and the Sector Planning Unit (USPADA) to assist him in preparation for meetings of the Monetary Board. The agenda of the Board meeting and supporting documentation are received shortly before each session with little time to analyze the consequences of proposed measures on the agricultural sector. The typical process is for a personal advisor to the Minister to get on the phone to his range of contacts to obtain their advice/opinions on the matters to be discussed. He may request USPADA to prepare a recommendation backed by whatever data/analyses (usually limited or non-existent) they have. The advisor then prepares a short briefing paper which suggests positions that the Minister should take on the issues. As a result of this hurried, ad hoc process and the almost complete absence of relevant data or analyses, the Minister has little influence on board decisions. At present, the Minister has one advisor who handles all matters related to preparation for meetings of the Monetary Board.

Sectorial policies are set by the Minister of Agriculture and the boards of the decentralized agencies of the Agricultural Public Sector, but are greatly influenced by the policies established by the Monetary Board. For example, the Board of the Agricultural Development Bank (BANDESA) has certain latitude in setting policy on credit allocations and interest rates within the overall guidelines established by the Monetary Board. Similarly, the Minister, with the advice of the Board of the Agricultural Marketing Agency (INDECA), can set support prices for basic grains but INDECA's ability to intervene in the market is determined by whether the Monetary Board decides to authorize the transfer of funds to carry out a purchasing program. In fact, the price support program has been totally or partially non-functional in recent years because of the lack of funding for interventions in the basic grains market.

The analyses underlying sectorial policy decisions are elementary or non-existent. The few analyses that exist are generally of poor quality and based upon highly suspect data. There are few employees in the agricultural sector who have been trained in economics beyond the bachelor's degree. Those who have received advanced training gravitate to management positions or leave the sector, resulting in continuous, debilitating turn-over of personnel. Thus the capacity to do any objective policy analysis within the public sector is almost non-existent.

There is a Department of Sectorial Policies and Programs within USPADA which is currently staffed by two agronomists at the B.S. level and one agricultural economist at the M.S. level. They are receiving advisory assistance from a Ph.D. in Agricultural Economics provided by UNDP and a M.S. in Agricultural Economics provided by IICA. However, the time of this department is devoted almost entirely to responding to urgent requests from the Minister of Agriculture, leaving almost no time for any significant policy analysis work. The rest of the USPADA staff is involved in planning, programming and budgeting as well as "fire-fighting" for the Minister and have neither the time nor the training and experience to carry out any policy analysis work.

In the private sector, there are several organizations which deal with policy analysis to varying degrees. The Association for Research and Social Studies (ASIES) has been in existence since 1979. Its principal objective is the study and discussion of national and international problems to identify and propose solutions oriented to promotion of development and democracy.

ASIES has a permanent full-time staff of 50, including 15 analyst/researchers (8 full-time economists plus some additional part-time contract professionals) who carry out a continuing series of studies on key political, economic and social issues in Guatemala. They also host recurring and special seminars on topics such as the National Reality (annually), the Social Economy of the Market (including the role of the state in monetary and fiscal policy) and the Challenge of the Economic Reactivation Program.

In 1985, prior to the inauguration of the Cerezo Administration, ASIES prepared an in-depth analysis of macroeconomic policy alternatives for consideration by the new government. They are now in the process of preparing a more ambitious outline of a 5-year strategy for achieving broad based participation in the benefits of national development for consideration by the Administration that will replace the Cerezo government in late 1990.

ASIES' policies and priorities are set by a 29 member Assembly which is composed of individuals from a fairly broad spectrum of political and economic persuasions. They have received support from a number of foreign sources including the National Endowment for Democracy and the Konrad Adenauer Foundation. Because of the support provided by the Adenauer Foundation, which supports the world-wide Christian Democratic movement, and the presence of several well-known Christian Democrats in its Assembly, ASIES has been characterized and perceived as a Christian Democratic organization. Members of the Assembly and ASIES promotional material disavow this characterization, insisting that there is a broad mix of political/economic opinions represented in their organization. Casual perusal of their membership tends to partially support this assertion.

The level of analysis demonstrated in the ASIES studies is good and the credentials of their members and researcher/analysts are impressive, with a number of individuals who hold or have held high positions in the private sector such as the Minister of Finance and President of the Bank of Guatemala.

CIEN, the Center for National Economic Research, is another private, not-for-profit institution which was established in 1983. Many of the individuals associated with CIEN are also associated, in one way or another, with Francisco Marroquin University. CIEN has a market economy bias and has prepared a number of studies which are primarily of an advocacy nature including a Diagnostic Study of the National Economic Situation contracted by the Coordinating Committee for Agricultural, Commercial, Industrial and Financial Associations (CACIF), a study of land tenure issues contracted by Amigos del Pais, and a study of Guatemala's role in the Caribbean Basic Initiative for a private development group

(FUNDESA). CIEN is also engaged in an ongoing dialogue with members of the Congress to promote free market policies, including preparation of a series of well-presented Reports to Congress on issues such as the Free Trade Zone law, evaluation of the 1988 Budget and the Export Promotion and "Maquila" law.

CIEN is a small organization with a part-time staff which puts together teams of people for specific studies as funding is located. They produce a monthly newsletter which is prepared in non-technical language, with 2,000 copies distributed on a subscription (20 per year) basis. The quality of their work is good although tilted toward a free market bias.

FADES, the Foundation for Analysis and Development of Central America, is a small, not-for-profit foundation which produces a weekly newsletter on timely economic and political issues. It describes itself as subscribing to no particular political/economic ideology although it does favor free market policies and equal access to opportunity. The weekly newsletter, Analysis Economico, was started in 1974 to provide a source of easily understandable information on economic and political issues of interest to the business community. FADES has a companion, for-profit company (COPADES) which produces a monthly in-depth report on economic/political developments in Guatemala which is made available on a limited subscription basis to 29 multinational firms and 15 local businesses. This report service is complemented by a monthly luncheon for subscribers to discuss topics of interest. FADES maintains an economic data bank and basic library. They do no in-depth policy research, but expressed interest in participating in this area if funding were available.

Infopress Centroamericana is another organization that publishes a weekly newsletter by the same name. The newsletter, which covers all of Central America, is published in both English and Spanish and distributed on a subscription and public sales basis. The study team did not meet with them so cannot comment on their capacity or interests.

Universidad Rafael Landivar is a private Catholic university, the second largest (8,000 students) in the country. The university offers programs in most academic fields including economics and agricultural sciences. There

is no present program in agricultural policy analysis or research, although the Faculty of Agricultural Sciences is planning to start a Master's level program in agricultural business and economics which will include courses and thesis research in agricultural policy. Individual faculty members have engaged in agricultural policy studies. A recent example is a "Synthesis of Problems and Prospects and Suggestions for Policy Alternatives for the Agricultural Sector in Guatemala" prepared for the National Cotton Council. The university representatives interviewed expressed great interest in getting involved in agricultural policy research which they viewed as a critical missing element in policy formulation in Guatemala.

Universidad Francisco Marroquin is a private university with approximately 4,000 students. It was founded in 1972 by a group of Guatemalan businessmen. The University is noted for its strong support of free market policies. Starting with an initial fund of \$40,000, the University has grown into an impressive physical plant worth more than \$10 million built with donations from multinationals, local businesses and philanthropists and the U.S. State Department's American School and Hospital Abroad (ASHA) Program.

Marroquin has programs in economics, law, business, architecture, computer sciences and medicine. It is also in the process of raising funds to establish an agricultural college, with a target completion date of 1993. In contrast with other private universities and San Carlos, the new facility will be located outside of Guatemala City, probably on the Pacific coast.

The university's first priority is teaching and academic excellence. Its scholastic requirements are the most stringent in Guatemala. There has been a conscious university policy to down play research, largely because of the lack of sufficient funds to carry out a research program. There is presently no agricultural macroeconomic research carried out at the university although several professors are involved in contracted policy analysis work. A recent example is a study of the impact of tariffs on economic growth prepared for the Chamber of Industry. There is a limited amount of research associated with the preparation of theses for the degree of licenciado in the School of Economics. The university representatives

interviewed expressed interest in getting involved in policy research if additional funds were available.

Universidad Del Valle is a small (1,500 student) private university, with a strong capacity in and commitment to basic and applied sciences. Courses are also offered in the Humanities but there are no courses in economics. The university has a research institute which is quite active in conducting research in the agricultural sciences in collaboration with the private sector. There is no program in policy research, with the university preferring to concentrate on enhancing its strengths in the basic and applied sciences.

San Carlos University is the largest and oldest university in Guatemala, established during the Spanish colonial period. As the only public university in Guatemala, the enrollment is huge with somewhere between 60 and 80,000 students, depending upon how they are defined.

The university offers a wide range of academic programs. Until recently it was the only university offering programs in such fields as pharmacology and orthodontics. It is still the only university offering degree in Zootechnology and Veterinary Medicine.

The College of Economics and Business offers degrees at the licenciatura level in accounting, business administration and economics. In addition, the School of Economics is launching a new master's level program this year in agricultural economics.

The School of Economics also has an Economic Research Institute which has no parallel in the private universities. The range of topics for research is wide. The quality of research reportedly once was fairly good but has declined in recent years with the continued politicization of the university and the bias towards Marxist/Leninist approaches. Some of the research themes deal with policy issues but the team was unable to judge the quality of the research products.

The university tends to be bureaucratic with almost all decisions centered in the Office of the Rector and the Supreme University Council, including

decisions with respect to research topics and funding. The Dean of the Faculty of Economics expressed interest in increasing the agricultural and macroeconomic policy research carried out at the university if funding were available.

There are several private sector organizations such as the National Agricultural Union (UNAGRO), the National Coffee Association (ANACAFE), the National Cotton Council (CNA), the Chamber of Industries, and the Coordinating Committee for Agricultural, Commercial, Industrial and Financial Associations (CACIF) which fund macroeconomic and agricultural policy studies completed by private institutions such as ASIÉS, CIEN or private consulting companies. These studies almost always have a political/economic bias and take an advocacy position. There appear to be a few fairly objective analyses, but these are exceptions to the general tendency to present an advocacy position.

#### **V. ALTERNATIVES FOR MORE ADEQUATE POLICY ANALYSIS**

Over the last decade, USAID has supported over sixty agricultural policy (sometimes mixed with planning) projects. Most all the projects involved enhancing policy analysis capacities, developing human capital and enhancing data bases. With few exceptions the projects were located in Ministries of Agriculture.

There have been many positive results where analytical results have impacted policy changes as incentives to growth, in training both analysts (policy advisors) and policy researchers, in helping to build data bases along with sampling frames and survey capabilities, and in initiating dissemination processes that enhance public knowledge of policy issues. There have been many studies of a fire-fighting or advocacy nature along with more substantive efforts on the consequences of policy changes.

There have been changes in the quality and relevance of policy studies. Unfortunately, the projects have not brought about the hoped for changes in the demand for and credibility of such efforts. The consequence is that most programs have not been sustained after USAID support is terminated.

In Guatemala, USAID's objectives for an effort in agricultural policy analysis are to provide quality information, to sustain such efforts and to assist in enhancing public awareness and participation in the policy decision process. Towards realizing these objectives, the following alternatives were evaluated.

1. A continuation of efforts (by USAID/Guatemala and other organizations) to structure and support collaborative studies on key sectorial problems involving indigenous and external professionals. Such studies have been completed in two to four months, have usually been diagnostic or sector assessment in nature and in some cases have objectively evaluated the consequences of policy changes. There have been such studies in both the public and private sector.
2. Another option would be to collaborate with other donor efforts to strengthen the public sector capacity in USPADA. The Regional Unit for Technical Assistance (RUTA II) supported by Japan, World Bank and IFAD and managed by UNDP has as one objective the enhancement of capacities for agricultural policy analysis within USPADA. Other objectives of RUTA II relate to other related responsibilities such as project preparation, pre-investment capabilities, project monitoring and budget preparation and review.
3. Continuing in the public sector, an alternative would be to fortify the Economic Studies Department of the Bank of Guatemala. This department focuses on some inter-sectorial policy issues impacting agriculture but does not have a strong agricultural sector analytical capacity.
4. There have been discussions on establishing a policy analysis capacity within the Ministry of Finance but the focus there is on fiscal policy and implementation of public sector investment.
5. The study team explored the adaptation of the Bolivian public sector model to Guatemala conditions. The unit in Bolivia, UNIDAD DE ANALISIS DE POLITICAS ECONOMICAS (UDAPE) serves as a substantive policy analysis unit for inter-sectorial and sector policies in sup-

port of a public sector group similar to the Monetary Board. This has the advantage of concentrating policy analysis in a single well supported unit.

6. In the public and private sector there are three universities (Rafael Landivar, San Carlos and Francisco Marroquin) with varying capacities for policy analysis. All have economics departments and two are initiating graduate programs in agricultural economics. There is one private university offering a Master's Degree in Economics.

With full-time teaching responsibilities and limited experience in, as well as support for, policy research, there have not been many research studies of an objective nature relating to agriculture. In discussions with university colleagues, there is a definite interest, but they admit there are limited numbers of professionals with research experience in agricultural policy studies and particularly those that evaluate the consequences of policy changes.

Clearly the number of qualified professionals is limited but the interest and opportunities for more research with an agricultural focus do exist. The existence of opportunities to carry out policy research would be expected to attract more M.S. degree students and in turn increase professional capacities in economics.

The alternatives for creating an enhanced policy research capability are contract research, an endowment of professorships or the endowment of a center or institute for agricultural economic policy analysis. The endowment options more clearly address the sustainability concerns.

7. Also, in the private sector, there are various foundations or centers (FADES, CIEN, ASIES, INFORPRESS, MOLINA WOOLFORD ASSOCIATES, COPADES, etc.). These institutions produce regular economic and political reports, sponsor forums and workshops, produce primarily advocacy type books and reports, and in many cases provide a source of policy analysts or advisors for public decision makers.

These institutions are supported by private patrons, the sale of regular publications, grants from external sources, membership fees and occasional research contracts with public and private institutions.

In addition, there are a number of private consulting firms which undertake studies on policy issues as contracted by public or private entities.

The relatively scarce economic research talent in Guatemala is spread among these private institutions and private consulting firms. Many such professionals are also associated with universities.

Many of these units also have considerable investments in libraries, data banks, computer centers, and printing as well as distributional capabilities.

8. The team has had experiences with agricultural policy analysis activities in Ecuador and Peru.

In Ecuador, a private policy analysis foundation has been established with USAID support. As part of that project, support continues for a policy analysis unit and an information system in the Ministry of Agriculture. The USAID mission is also exploring more direct linkages with the Central Bank.

In Peru, there has been a strong analytical unit developed with USAID support but like most projects the effort has collapsed as the project terminated. However, in an effort to salvage the policy capabilities in Peru, a new foundation almost became a reality. The basic concept was to support a group of six to eight professionals, one or two of whom would also serve as policy analysts to the Minister of Agriculture. There were also plans for scholarships and research support including computer, printing and dissemination capabilities. The assigned professionals were already employed as public and private university professors and in some cases were employees of the public

agricultural research institute.

The activities in both Ecuador and Peru offer concepts and expectations for Guatemala.

9. Another option that emerged in our consultations focused on support for a policy analysis unit associated with the legislative body of the government of Guatemala. This is a common model in many European countries as well as in the U.S.

Such analysis units are structured with a group of analysts or advisors, a group of policy researchers and adequate support for data banks, computer, and publication and dissemination activities. In most cases there is also an internship program linked to graduate educational institutions.

## **VI. RECOMMENDATIONS:**

### **A. AGRICULTURAL POLICY ANALYSIS**

Based upon a series of interviews with individuals and institutions in both the public and private sectors (see Appendix 1) and review of a select number of policy and program documents, the study team concluded that:

- the policy analysis and research capacity in Guatemala is very weak, especially in the public sector,
- policy analysis in the private sector, though of superior quality, is frequently of an advocacy nature, and
- there is a growing awareness of and demand for improved policy analysis and research to better inform and guide the policy formation process for the agricultural sector, including macroeconomic policies which impact on the sector.

The study team sees a clear need for an improved capacity within the public sector to provide timely policy advice and analysis (by policy analysts rather than researchers) to help address the never-ending set of urgent policy problems and choices that confront public decision makers. There is

also a clear need to support policy researchers for more serious longer term policy research that provides a more objective basis for policy dialogue and formation. Finally, the team sees the need to develop an enhanced human capital base and to explore new approaches and mechanisms to help assure the sustainability of any efforts that may be undertaken to improve in-country policy analysts and researchers.

Within this context the team believes that the following alternatives merit further exploration by USAID/Guatemala:

1. Improve policy analysis and advice in the public sector.

a. Strengthen the Economic Studies Department (and/or the Department of Agricultural and Industrial Research) of the Bank of Guatemala to enhance its capacity to monitor the impact of macroeconomic policies on the agricultural sector, including agro-industry, agricultural services, commerce, finance, etc. The Department should also develop the capacity to undertake in-depth analyses of policy issues identified as problems by the monitoring process. This could involve the hiring of two additional policy researchers for either Department whose time would be devoted to analysis of the consequences of changes in macroeconomic policies as they relate to the agricultural sector and similar analyses for selected policy options within the sector itself. Funding could also be provided for improving the Bank's agricultural data bank and for support functions for the two researchers.

b. Strengthen the role of policy analysts to provide advice to the Minister of Agriculture so that he/she can play a more active and influential role in the deliberations of the Monetary Board. This could involve providing funding for two part-time policy analysts, one full-time equivalent, to review issues on the agenda of the Monetary Board, assess their potential impact on the agricultural sector and advise the Minister of positions he should take on the issues. The policy advisors would be responsible for developing a policy calendar for the agricultural sector which identifies upcoming events requiring policy decisions by the Minister such as changes in the rate of exchange, announcement of price support levels, tax policies, importation of basic grains, credit allocations by

BANDESA, etc. Funding could also be provided to develop sources of knowledge (internal and external professionals, libraries and institutions) that have a previous history of research in priority policy areas, to facilitate access to the transfer of such knowledge, to hire short-term consultants (such as through IICA) to prepare analyses of upcoming policy issues, and to link policy advisors with the other policy analysts and researchers suggested in other sections of the report. Modest long- and short-term foreign technical assistance could be provided to help build this capacity within the Ministry of Agriculture.

It would be preferable to establish this capability within the Office of the Minister rather than USPADA to avoid over-extending USPADA's already fragile capacity, allowing it to concentrate on planning, programming and budgeting -- all important and demanding functions. The location within the Office of the Minister would allow employment of top flight professionals who would have continual access to the Minister as policy issues arise.

In order to put these two public sector activities on a self-sustaining basis, the team recommends that USAID/Guatemala explore the possibility of negotiating an agreement with the Government of Guatemala to use E.S.F. funds to establish a long-term or perpetual trust fund within the Bank of Guatemala with earnings, after assuring maintenance of value, from the fund being used to support the two units. The Team estimates that a trust fund of approximately \$800 thousand to \$1 million would be needed to generate the earnings required to support each of the proposed public sector choices, or a total of \$2.5 to \$3 million. A representative of the Ministry of Finance indicated that establishment of such a trust fund would be legal and feasible but that earnings from the trust would have to be run through the annual public sector budget. While an inconvenience, that does not appear to be a major obstacle to providing a continuing source of support for the units.

2. Improve the policy research capacity within the private sector.

a. Establish an agricultural policy research division within the Association for Research and Social Studies (ASIES). The division would be

responsible for monitoring the impact of macroeconomic and sectorial policies on the agricultural sector. The division would also undertake in-depth policy research (again with an emphasis on estimating the consequences of policy changes on objectives) on critical sectorial issues identified in annual (or biannual) agricultural policy seminars (or from a process described in section VI) involving key participants from both the public and private sectors.

Assistance could be provided for funding two or three policy researchers, expansion of the ASIENS agricultural data bank, development of an economic policy analysis journal, and administrative support for the researchers. Funding could also be provided for short-term foreign technical assistance to work with the policy researchers on establishing and carrying out a policy research agenda.

ASIENS is proposed as the host institution for an agricultural policy research activity rather than other alternatives such as CIEN, FADES or one of the local universities because of its clear, long standing commitment to quality research, the training and experience of its professional staff, and its impressive record in carrying out studies and hosting public forums to discuss critical domestic policy issues.

The team also considered the alternative of suggesting that USAID/Guatemala provide support for the creation of a new, independent Foundation or Institute to carry out policy research in the private sector. This alternative would have the advantage of not being perceived as the captive of any local political party (as might be the case with ASIENS), but conversely would bear the imprint of a U.S. creation. It would be possible to seek other support, both within and outside of Guatemala, which would lessen the perception of the new organization as a U.S. creation. However, this would require a major effort which the team judged difficult to justify. The advantage of fortifying an existing organization like ASIENS is that they have a competent professional staff in place, a history of policy advising in the public sector, a good computer capability and library, an experienced administrative structure, a commitment to quality work and a proven record in carrying out policy studies and hosting public forums on national and sectorial issues. These factors were persuasive in

leading the team to recommend establishing a policy research division within ASIES.

b. Strengthen agricultural policy analysis training and research in the domestic university community.

Consideration should be given to establishing endowed chairs in agricultural policy research in one, two or all of the following universities -- Rafael Landivar, San Carlos and/or Francisco Marroquin. The team saw some difficulty with trying to establish an objective policy research capacity in San Carlos and Francisco Marroquin which have clear ideological biases. Rafael Landivar presented an attractive option because it appears to be less biased toward a particular economic or political position. At the same time, the team saw value in strengthening policy research at all three institutions to allow for a more informed national dialogue on policy issues. The question of possible assistance to any or all of the universities mentioned requires further exploration.

A program of assistance to the university community through endowed chairs could provide for a salary level high enough to attract and retain a highly qualified policy researcher, funding for graduate assistants, data processing costs, domestic travel and other support costs. Funding could also be provided to establish linkages with one or a consortium of U.S. universities to provide continuing short-term technical assistance to help develop and implement a policy research agenda.

The team recommends that consideration be given to negotiating an agreement with the Government of Guatemala to use E.S.F. funds for a direct transfer to ASIES (and the participating universities if such a program is pursued) to establish an endowment fund with the annual earnings to be used to fund a set of agreed upon activities. A representative of the Ministry of Finance indicated that such a direct transfer under an international agreement would be legal and feasible. The team estimates that such a grant to ASIES could be on the order of \$2 to 3 million. Endowment of a university chair in agricultural policy research could run about \$1 million per chair. If the concept of establishing an endowment for ASIES and

perhaps Rafael Landivar appears attractive, the team recommends that consideration be given to attempting to negotiate such an agreement with the GOG within the next few months before "lame duck" status interferes with this Administration's willingness or ability to pass favorably on such an arrangement. The fact that the present Minister of Finance and President of the Bank of Guatemala are members of ASIIES suggest that they may be favorably disposed to such a proposal.

3. Improve policy dialogue between the public and private agricultural sectors.

a. An option that might be explored further would involve building upon the present Private Sector Consultative Committee to the Minister of Agriculture to establish a National Agricultural Council which could be modeled after the National Council for Promotion of Exports (CONAPEX) with participation of key leaders from the private and public sectors. If such a Council were to be established, consideration could be given to creation of an Executive Secretariat with a strong policy analysis capability, somewhat like the UDEPA model (see Section V) in Bolivia. Funding could be provided for employing policy analysts, establishing an agricultural data bank and other administrative support costs. Funding could also be provided for short-term foreign technical assistance in developing an agricultural policy analysis capacity within the Executive Secretariat.

Sustainability could be assured by including this activity under the trust fund arrangement proposed for the public and private sector activities as discussed in Section VI.

The team was not able to assess the extent of interest in or support for such a public/private council but believed that the increased opportunity for policy dialogue and policy analysis provided by such an organization justified further investigation.

b. Whatever vehicle(s) may be selected for improving agricultural policy analysis and research in Guatemala, a strong continuous effort should be made to seek and support opportunities for airing key policy issues in public forums utilizing high quality, in-depth analyses. Such

open policy dialogue is essential to the establishment of a policy environment which promotes broad based economic and political development.

The team explored several other alternatives including assistance for policy analysis in the Congress, establishing an agricultural policy analysis and research capability in the General Secretariat for Planning, and strengthening policy analysis capacity in the Union Nacional Agropecuario de Guatemala (UNAGRO), the Nacional Agropecuario de Guatemala (UNAGRO), the National Coffee Association (ANACAFE), and/or the National Cotton Council. In the final analysis they did not seem as feasible or promising as the alternatives suggested above.

## **B. THE INFORMATION SYSTEM**

As described in previous sections of this paper, the extent and quality of the basic agricultural data base is very suspect. Clearly, because of restrictive fiscal policies and other reasons the data base has deteriorated.

There is a temptation to suggest a substantial effort in this area. However, there are some activities underway with support from various donors and there is a need to further assess the array of existing activities in more depth than was possible during the team's visit.

On-going and new initiatives on the data bank include activities in the macro area with USAID-PPC, the possibility of assistance under a new RUTA II project, some initiatives associated with the agricultural sector assessment underway with BID support and some recent initiatives to support data bank improvement within the National Institute of Statistics. It is recommended that these activities be more thoroughly evaluated before taking any action.

In some of our conversations, it was pointed out that the country has a reasonably good agro-climatic network. This activity is in another ministry but at present there is little coordination with components of the Ministry of Agriculture.

As in many areas of the Ministry of Agriculture, the salary conditions, instability and the lack of career opportunities prevents the retention of qualified information system personnel. The suggested course of action on an enhanced basic data bank (farm and market prices, areas planted, yields, land use, labor use, etc.) is to carefully evaluate the data system and human resource capabilities in the National Statistical Institute. The team was informed that within the Institute, there was a sampling frame capability and regular periodic surveys were being conducted on the basic data set described above. There may be opportunities to enhance the scope, timeliness and quality of this unit in the Institute.

Another possibility on the basic data set is to assess possibilities with private producer and agri-business associations. It is our impression that these groups have taken actions to improve the basic data bank. Given the advocacy nature of these associations, there may be questions on the authenticity of such data sets, there are also the issues of data banks as a public good and responsibility, and the private nature of such information.

However, this private sector source of basic data as well as activities going on in the National Statistics Institute should be thoroughly assessed. In both cases the cost of acquiring continuing access to such data banks may be substantially less than an enhancement program with components of the Ministry of Agriculture. The key advantage in both of the above institutions may be the availability of highly qualified personnel (statistical and survey skills) and the availability of operative computer systems.

If the private sector source for a basic data set is judged to be of high quality and continually updated, consideration should be given to contractual mechanisms for acquiring data sets not now available. This may be the case with data for many basic grains and non-traditional horticultural commodities.

Another basic information system recommendation relates to the enormous scope of data required for agricultural policy analysis. In many cases it

is uneconomic to develop and maintain extensive but infrequently used data sets. This suggests that many policy analysis research activities will require support for specialized surveys using modern survey and sampling techniques. There are economies associated with such specialized data collections. Some examples would include domestic and international prices for potential export options, the data base for estimating damage functions relating to environmental evaluations, estimating labor and capital substitution rates, assessing nutritional levels, estimating relationships associated with public food distribution schemes, etc.

The general recommendation relating to specialized data needs would be to incorporate support funds within special contractual studies or into the scope of endowment developments.

### **C. THE AGRICULTURAL POLICY RESEARCH AGENDA**

There are two recommendations relating to the research agenda; one on the criteria, including a process for establishing the agenda, and suggestions on the research agenda itself.

#### **Criteria and Process:**

An acceptable criteria for choosing the near term research agenda would be to focus on problem areas currently identified as constraints to developmental objectives. This is particularly desirable when there is not a history of objective policy research.

The GOG has identified at least five priority programs that include irrigation, diversification, food security, natural resources and land tenure. Within these broad program areas, the criteria for choosing the policy research agenda might focus on a consensus of what are the present policies that are major dis-incentives to further growth.

Another criterion relating to the development of a medium-term research agenda could emerge from a close monitoring of the consequences of macro and sectorial policies now in place. Such monitoring would try to identify where present policies are stimulating growth rates and where they appear

to be obstacles to growth.

A near term and medium-term research agenda could also emerge from forums or workshops allowing for an exchange of views on priority policy options or constraints. Such forums should offer opportunities for professional economists, politicians, agri-business and agricultural producers to meet separately and then collectively to focus on policy incentives and disincentives. As a supplement to this process, consideration should be given to a well designed survey to solicit opinions from both the public and private sector.

The process for establishing the research agenda should not be dominated by the immediate or short-term interest of politicians and groups with vested interests. The exchange of views should be encouraged among decision makers within public and private institutions as well as between the public and private sectors.

#### **Research Agenda:**

Over the two week period of interviews and report reviews, there emerged some consistent ideas on immediate areas for policy research. There were agenda ideas on both inter-sectorial and sectorial policy issues.

At the inter-sectorial level the ideas focused on:

1. The effects of a continued overvalued exchange rate on agricultural growth. The issue focuses on knowledge of changes in the real exchange rate (relative prices of export products to prices for domestically consumed products), on a more complete characterization of value added by subsectors in agriculture, levels of protection and related issues that have important consequences on real agricultural growth rates.
2. The effects of further changes in fiscal policies including tax and tax exoneration policies on agricultural investments and government deficits were a frequent theme. These issues are related to the

investment climate, distributional concerns, and among others, agreement on structural adjustments as related to external debt.

3. Another set of issues relates to credit policies. What are the consequences of expected changes in interest rates, reserve ratios and the setting of credit ceilings on inflation and on agricultural growth?
4. A frequent theme centered on trade policies. There are at present policies that restrict some exports (basic grains, cattle, lumber, etc.) and there is limited knowledge of the consequences of changes in such policies. Associated with this issue is the poor state of knowledge on domestic resource costs, levels of external protection, international prices and marketing requirements for effectively competing in international trade.
5. The team also participated in discussions on employment issues. Open unemployment was estimated at 10 percent while under-employment estimates ranged from 30 to 40 percent. There are issues of the minimum wage as a ceiling on rural wage levels, incentive policy options for increased rural farm and non-farm investment and employment levels, and among others the possibility for emergency public investments to trigger employment (particularly related to infra-structural investments) and rural growth.
6. In many discussions, there was an expressed need for greater analysis of demand relationships. Greater knowledge of such relationships on internal food consumption and for the demand for major agricultural inputs was frequently discussed.

At the sectorial level, policy discussion focused most frequently on:

1. The reality of low productivity levels for basic grains and some major exports. There are related policy issues on incentives for both public and private technology generation and transfer activities. In turn, there are important relationships between productivity changes and natural resource degradation, to the assumed need for greater

irrigation investments, and to employment options. A closely related issue is the effect of policy changes on alternatives for enhancing the rate of technological change in agriculture.

2. There were many discussions on diversification and marketing issues. There was general agreement that export growth from non-traditional crops was impressive and important, but an inadequate source of overall growth.

Many expressed the serious need to evaluate alternatives for expanded exports and an assessment of present policies that act as disincentives to expanded export growth. There was a need for knowledge of the consequences of tax policies on non-traditionals and current restrictions on basic grain, lumber and cattle exports.

Some discussions also focused on the need to evaluate policy constraints and incentives on non-agricultural diversification options.

3. The relatively large investments in irrigation as a source of growth in agriculture raised many policy related issues. Some dominant ones were water value and pricing, options for recuperating some of the large public investments, incentive policies for more efficient water use and policy choices for maintaining the value of previous investments. Some closely related issues focused on the complementarity of irrigation investments to rural electrification, tourism and the concentration of infrastructural investments.
4. There appears to be a growing concern for environmental degradation. The policy choices are associated with population growth rates, pesticide and chemical use, disincentives for reforestation (tenurial requirements, forest product export constraints, etc.) as well as with productivity increases for both agricultural and forestry products.
5. On the issue of food security, there were discussions on the growth consequences of self-sufficiency goals, on the levels of dependency on food imports, the complementarity of productivity changes in basic food crops and non-traditional exports, the inefficient use of public

storage capacities and the appropriate role of government in stabilizing basic grain prices.

6. On the issue of land purchase and sale or land redistribution we listened to many discussions. We also reviewed a number of advocacy reports on the subject. This is a very sensitive area but like most such areas it is difficult to locate objective studies on the consequences of policy and investment alternatives.

As expressed throughout this paper, there are policy analysis requirements that complement immediate decision processes as well as more substantive studies that guide future policy choices.

## Appendix 1

### PERSONS CONTACTED

#### USAID/Guatemala

Anthony Cauterucci, Mission Director  
Steve Wingert, Deputy Mission Director  
Sam Skogstad, Chief, Office of Economic Analysis  
Gordon Straub, Chief, Office of Rural Development  
David Adams, Chief, Program Office  
Felipe Manteiga, Chief, Private Sector Office  
Tom Kellerman, Program Office  
Brian Rudert, Office of Rural Development  
Roberto Castro, Office of Rural Development  
David Hoeschler, Office of Economic Analysis  
Rosario de Reyes, Office of Economic Analysis  
Ron Curtis, Chief, Office of Agriculture, ROCAP  
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#### ASIES

Raquel Zelaya, Presidente, Junta Directiva  
Arnoldo Kuestermann, Secretario Ejecutivo  
Carlos Gonzales Arevalo, Asesores Economicos  
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#### CIEN

Pablo Schneider, Presidente

#### FADES

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GREMIAL DE EXPORTADORES A PRODUCTOS NO TRADICIONALES

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Ministerio de Agricultura

Carlos de Leon Prera, Ministro  
Carlos Morales, Asesor

SEGEPLAN

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Rolando Tobar, Coordinador Nacional  
Rudy Villatoro, Jefe RUTA II

## Appendix 2

### Selected Data Sets

Table 1: Real GDP Growth Rates 1970 to 1988 (1958 prices)

Years	Real GDP	Real GDP Per Capita	Real GDP Agriculture
1970	5.72	0.00	5.83
1975	1.95	0.00	2.48
1980	3.74	0.00	1.58
1985	-0.61	0.00	0.26
1986	0.14	-2.70	-0.79
1987	3.13	0.21	3.59
1988	3.99	1.03	2.95

Sources: 1970/84, MEMORIAS DE LABORES, Banquat.  
 1980/84, MEMORIAS DE LABORES, Banquat.  
 1985, ASPECTOS MACROECONOMICOS DEL SECTOR AGROPECUARIO, Depto. de  
 Investigaciones Agropecuarias e Industriales, Julio 1986.  
 1970/79, ESTADISTICAS DE LAS CUENTAS NACIONALES DE GUATEMLA,  
 Banquat.

Table 2: Gross Domestic Product by Sector 1970 to 1988 (in thousands of 1958 Quetzales).

Years	Agriculture	Manufacturing	Construction	Trade	Government	Other
1970	490	283	28	518	87	387
1975	660	356	44	649	118	526
1980	772	517	98	839	163	718
1985	750	467	49	745	191	723
1986	753	468	51	731	199	738
1987	780	476	57	749	209	761
1988	803	487	67	772	215	794

Source: BOLETIN ESTADISTICO, Banquat, January-March/77, July-September/77,  
 July-September/86, October-December/87.

Table 3: Real GDP Growth Rates by Sectors 1970-1988.

Years	Agriculture	Manufacturing	Construction	Trade	Government	Other
1970	5.83	3.66	-3.45	7.69	4.82	5.45
1975	2.48	-1.66	15.79	-1.07	11.32	4.78
1980	1.58	5.51	4.26	1.70	10.88	5.74
1985	-0.92	-0.21	-9.26	-3.75	1.06	1.40
1986	0.40	0.21	4.08	-1.88	4.19	2.07
1987	3.59	1.71	11.76	2.46	5.03	3.12
1988	2.95	2.31	17.54	3.07	2.87	4.34

Source: BOLETIN ESTADISTICO, Banquat, January-March/77, July-September/77, July-September/86, October-December/87.

Table 4: Annual Inflation Rates 1970 - 1988.

Years	Average Percentage Rate
1970	2.4
1975	13.1
1980	10.7
1985	18.5
1986	37.2
1987	9.6
1988	12.3

Source: Instituto Nacional de Estadística (INE)

Table 5: Exchange Rates 1970 - 1989.

Years	Official <sup>1/</sup> Rate	Market <sup>2/</sup> Rate	Parallel <sup>3/</sup> Rate
1970	Q 1.00	Q 1.00	N.A.
1975	Q 1.00	Q 1.00	N.A.
1980	Q 1.00	Q 1.00	Q 1.00
1985	Q 1.00	Q 1.00	Q 2.96
1986	Q 1.00	Q 2.50	Q 2.64
1987	Q 1.00	Q 2.50	Q 2.52
1988	Q 1.00	Q 2.70	N.A.
1989	Q 2.78	Q 2.78*	N.A.

Source: modelo MWA, Molina Woolford y Asociados, S.A.

- 1/ Official rate for payment of external debt signed before the Programa de Reordenamiento, June/86.  
 2/ Market rate for commercial transactions and debt payments signed after the Programa de Reordenamiento, June/86.  
 3/ Parallel rates for all other transactions. It is also known as "Mercado Bancario buy rate" or banking buy rate).

NOTES: On June 23, 1988, the different exchange rates established since 1986 were converted to one single rate of Q.2.70 x US\$1. However, for external debt payments the exchange rate continued to be Q1.00 x US\$1. No real economic consequences were expected from these two exchange rates.

\* On August, 1989, the government changed the exchange rate from Q.270 x US\$1.00 to Q.2.78 x US\$1.00 for all transactions.

Table 6: Structure and Value (CIF) for Guatemalan Imports, 1983 - 1988.

Economic Group	1983	1984	1985	1986	1987	1988
Consumption goods	235	264	225	159	254	250
Raw materials	604	677	622	494	672	725
Intermediate goods						
Combustibles and						
Lubricants	113	131	121	94	105	117
Construction Material	60	56	50	39	73	74
Machinery/Equipment/ Tools	115	147	154	174	343	369
Others	8	3	3	0	0	1
Total	1,135	1,278	1,175	960	1,447	1,536

Source: SEGEPLAN, Bank of Guatemala.

Table 7: Type and Value of Guatemalan Exports (F.O.B.) 1983 - 1988.

Commodities	1983	1984	1985	1986	1987	1988
	----- (US \$ millions) -----					
Coffee	309	360	452	502	355	385
Cotton	67	72	73	24	16	27
Sugar	95	71	46	52	51	60
Banana	54	55	71	74	75	101
Meat	16	13	10	4	14	17
Others	230	269	200	204	236	334
Central American Common Market	321	291	208	185	231	140
Total	1,092	1,132	1,060	1,045	978	1,164

Source: SEGEPLAN, Bank of Guatemala

Table 8: Yield Comparisons for Principal Crops in Guatemala and Selected Countries, 1985-1988.

Commodities	Experimental Demonstration		Average Yields	Other Countries	
	Yields	Yields		Yields	Country
	----- (kg/ha) -----				
Corn	5220	3900	1650		
Bean	2270	1270	623	1620	USA
Wheat	2340	1980	1640	1174	CHILE
Rice	5590	3800	2150	2300	ARGENTINA
Sorghum	5500	3450	2083	5315	USA
Coffee	2230	2000	635	3423	MEXICO
Cotton	3230	-	1304	5400	USA
Banana	600	550	515	3500	MEXICO
	----- (metric tons) -----				
Sugar	95	85	78	100	BRAZIL

Source: Various sources in ICIA, Bank of Guatemala, Annual FAO Yearbooks and others.

Table 9: Employment and Unemployment in Guatemala, 1980 to 1988.

Description	Years									
	1980	1981	1982	1983	1984	1985	1986	1987	1988	
	(000's)									
Total Population	6,917	7,113	7,315	7,524	7,740	7,963	8,163	8,399	8,643	
Economically Active Population	2,183	2,251	2,307	2,371	2,438	2,506	2,576	2,648	2,722	
Employed	2,136	2,218	2,169	2,135	2,216	2,210	2,215	2,328	2,461	
Unemployed	47	33	138	236	222	296	361	320	262	
Underemployed	633	701	701	701	767	767	767	839	914	
	( % )									
Employed	54.5	54.5	54.2	54.0	53.9	53.7	53.6	53.4	53.0	
Unemployed	2.2	1.5	6.0	10.0	9.1	11.6	14.0	13.1	9.6	
Underemployed	29.0	31.1	30.4	29.6	31.5	30.6	29.8	31.7	33.6	

Source: CEPAL.