IICA | SUSTAINABLE DEVELOPMENT OF AGRICULTURE | SERIES

TOWARD THE SUSTAINABLE DEVELOPMENT OF AGRICULTURE AND THE RURAL MILIEU

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"Any country's agricultural sector is sustainable if it is competitive and profitable enough to provide a sound footing for the nation's economic stability. It is sustainable if it provides a means for workers and small-scale entrepreneurs in the sector to improve their lives. It is sustainable if it closes the gap between urban life styles and rural life styles and improves the access of rural populations to basic social services. It is sustainable if levels of technology are rising and the sector interacts more closely with industry and trade, so that the return on human effort and natural resources surpasses that available through primary production alone. And of course it is sustainable if it can preserve natural resources over the long term."

Jose Maria Figueres
Agriculture: Lifeblood for the Future of the Americas, 1995

FOREWORD

When the countries of the region plunged into the foreign-debt crisis of the early 1980s, they found themselves compelled to take a new look at development strategies and reform their economic policies and institutions, encouraging the markets and the members of civil society to play a more active role in the allocation of resources.

All over the world, these liberalization policies have been characterized by three processes of great significance. First, the countries undertook a round of negotiations to liberalize world trade, which included agriculture for the first time, and which concluded with the GATT Agreement of 1994 (Uruguay Round). In the second place, rapid progress is being made in giving an international dimension to economic phenomena as part of the process of globalization of the world economy. Finally, given the new political landscape, ideological confrontation has given way to efforts by the nations to make production and trade more competitive. This led to the dynamic emergence of processes to expand markets and integrate their economies.

Agriculture in the Americas has seen significant changes in the environment in which it develops, and it is now at a crossroads in the sense that its current role and its traditional vision have become inadequate.

The Inter-American Institute for Cooperation on Agriculture (IICA) is concerned with the need to redefine the role of agriculture in accordance with the deep-running transformations in international and national scenarios as the twentieth century draws to a close. On the occasion of the Eighth meeting of the Inter-American Board of Agriculture (IABA), attended by the highest authorities of the sector from all over the hemisphere, it sponsored a technical forum where participants were encouraged to consider and analyze the need to rethink the role of agriculture within the new model.

This document is a compilation of the technical materials that IICA prepared for the deliberations, as well as the results of the discussion. The publication is intended as a first step toward a process of deeper reflection and analysis so that the hemisphere's agriculture can strike a more favorable position better as we enter the new millennium, and will

contribute more efficiently to the task of development for the countries, and particularly, for the rural environment.

Carlos E. Aquino González
Director General

INTRODUCTION

During the last two decades of this century, the world has undergone profound changes in almost all aspects of life, especially in the political, economic and technological realms. The overall context in which the production, storage, distribution and consumption activities of the agri-food and agroindustrial sectors take place has been transformed, both within the countries and in relations among countries.

In Latin America and the Caribbean, these two decades have been marked by the most profound changes since World War II, with national economies going through a sequence of crisis, stabilization programs and structural adjustment. The external debt crisis of the early 1980s brought an end to the industrialization/import-substitution model, which had been the basis of development strategy during the post-war period. Stabilization programs sought to halt the effects of the crisis and restore macroeconomic balances as a requirement for economic recovery. Economic reform programs seek a new development strategy to bring about structural changes that will make it possible to generate sustained economic growth and enable the countries of the region to participate more fully in the new international context.

Under this new development strategy, the countries must bring about changes in production and enhance their competitiveness if they are to participate more effectively in international markets. To this end, they have implemented reforms to liberalize domestic markets, opened up their economies to international trade, re-defined the roles of the state and civil society, and negotiated integration agreements intended to expand markets and introduce disciplines and regulations for improving the transparency of market operations.

Also, progress has been made in the search for a new social consensus for addressing problems related to inequity, the use of natural resources and good government, which must be solved if the process is to continue and move beyond merely restoring and consolidating macroeconomic balances.

This context of profound economic, social, political and technological changes has exerted a severe impact on agriculture. The rules of the game that govern the sector's development have changed substantially, as have the factors that determine its performance. At the same time, in general terms, there has been a decline in the perceived importance of agriculture.

IICA is clearly aware of the challenges the new circumstances pose for agricultural development and firmly convinced of the need to analyze and evaluate agriculture from a new perspective and with innovative instruments. It therefore wishes to foster a process of reflection throughout the hemisphere on the role of agriculture in the new development model and support an effort to re-assess the importance of the sector and its current and future contributions to society in the countries of the region.

In the first place, IICA prepared a number of basic documents and took advantage of the Eighth Regular Meeting of the Inter-American Board of Agriculture (IABA), its governing body, to hold a forum for a high-level discussion on the sustainable development of agriculture and the rural milieu in the Americas.

The topic was addressed in different sessions of the IABA meeting and in a Ministerial Forum, chaired by the President of the Republic of Costa Rica, the host country of the meeting.

Given the importance of the topic, the level and qualifications of the participants and the conclusions reached, IICA decided to publish this book, which can serve the countries as reference material as they redefine roles and strategies for the development of their own agricultural and rural sectors.

This book is divided into four sections. The first presents the technical and policy dimension and includes the most important messages of the speeches delivered during the inaugural session of the Eighth IABA meeting. The role of agriculture in the hemispheric integration process, the need to define a positioning strategy, the importance of agriculture in the economies of the countries, and the principal challenges faced by the sector are the key points of this technical and policy dimension.

The second section takes a backward look at agriculture's role in the development models pursued in Latin America and the Caribbean, especially as regards the treatment of the sector under the import-substitution model, and the principal implications of same. It also analyzes how agriculture is dealt with under the new macroeconomic policies, comparing them with the evolution of the sector since 1982 and concluding that the observable trends should be a matter of concern. This is followed by a description of the principal characteristics of a broad vision of agriculture, an explanation of the reasons why it has been difficult to expand inter-sectoral linkages and an appreciation of this

situation in the new macroeconomic context. Lastly, on the basis of the trends identified, an attempt is made to visualize the vision and mission of agriculture in the year 2020.

A number of questions are posed in the third part of the book to determine the role played by technical cooperation in bringing about sustainable development in agriculture, for example: Why should we adopt a new approach to agriculture? What is the goal of this new approach and what does it consist of ? What do we need to do to develop this new approach? Answers to these questions are offered, reflecting IICA's institutional vision. Then, ideas are proposed on how the institutional vision can be translated into guidelines for the Institute's technical cooperation activities in the countries of the region.

The fourth and final part of the book consists of the rapporteur's report on the Ministerial Forum "Agriculture in the Americas on the Eve of the Twenty-first Century," in which the ministers of agriculture of the member countries of the inter-American system discussed the challenges facing the sector on the threshold of a new millennium, as well as policy guidelines for meeting them.

PART I

THE TECHNICAL AND POLICY DIMENSION

CURRENT PROCESSES AND THE HEMISPHERIC AGENDA FOR AGRICULTURE[1]

Carlos E. Aquino González

I would like to share with you some thoughts on the most important processes taking place in the setting in which agriculture in the hemisphere will develop in coming years. I also want to share with you some of the key actions that should be on the working agenda for agriculture throughout the Americas, if we are to respond effectively to the challenges posed by integration, globalization and sustainable development of agriculture and rural areas.

The Focal Point: Hemispheric integration

Hemispheric integration is a process of key importance because it is increasingly becoming the axis around which the principal economic interests and the development of our countries revolve. The creation of the Free Trade Area of the Americas (FTAA), which will gradually eliminate barriers to trade and investment by the year 2005, will give a boost to the hemispheric integration process already under way as a result of subregional and bilateral agreements now in effect.

As we approach the twenty-first century, we are witnessing the construction of a hemisphere-wide system of production and trade, the flow of capital and technology, the exchange of knowledge and information, and the shared needs and opportunities of groups of countries and the entire hemisphere. Hemispheric integration is an organic process because it has the political support of the countries and is built on the results of structural adjustment, which provide a solid foundation for maximizing the potential benefits.

Hemispheric integration is also a comprehensive, viable and sustainable process because, as the twenty-first century draws to a close, a new style of economic and social development is taking shape. Economic development will be based on the opening and integration of economies, deregulation and liberalization, a government whose job is to

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[1] Based on the address delivered by Mr. Carlos E. Aquino, Director General of the Inter-American Institute for Cooperation on Agriculture (IICA), during the Inaugural Session of the Eighth Regular Meeting of the Inter-American Board of Agriculture.

regulate and promote development, and a more important role for the private sector.

The countries are basing their social development on democratization and plurality in their societies, on the struggle against poverty and efforts to incorporate the most disadvantaged sectors of the population (women, children, young people and indigenous groups) into the mainstream, on educational reform and training, on health and good nutrition, on hard work, and on the conservation of natural resources and the environment with the aim of ensuring productive use in the future, and on the struggle against corruption, smuggling and drug trafficking.

In the Americas, agriculture is part and parcel of this process, and the time has come to view the agricultural affairs of any given country from the perspective of inter-American integration, a process which is creating a hemispheric system made up of many interdependent elements. It calls also for an inter-American view of agriculture.

Change and Leadership in Agriculture

As agriculture's role and importance in these processes grows, so must the role of the sector's leaders and other participants. To begin with, they should play an active part in negotiations to establish the rules of the game and general policies; in the offices that prepare and store the technical arsenal to support their arguments and contributions; and in the countryside and in the economy, where the most important efforts are made to make agriculture more competitive.

When we hear, or even say, that agriculture is declining in importance, that it is losing ground, I submit, Mr. President, honorable ministers, friends and colleagues, that, if this is true, it is because we are allowing it to happen. Today, however, we have noticed how all those involved in agriculture throughout the Americas, from agricultural leaders to farmers, are doing their utmost to translate into concrete actions the ofte-lauded "agricultural priority," which is preached everywhere, but which often contrasts with the facts.

A Renewed Approach to Agriculture

We contend that not only has agriculture not lost importance, but that its role is becoming more critical every day. However, we have not always been able to demonstrate this or to have society recognize this

fact. Why is it that we cannot demonstrate agriculture's importance or convince society that it is important?

In our view, the problem is that the approach we use in discussing, managing and transforming agricultural activities is no longer the most suitable. I am referring to the traditional and inflexible view of agriculture and its relations with its surroundings, which, on the one hand, considers agriculture as an isolated, primary production sector, and, on the other, is narrow, self-limiting and short-sighted.

In the context of globalization, hemispheric integration and the crumbling of political-ideological, economic and commercial barriers, this approach is no longer suitable. For more than a decade, the import-substitution model has been wearing down as a new model of development has emerged in all the countries. However, the traditional approach to and concept of agriculture has not yet been replaced; it is still the same.

As the new style of economic and social development takes shape, a renewed approach to agriculture must still be developed, one that is functional and able to rise to the new challenges. This approach will enable us to disprove the myth of the "marginalization" of agriculture, and promote the growth and development of agriculture, the environment and rural inhabitants.

We must advance collectively in a joint effort to invigorate this vision. We must again adopt a systems approach to agriculture, which, in the context of globalization and integration, reveals its structure, which is also systemic. This is a renewed and hemispheric approach that envisages agricultural production, food, natural resources, poverty and rural development as closely intertwined and interdependent with the economy and society as whole.

Defining a Strategy for Returning Agriculture to a Position of Importance

In developing a renewed approach, it is also necessary to develop a new vision and mission for agriculture and its institutions. We must envision the actions needed in a process to define and establish an agricultural policy for the Americas. This policy should aim to reassess agriculture by assigning a more accurate value to the sector, to rural areas and to their human resources, with a view to enabling them to

participate actively in hemispheric integration and meet the challenges of the twenty-first century.

If we believe that agriculture's importance has not diminished, it might seem inappropriate to speak of restoring its position, since it is impossible to restore importance to something that has not been lost. Why, then, insist on restoring its position? Because we have lost the capacity to recognize and demonstrate its importance, and because many of us still have a simplistic, distorted view of agriculture.

Therefore, we understand efforts to raise the profile of agriculture as a deliberate and voluntary act to earn recognition by all of society that agriculture has not declined in importance, but rather has changed qualitatively. We must demonstrate that it is a systemic structure, that it pervades, in real and effective terms, all of the economy and society.

We must work to establish its value with a strategy aimed at enabling the sector to perform effectively in integration and meet the challenges of the twenty-first century. We must define and implement an ongoing process to add value in all the strategic segments of systemic agriculture. Allow me to mention some areas where agriculture's value can be heightened, and the important challenges facing us in that regard.

Biodiversity and natural and genetic resources: sound conservation and use of these, as well as the identification of commercially valuable products and substances, will provide hitherto unsuspected new ways of contributing to society and the overall economy.

Agricultural and agroindustrial products: high quality and the ability to fill new market niches will provide excellent opportunities, within the context of hemispheric integration and intra-regional markets.

Essential services that support agriculture, agroindustry and markets: these are the cornerstones of renewal, competitiveness and greater added value. Other activities related to agriculture are industry, education and services, all of which also add value.

Agriculture can also add value to the decision-making process for sectoral and especially macroeconomic policy, through better capabilities and harmonization. The reform of agricultural institutions, both public and private, will add value to agriculture. Moreover, the development and ongoing training of human resources, the source of wealth of the sector, is key to competitiveness and to raising the value of systemic agriculture.

If we adopt a suitable approach and a strategy that creatively combines the short and the long terms, as well as the urgent with the strategic, we are certain we will be able to diffuse threats, strengthen our advantages and enhance opportunities. Economic recovery in the region in the 1990s must receive a greater contribution from agriculture. We will be in a better position to halt the deterioration of natural resources and rural areas, and especially to curb poverty and bring about a sustainable and comprehensive human development in rural areas.

These are some of the great challenges before us. Let us join efforts; let us undertake together this great task of earning recognition for agriculture's true importance and value. We must be convinced and truly understand that agriculture is not just a technical, diversified, high-risk activity, but also a significant and complex social process intimately linked to peace, democracy and economic, political, social and ecological sustainability.

COOPERATION FOR STRUCTURAL TRANSFORMATION OF OUR RURAL SECTOR[1]

Francisco Labastida Ochoa

Two years ago, my country had the honor of hosting the Seventh Regular Meeting of the Inter-American Board of Agriculture. During this event, the Ministers of Agriculture reaffirmed their commitment to agriculture in the Americas and to cooperation for development as the key to the sector's success.

The meeting marked the beginning of a long period of analysis that has culminated in the 1994-1998 Medium Term Plan, which sets out the guidelines for the work of our Institute. We appreciate this institutional modernization effort and offer our support to make IICA an organization that is ever more able to meet the needs of the Member States. During this period, IICA has identified its strengths and weaknesses and expanded its thematic and institutional horizons towards a renewed approach to agricultural cooperation in the hemisphere.

Our countries are building a mutually beneficial market place through free-trade agreements between countries in North, Central, and South America. These agreements are an answer to the needs and requests of the agricultural and rural sectors in our countries.

It is important to mention the need for open, participatory cooperation, particularly in the areas of animal and plant health and technology transfer. This will enable the countries presented here to engage in a cooperative mechanism for international macroeconomic growth. Despite the progress that has been made, remaining deficiencies are serious and must be solved as soon as possible.

Mexico believes in and practices multilateralism. One example of this is the fact that, despite our economic problems, my country has tenaciously pursued its efforts abroad.

The economic process we are witnessing today has a much less distorting effect on market forces and wields instruments that have a

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[1] Based on the address delivered by Mr. Francisco Labastida Ochoa, Secretary of Agriculture, Livestock and Rural Development and President of the Eighth Regular Meeting of the Inter-American Board of Agriculture.

wider scope of action. This process has opened the door for new relations among social agents, guided by standards of efficiency, productivity, and competitiveness. There is no question that the government is the engine of economic and social transformation. Indeed, there is an awareness that the government is not only irreplaceable, but is the driving force behind modernization in the production, social, and political spheres.

In this process of adaptation to global change, our countries must move beyond a national sectoral perspective. We must be imbued with the spirit of solidarity and interdependence at the macroeconomic level that will enable our farmers, and agriculture in general, to interrelate unimpeded in trade, technology transfer and the necessary collaboration mechanisms between disparate, but complementary, economies.

At the summit of the Americas, our leaders pledged to promote free trade and hemisphere-wide integration, the eradication of poverty, the effective incorporation and women and youth, and to encourage private-sector participation in our countries' development tasks.

Within that framework, the ministers of agriculture are meeting as a political forum at a point in history in which we must assume our role and ensure that our sector becomes more and more involved in trade negotiations in order to promote joint participation and investment in agricultural projects that will reactivate our rural economies across the board.

Our countries have opened up to world trade flows, but in return we expect to be granted facilities such as loans, technology and joint investment opportunities, in order that we may successfully carry out the structural transformation of our rural sector and make it a natural part of the agroindustrial process and other economic sectors. In its capacity as the coordinating agency for this endeavor, IICA, the technical arm of the Inter-American Board of Agriculture, can make substantial contributions in this regard.

In such a context of balanced cooperation, it would be possible to make domestic production more market-oriented and gear it towards competition at the global level. This in turn would attract capital, investment and jobs, and draw more foreign exchange into the nations that need it.

In addition to developing profitable activities, however, our countries have a pressing need to manage their productive potential more

effectively, to carefully plan future food supplies, and above all, to raise productivity and bring rural sectors up to the level of the rest of the economy, putting them in step with the pace of overall progress.

The efforts we have afforded at IICA have been a magnificient opportunity to cooperate with our sister countries and with the multilateral cooperation institutions that have been established worldwide to accelerate and consolidate human progress, particularly the progress of those to whom a debt of justice is still owed, especially the people living in rural areas.

The work carried out jointly by IICA and the countries of the Americas is witness that the potential of this vast land of promise can be turned into reality as a trigger of growth and collective well-being. If all of us here today combine our efforts, we can develop suitable formulas that will hasten a process by which this hemisphere can surmount its obstacles and leave behind the backwardness of our rural societies.

Let us focus all our efforts, capacity and political will on this hope. Our people demand it; our countries need it.

THE ROLE OF AGRICULTURE ON THE THRESHOLD ON THE TWENTY-FIRST CENTURY[1]

Roberto Solórzano

This final decade of the twentieth century has brought profound change to an astonished world, transforming many spheres of our society. As a result of these transformations, development models must now respond to a new economic setting, a new social arena, a new institutional life, and a new environmental plane.

Our countries have seen their societies redefined by rapid socioeconomic and political transformations. With these changes come new scenarios that call for a fundamental change in agricultural development models. Considering that the world economic setting has been revolutionized, the paternalistic state has faded into history, and that the environment has suffered from imbalances induced by our production styles, it is now time to envision new dimensions. Our countries' agricultural sectors will have to compete in new scenarios as opportunities require, where private and public sectors share responsibility for the sector's development.

Agriculture is the backbone of the economy for most of the countries represented in this meeting. This is why we must spare no effort to promote a competitive and prosperous agricultural sector. The resulting economic stability will allow workers and small agricultural businesses to improve their lot each day. We will see a shrinking of the gaps that separate city from countryside, providing rural populations with greater access to effective social services.

Costa Rica's agricultural sector, as occurs in most of the countries of the Americas, has played a decisive role in the economic, social and environmental development of our society. It is the cornerstone which has supported our people's development and, as such, has become the foundation on which our nation has built the democratic system we enjoy today.

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1 Based on the address delivered by Mr. Roberto Solórzano, Minister of Agriculture and Livestock of Costa Rica, during the Eighth Regular Meeting of the Inter-American Board of Agriculture.

In five more years, the twentieth century will draw to a close, and as of today, Costa Rica's economy continues to depend on the agricultural sector. Statistics show that agriculture produces approximately 20 percent of our gross national product and 68 percent of the value of our exports. Only this sector continues to post a positive trade balance, standing in contrast to trends of the nation's overall economy.

Labor figures are also very revealing, as 22.6 percent of the economically active population is employed in activities related to agriculture. This is the sector that provides economic opportunity in the rural areas of our country, where 56 percent of the Costa Rican population lives.

As we approach the twenty-first century, we find that the agricultural sector has retained the lead role it has played since the beginning in helping to build the Costa Rican economy. Generation after generation, our culture and our national identity have drawn sustenance from agriculture.

As we look toward the future, we visualize a Costa Rica that has learned to make the most of its traditional love of agriculture, drawing on this sector to achieve higher levels of economic and social development and thus striving to find and intelligently maintain its place in the world economy. Under the conviction that agriculture will continue to be the engine for economic reactivation, we have set out a strategy for sustainability in the agricultural sector of Costa Rica, which rests on three main pillars:

Participation. This means that producers and their organizations are encouraged to play an active role in shaping public policies, in providing services, and in identifying shared actions.

Reconversion. As production structures are overhauled, production becomes more efficient. Products can win a better market position, natural resources are conserved, and the degree of equity increases.

Institutional transformation. The sector's institutions need to improve their ability to respond to the demands and needs of agricultural producers and to begin serving as facilitators, streamlining relations and integrating the sector in the framework of sustainable development. As they do this, they will give new momentum to a development strategy able to combine the here and now with the future, the important with the urgent, and the economic with the social and environmental.

Let me share something I heard from a small farmer in a rural community of Costa Rica. He was telling me about an organic vegetable farming project he owns in partnership with several other small farmers. He said, "We are an association. No one is more important than anyone else, because we all work the land in order to provide for our families. But I have to say this. We do have three bosses; the consumers (both here and in other countries), our land, and the environment."

In his simple way, this farmer summed up the challenge facing our hemisphere's entire agricultural sector as we approach the twenty-first century. In his statement he has encapsulated the need to adapt and compete in accordance with the demands of an international market, producing on a foundation of social peace and environmental balance. This Costa Rican farmer, seeing things from his own standpoint, understands that better income levels, in and of themselves, will not improve lives. Just as important as income is the right to a clean environment and greater access to public social services, as well as development opportunities for future generations.

The leaders of the world's nations saw this clearly at the Earth Summit. They shouldered important new commitments, and the agricultural sector took up the challenge by implementing policies based on sustainable development. This is why we are determined to find methods of agricultural production that use agrochemicals more rationally and conserve soil and water more effectively, all in a setting of shared responsibility between the government and civil society.

One of the challenges for sustainable development is to bring conservation goals into harmony with the objectives of production, tailored to the characteristics of each region and community. This is why I would like to emphasize the essential role of the micro-watershed. It is an elemental planning unit containing all the hydrological and social elements necessary for institutional actions to be fully integrated, and for communities to have true participation. More than a physical space, the micro-watershed is the essential social environment for propelling local development so that a true strategy for sustainable development can be erected. Local groups need to be involved in this process through participatory planning, as this will lead to sustainable land management based on the decisions of farmers, who are at the forefront.

Today we are here to reassert the agricultural sector's commitment to the economic and social development of our countries, based on competitive production structures. Our competitiveness must be rooted in more advanced scientific and technological knowledge and greater

specialization for our producers of crops, livestock and fish products. Never again can we rely on low incomes and deteriorating social conditions in the countryside. Instead, efforts should focus on strengthening our competitive advantages by raising quality and lowering costs, by making our labor force much more productive, and by advancing our technological development.

We need an agricultural sector that is closely bound to industry and uses innovative business approaches that will meet the demands of today's economic, social and trade environment, and that can compete successfully on local and international markets. We also need forms of agriculture that will truly enrich rural communities and allow farmers to combine the mastery of modern technology with long-standing cultural traditions.

The challenge that lies before us for these three days is to break new ground in this hemisphere, giving agriculture a new, more dynamic role to play in the world economy, bringing about greater social peace, and guaranteeing development for our farmers, all in a framework of sustainable development. With this perspective, my sincere hope is that we can find new, stronger approaches to inter-American cooperation that fully embrace all these demands and needs of agriculture and thus contribute to improving the quality of life for all the citizens of our Americas.

SUSTAINABLE AGRICULTURE IN THE FUTURE OF THE AMERICAS[1]

José María Figueres

I would like to focus my address on the current status and future prospects for agriculture in Latin America and the Caribbean. My address will be divided into three parts. First, I will review the important role of agriculture in our national development strategies. Second, I will mention some of the problems that are inhibiting agricultural progress in our countries. Finally, I will share a few thoughts on ways we might be able to overcome the current crisis.

Could Our Countries Live Without Agriculture?

For over three decades, agricultural production growth has been losing momentum. Today, agriculture in the majority of our countries is in outright crisis. Although the region's economy has been on the rebound since the beginning of this decade, agricultural production has failed to keep pace with overall economic growth.

Many people are unconcerned about the decline of agriculture. New industries and services, they claim, will be enough to fill the gap. They seem to forget that we cannot make over our production structures from one day to the next, as if they were easy-to-assemble mechanical devices. At issue here are entire societies whose bond to their land and natural resources have been gradually built up over the long course of personal histories. What nation has ever denied its own history of production, simply to pursue development? A look around us gives eloquent reply. We can think of the industrialized societies of Europe, or the state of Israel, or the recently industrialized countries of southeast Asia. All of them centered their development on a renewed appreciation of primary production. This was the foundation on which they erected later processes of industrialization.

Although the examples of these countries are revealing, the answers to the riddle of agriculture can be found most clearly on our own doorsteps. Because the majority of our countries have a strong

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[1] Based on the address delivered by Mr. José María Figueres, President of Costa Rica, during the Inaugural Session of the Eighth Regular Meeting of the Inter-American Board of Agriculture.

agricultural tradition, agricultural modernization is a prerequisite if we hope to pursue sustainable development. When I use this term "sustainable development," I mean that the process by which a nation advances rests on four building blocks: macroeconomic balance, social equity, political democracy, and environmental equilibrium.

Agricultural progress provides the key for our countries ultimately to set these building blocks in place. We will not easily achieve sustained economic growth unless we begin to attach greater value to our natural resources. If full economic prosperity and social development take hold in the rural zones, we will build greater social equity and our democracies will become more vigorous. We can even deter environmental deterioration if our agroindustrial practices begin to conserve natural resources and use them more rationally.

Fragmented Production Structures

The future of agriculture will determine the overall future of our nations. This is why we must be so concerned when we see the sector lagging behind. Agriculture has failed to keep up, not only in quantity produced, but also in terms of how it is produced, and whether the sector is capable of transforming itself to assimilate constant change in world markets. In our countries, unlike the industrialized world, production structures have failed to build fluid linkages, they lack multiplier effects, and they have developed little synergy between production, marketing and consumption. Instead, they tend to be utterly fragmented. Five broad structural gaps have partitioned the agricultural sector.

The first is the gap between **agricultural production and natural resource conservation**. Our production methods have been hostile to nature. Our agriculture has often been the force behind deforestation, which is raging ahead at the rate of seven million hectares per year, bringing soil erosion and water pollution. The responsibility falls both to small-farm production and to modern production enterprises. It is a sad irony that we have squandered so many natural riches in exchange for so little added value.

Another wide gap exists between **production and trade of agricultural goods**. How we waste our productive efforts by our inability to market what we produce! I would hesitate to ignore the powerful external barriers our exporters must face when they attempt to sell their products for fair prices on the international markets. But it is no secret that we have much to learn about trade, and that no one can overcome

our limitations for us. Until we take this step, we will continue to miss opportunities to sell more and sell better.

Another gap separates our **production structures from our scientific and technological capabilities**. We have failed to place our scientific and technological resources at the service of sustained innovation processes. We are slow to assimilate conventional technologies. We have barely advanced in the use of fertilizers, improved seed, tractors and irrigation. More serious still is that we have not been adopting new technologies, such as computer use and biotechnology, as much as we should. Meanwhile, the world technological revolution moves ahead. Even in modern production sectors, many businesses are being pushed out of the market by constant innovations. Unless we regroup our scientific and technological sectors to start making true progress, our competitive positions will continue to deteriorate.

The next gap is between **agriculture and industry**. In spite of the fact that agroindustry has a high profile in our national industrial sectors, and that some of our countries have highly competitive agroindustrial operations, it is evident that we are not doing enough agroindustrial processing. We need to open new export opportunities, protect ourselves from fluctuations in agricultural product prices, extract greater value from our natural resources, and open our doors to regional development. None of these objectives, as you know, can be met unless we thoroughly revitalize our agriculture through vigorous industrialization processes that will raise the market value of our natural and human resources.

The fifth gap separates **agricultural production from social development**. One result of the gaps I have already mentioned is that areas with a long-standing agricultural tradition have failed to achieve dynamic production levels. Even areas that have pursued agricultural modernization have become polarized, with benefits spread unevenly. These factors, in combination with weak social policies, have hindered social development in rural zones. A clear indicator of this is that the labor force has failed to improve its level of skills and training. At the same time, a growing contingent of engineers and technicians waits in the wings, unable to find positions in agricultural businesses. Rather than growing, the rural population is emigrating to urban areas, taking its poverty with it.

These limitations in our production structures have been with us throughout history. But they weigh heavier on us today because the

great changes occurring in the world are making our own weaknesses more critical. Despite their promise of progress, these changes will bring only trouble unless we transform our economies.

The technological revolution continues to reshape the way we produce and live in the world. The growth of world trade creates economies that are more interdependent and rely on exports. Our economies continue to open, but production processes are not changing fast enough to protect producers. Meanwhile, protectionist policies persist in the industrialized countries. Added to this panorama on our continent is the hemisphere-wide integration process, which has intensified these trends and is driving us to eliminate trade and investment barriers within just ten years.

The choice could not be any clearer: either we continue to lose our competitive edge as the economies open up and our productive transformation lags behind, or we take the path of modernization, shaking off production structures that have weighed us down in the past, and seizing the opportunities held out by economic integration.

The Path to Agricultural Renewal

We have no choice but to change our forms of coexistence, production and trade by raising the value of our natural and human resources. Only then can we begin sustainable development processes. To attain this end, we must renovate our long-neglected production policies, and more specifically, revitalize agricultural policy. I do not believe we should recycle old dogmas on the role of the state. We now know that, for economic growth to become sustainable, state and market alike must be combined in a creative, pragmatic manner, making the most of their strengths and minimizing the impact of their weaknesses in each specific situation.

With regard to the challenges facing our production policies, I would like to make a few comments, merely to illustrate my view on the direction changes are taking. Aware that this is a meeting of ministers of agriculture, I will concentrate on your own field of action. I shall mention three spheres of concern.

The first involves **strengthening the roles that the ministries play in production**, as leaders of their sectors. This includes ministries such as agriculture, industry and tourism. In strengthening their basic functions, these ministries should seek to exert greater influence on

economic policy, to make it reflect the productive interests of our countries more effectively. I am thinking of our macroeconomic policies in particular, since they continue to favor importers and financial speculators, while heavily penalizing productive efforts. With overvalued exchange rates and high interest rates, we will continue to compete at a severe disadvantage. We are well aware that there are reasons for such situations that go beyond the power of our national governments. I continue to believe, however, that there is room for political action that we can use to better advantage to favor productive modernization, and that the institutional front is very important in that struggle.

To strengthen their leadership role, agricultural ministries should abandon their productive bias and cease to be the closed preserve of the agronomic professions. Instead, they should embrace an integrating, interdisciplinary view of agricultural activity that will seek to close structural gaps, rather than widening them.

It would also be advisable for agriculture ministries to strengthen their dialogue and alliances with farmer organizations, whose strategic interests should have a greater bearing on economic policy. I am not referring to the frequent discussion of immediate problems or the pressure exerted by some farmers to secure privileges as a means of evading genuine competitiveness; rather, I am referring to responsible dialogue with a vision of the future, in which the government plays its role as the representative of society as a whole and avoids becoming a mere distributor of handouts.

If they can renew their mission, agriculture ministries will also be in a better position to incorporate the views of agricultural business into international trade negotiations. Within the framework of continent-wide integration, our countries must join hands to fight for justice in the liberalization process. The multilateral trade system, which lays down a standardized code of conduct for all countries, provides us with the best avenues for attacking the inequities that prevail in international trade, particularly on the part of industrialized countries.

The second sphere of action for production policy to which I would like to refer concerns the **reform of agricultural support services**. Our region has made much progress in carrying out a critical analysis of the productivist, agronomist model that has prevailed in the agricultural sector's institutions, and there are reforms from which we can learn. We now know that support for agriculture will be more effective if it offers comprehensive, appropriate services to all the links in the agroindustrial chain, from primary production to end consumption. Let us do away,

once and for all, with the approach to agricultural services that focused exclusively on research and extension; all too often, it only benefited large-scale farmers and excluded small producers.

Our governments face the great challenge of spurring the creation of newer, more advanced networks of agricultural services -- public or private, depending on which is more suitable in each case -- to help close the structural gaps I mentioned previously. In this regard, we certainly do need better research and extension. Today more than ever, we need basic research, particularly if we are to master and make creative use of the fruits of the biotechnological revolution. We must re-examine the role of applied research, allowing it to respond flexibly and effectively to the challenges facing our products on the market.

We need new extension programs. If they are to be of real use to small-scale farmers, they should form part of a more comprehensive set of services.

Advisory services for the organization of farmers must play a more important role. The organizations can serve to facilitate credit applications, to secure better prices for purchasing inputs, and to increase exportable supply. Farmer organizations can enable producers and exporters, or agricultural and industrial producers, to establish joint ventures. Finally, organization can take a multinational shape, allowing us to reap the advantages of trade liberalization, establish linked production and marketing chains between two or more of our countries, and strengthen the competitive advantages of each one.

We also need more and better market information. There is no more room for production initiatives that turn a blind eye to the marketplace. All too often, the naivete of our farmers can be measured in bankrupt businesses and hungry families. The solution lies in timely, reliable market information, freely available to the public and easily accessible by farmers and exporters alike.

Let us not forget agricultural credit. Even in a severely restrictive macroeconomic environment, much can be done to make credit available to larger numbers of farmers, and to design specialized funds tailored to the specific farming methods of each group.

Technical assistance for farmers also deserves attention. We should be trying harder to spread efficient conservation-oriented practices. We need to take better care of the natural resources used for agriculture. We need to conserve soils and water, make better use of irrigation, assimilate

integrated pest management techniques, and curb the abuse of agrochemicals, replacing them with more intensive use of biological controls on farms. We need to recognize the true value of our natural resources, rein in the plundering of this wealth, and increase the economic benefit we reap. I am mindful of the case of open-range livestock production, that erodes the soil and encourages the felling of natural forests. We need to be changing over to more rational methods for producing livestock intensively, whenever possible in combination with tree farming or other activities.

Our agricultural producers should be receiving better services in many other fields as well, including advisory assistance in farm management techniques, animal and plant health services, technical support for post-harvest and processing activities, training of the labor force and building of public infrastructure.

With this approach, as we begin to translate a present challenge into reality, our farmers and agroindustries will find that the support they receive is more effective. We will have moved beyond traditional approaches that distort price systems, instead finding ways to make our production activities genuinely competitive.

Our third challenge is to **promote projects of high national interest**, which build on potential competitive advantages and have a powerful social and economic impact. Industrialized countries have undertaken large-scale national and multinational projects to develop new competitive advantages. How much more important is this type of initiative for those of us whose countries are poor, have fewer resources, and face greater external challenges? It will be very difficult for us to make qualitative leaps in our production structures unless we focus on projects of strategic importance. Some projects could aim to create agroindustrial development centers located in particular rural areas. Others might seek to develop a competitive edge in industries of strategic importance.

In Costa Rica, coffee provides an eloquent illustration. For over a century, we have produced high-grade coffee with one of the highest productivity levels in the world. But we continue to sell our coffee just as we have been doing for one hundred years, unable to penetrate specialty coffee markets or to begin selling processed coffees or other coffee products, even though these markets hold out promise for leading us out of the structural crisis that dogs us. Certainly, we could envisage a joint effort between private enterprise and the government, to bring about a qualitative leap in the competitiveness of this agroindustrial chain. This is

the type of venture that would be very difficult for individual farmers to undertake, but that can become feasible when we all pool our efforts.

National programs such as these can draw particular force from new and ambitious region-wide initiatives. As Carlos Aquino pointed out, agricultural policy must play a more visible role in hemispheric fora. At the same time, we need to synthesize our national experiences more systematically, so that we can draw from them the lessons and new ideas that will light the way as we proceed to transform our countries. We must work together to build a new paradigm for transforming agriculture, giving due weight to our own situations and common aspirations.

We must also undertake an in-depth review of regional organizations associated with agriculture. These organizations, like the sectoral institutions in our own countries, need to be profoundly rethought if they are to meet successfully the present challenges of agriculture in the hemisphere. In this regard, IICA stands out as an example of an organization willing to engage in self-critique and redesign its internal structure. I am confident that this Board will produce joint initiatives and agreements that will guide actions related to agriculture throughout the hemisphere.

I hope to have left you with one clear idea: even though our production structures may be backward, even though the external market holds many obstacles, our countries have great latitude for action to transform and revitalize our agricultural sectors. I have faith that we will use this latitude wisely, and that we will bring forth a new period of lasting prosperity. I am confident that this will be the case. The history of our hemisphere reveals a people who have never shrunk from daunting challenges such as this. I know that we all share this optimistic view, and this is why we will leave this Board meeting with our energy recharged and our ideas renewed to take on the common struggles that lie ahead.

PARTE II
THE ROLE OF AGRICULTURE IN SUSTAINABLE DEVELOPMENT

ECONOMIC DEVELOPMENT MODELS AND THE ROLE OF AGRICULTURE IN LATIN AMERICA AND THE CARIBBEAN[1]

The role of agriculture in the economic development of Latin America and the Caribbean (LAC) can be divided into two separate phases. The first is the period between World War II and 1982, and the second, from 1982 up to the present. This division recognizes the fact that two different economic development models were in operation: first, one of industrialization aimed at import substitution (inward-looking), and second, the model that is still in a process of transition and could be described as "outward-looking," or geared to opening and deregulation.

Agriculture has traditionally played an important role in the economies of the countries of the Americas. It is a role that has different connotations, depending on the type of economy involved, the level of development it has achieved, and the prevailing economic model.

Agriculture is generally recognized as making an important contribution to the rest of the economy by: a) supplying food for the population, b) providing a source for savings and for generation of foreign exchange, c) channeling raw materials for industry, d) creating jobs, e) supplying labor for other activities, f) creating a market through the demand for goods and services from other sectors, and g) funneling economic surplus into the rest of the economy (Bruce and Mellor 1972).

The Role of Agriculture in the Import Substitution Model

The subsidiary role of agriculture

The inelasticity of the demand for primary products in the industrialized nations and the constant deterioration in the terms of trade were the basic arguments put forward in the 1950s for funneling resources into import substitution. Capital resources, labor and land were to be concentrated on achieving this objective through tariff protection and taxes on exports of primary products.

At that time, the concept of "inward-looking" development contained elements that supported this argument, but this model was maintained for too long, at a high cost to society in general and agriculture in particular.

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[1] Based on the document "Problems related to and the Implications of New Economic Development Models for Agriculture, the Food Supply, the Environment and Rural Poverty", presented at the Eighth Meeting of the IABA, Costa Rica, 1995.

The region's isolation from a rapidly changing international environment and the failure to comprehend the inherent limitations of a closed model were factors in that high cost. The countries of LAC found themselves falling behind those in other parts of the world, including Asia, where growth and development surged ahead.

Agriculture became one of the linchpins of the model of industrialization based on import substitution that held sway between the 1950s and the late 1970s. In many countries it provided most of the resources that in large measure financed the development of industry and the cities.

Food production in particular was expected to facilitate the process of industrial accumulation by keeping down the prices of food and non-food wage goods and supplying low-cost raw materials for use by the fledgling agroindustry. In both cases the aim was to substitute as many of these imported goods as possible, thus making agriculture the principal economizer of foreign exchange. It also generated the foreign exchange needed to drive the industries geared to import substitution.

When the countries were basically rural, the abundant supply of cheap labor from agriculture for use by infant industries and services was an equally valuable asset. The generation of jobs and employment in agriculture itself created demand and a market for the products of industry and services, thus reinforcing the rationale of the model itself.

Agriculture received a double blow from the model. The sector was required to export under unfavorable international terms of trade, while at the same time it was penalized by domestic anti-export and anti-agricultural policies that increasingly extracted its economic surplus. Its contributions to the rest of the economy took on a new focus from time to time, in line with the stages of the import substitution model. During the "easy" stage, nondurable, labor-intensive consumer goods were produced that offered high profit margins and called for neither great economic or business sophistication, large markets nor high levels of protection. Agriculture's main contribution was in the form of cheap food, cheap labor and economic surpluses.

However, the subsidiary role of agriculture took on even greater importance during the second stage of no-holds-barred import substitution, as this socially more costly phase called for more resources. Thus, the emphasis of agriculture's contributions shifted toward exports in order to obtain the growing amounts of foreign exchange required. It also shifted toward the cheap production of raw materials to support the

agroindustrialization process of the 1960s and 1970s, and even more unfavorable terms of trade for agriculture.

In the absence of larger markets that could have been created by regional integration, inward-looking development proved very costly. It was highly concentrated in, and monopolized by, a few companies in the industrial sector. This in turn made it necessary to increase the level of protection and isolation from the rest of the world.

The combination of high external tariffs, the lack of competition and the easy, fast profits to be made created a context that hindered the orientation of the industrial effort toward international markets. The government, as lead player, held out extensive advantages and incentives that directed domestic and foreign capital toward import substitution rather than exports. Companies enjoyed a captive domestic market offering high prices, fat profits, and a monopolistic or oligopolistic position; there was no reason to take risks in the international market, much less embark upon technological innovation and change.

The anti-export bias and the absence of a manufacturing industry connected with world markets, but increasingly dependent on imported raw materials and parts, soon plunged the external sector into crisis. The rapid urban growth generated by this model also exerted strong pressure on agriculture.

Agriculture and macroeconomic policies

During the long process of industrialization geared to import substitution, an industrializing and urban context was created in which macroeconomic policies played a vital and decisive role. A brief review of the management of the main macroeconomic and sectoral variables during this period will make this context clear.

Exchange policy was geared toward nudging producers to supply the domestic market through managed multi-tiered exchange rates and overvalued currencies. Imports became cheaper and exports more expensive, so that agriculture was unable to expand or diversify, or to offer alternatives to agricultural imports. Indeed, the latter grew steadily from the 1970s onwards.

Foreign trade policy throughout this long period meant, generally speaking, little or less protection for agriculture in comparison with other sectors, especially industry. Various tariff and non-tariff mechanisms

were used to control imports and limit exports. In addition, agricultural exports benefited from fewer subsidies and other compensatory mechanisms than industry. This was reinforced through direct, monopolistic government involvement in the domestic and foreign trade of goods and services, and the control and closing of borders.

Price policy was implemented through the administrative control of macro prices and specific prices. This cause severe distortion and great instability in relative prices, especially in the final phase when it was accompanied by inflation and even hyperinflation in several countries. This policy proved unfavorable to agriculture and increased uncertainty, leading to indecision and the contraction of private investment and production for export. The policy was also intended to protect consumers by cutting producers and consumers free from market prices and introducing a clear pro-urban and industrial bias.

Monetary policy held out incentives for expanding the industrial plant, in the form of heavily subsidized credit resources, so as to raise production and expand productive and commercial infrastructure. Agriculture and agroindustry were granted special privileges, but the positive effects were on the whole short-lived. While the capital stock in agriculture did initially increase, it then declined rapidly along with production. This policy also encouraged poor resource allocation and tended to create inertia by accustoming producers to subsidies and the repeated cancellation of their debts.

Expenditure and investment policy was aimed at transforming the economic and trade structure through public investment. This investment effort produced few effective and lasting results. It was also largely unsuccessful in generating sustained private investment and produced only low returns. It did lead to a substantial increase in the agricultural and agroindustrial capital stock, but this proved unsustainable over time.

Until the 1970s, macroeconomic management and the combined effect of these instruments proved to be anti-agricultural and anti-export, and this had direct and indirect negative effects on the buoyancy of agriculture. However, specific sectoral instruments were also implemented to offset the most detrimental effects of macroeconomic management. Generally speaking, these compensatory policies consisted of the establishment of certain preferential tariffs, subsidized credit, the supply of cheap capital goods and inputs, direct subsidies, tax breaks and transfers of income through public investment and technical support for production and social assistance programs.

This phase was in fact characterized by a long period of state intervention including the regulation of production and trade processes and of conditions for rehabilitating the agricultural system. Government policies succeeded in transforming conditions in the countryside, as they were geared to developing scientific research, professional training, the production, distribution and dissemination of inputs, technology transfer and adoption, capital formation, improvements in the physical infrastructure, the realignment of markets, and the like. The dynamic government presence and intervention in the economy in general, and agriculture in particular, naturally called for institutions to set and implement policy for every facet of the agricultural sector, as well as accompanying political and cultural instruments and mechanisms.

In general terms, and with big differences from country to country, the institutional fabric of agriculture was characterized by the leading role of the public sector to the point of government omnipresence and the subordination of producers. Even when they were able to take advantage of its benefits, producers were trapped in a penalization-compensation syndrome that resulted in a loss of autonomy and dwindled capacity for self-management. A paternalistic and subsidiary relationship of political patronage was established between them and government institutions.

The State's paternalistic relationship that restricted initiative in the sector was accompanied by a policy designed to disconnect producers from markets and isolate them from technological change and competition. Access to subsidies, credit, technology, inputs and irrigation benefitted very few, generally the big pressure and power groups, and to a lesser extent, small farmers and peasants.

Implications for agriculture, food, the environment and poverty

Agriculture played a key role in the sustained and relatively dynamic expansion of the economy, in aggressive industrialization based on import substitution and a significant expansion in investment, especially public investment. Many countries urbanized, social indicators improved considerably, including the literacy rate, life expectancy at birth, and others, physical infrastructure visibly increased and both public and private institutions were developed. However, poverty declined only slowly, while the distribution of income actually deteriorated.

During the stage of "no-holds-barred" import substitution, production rose by over 50 percent: 54 percent in crop production and 60 percent for livestock (FAO 1994). The value of exports increased sixfold during the same period, and imports grew even more. At the same time, the region maintained its traditionally favorable balance of trade in agriculture. As a result, the foreign exchange available for other sectors of the economy rose from US$3.8 billion to US$18 billion. As late as 1980 the region's agricultural exports accounted for over one third of its total exports.

A large part of this effort was accompanied by the modernization of agriculture. This is clearly reflected, among other indicators, in the use of fertilizers, which rose by 9.2 percent a year and nearly quadrupled from 10.4 kgs per hectare to 39.1 kgs per hectare over the same period. A similar increase in the number of tractors was recorded: from 472,000 to 1,045,000, an annual rate of 5.4 percent.

A slowdown in the rate of growth of agriculture began to be noted from the mid-1960s onwards in many Latin American countries. It fell to an average of 3.5 percent and then 2.8 percent in the first half of the 1980s. As agriculture ceased to grow and large sectors of the rural population sank into poverty, rural-urban flight gained momentum, surpassing rates posted since the 1950s (FAO 1994).

In 1960 the agricultural population accounted for 48.6 percent of the total population, sliding to 41.5 percent in 1970, and falling sharply to 32.6 percent by 1980. This means that by 1960 countries like Mexico, Argentina, Chile, Uruguay and Venezuela were already largely urban. By 1970, three more countries--Brazil, Colombia and Peru--had joined the ranks of urban nations.

In 1960 the population of LAC living below the poverty line was 110 million, or 51 percent of the total population. The absolute number of poor people increased slowly in the 1960s to 113 million, but then rose dramatically in the 1970s to 136 million. In 1970, 62 percent of the households in rural areas were below the poverty line, and 34 percent below the absolute poverty line. As a result of intense migration from the countryside to the city, by 1980 the situation in rural areas had improved, with 54 percent poverty rates and 28 percent in absolute poverty. Figures in urban areas had remained stable: 25 percent in poverty and 10 percent in absolute poverty. These figures are more striking if compared with the absolute number of persons in the population.

In 1980 both poverty and absolute poverty were concentrated mostly in rural areas. Of the region's 136 million poor, 53.7 percent were in rural areas, while 63.9 percent of the 62.4 million people living in absolute poverty were rural. As will be seen below, by 1986 these figures stood at only 44 percent and 56 percent, respectively.

Even allowing for periodic shortfalls, the increase in food production and in the calorie and protein supply[2] meant that the problem lay not on the supply side (in agriculture), but was specifically a problem of access to food (a question of income).

At the same time, natural resources were being rapidly depleted due to three basic factors. The first was the fact that the model excluded broad groups of farmers and rural dwellers who were condemned to surviving under deplorable conditions. Their use of resources was an understandable part of their survival strategy, but nonetheless entailed high social costs in terms of the destruction of natural resources and human capabilities alike due to poverty and its inexorable encroachment on available human capital.

The second factor involved the agricultural modernization processes that got under way in many countries of the region in the 1950s and gathered momentum in the 1970s. The result was a severe depletion of natural resources, particularly due to farming practices, excessive tractorization and poor soil and water management, as well as the incorrect use of inputs such as pesticides, herbicides and fertilizers, which are extremely harmful to health, the environment and natural resources. Other actions, such as uncontrolled logging, the "mining" of forest resources, and intensive livestock raising, also had a substantial adverse impact on natural resources and the environment.

The third factor concerns the tendency to extract surpluses from agriculture and transfer resources to other sectors of the domestic economy that accompanied the import substitution model. The ultimate effect was that the value of natural resources (land, water and forest) never figured in the equation of the exchange between the countryside and the city, as they were regarded as cost-free goods with no economic or social value. Due to the low prices usually imposed upon agricultural

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2 In these two decades, the per capita availability of calories/day rose from an average of 2,363 between 1961 and 1963 to 2,693 between 1979 and 1981. Protein availability per person per day also rose from 61.9 to 66.9 in the same period.

products and the need to maintain certain levels of profitability in agriculture, nature was made to foot the bill of this unfavorable relationship in regard to the terms of trade.

In short, the causes of the inaccessibility of food for large sectors of the population, poverty, and the destruction of natural resources, basically lay in the unsustainable bimodal development style that prevailed at the time, and they were exacerbated by adverse macroeconomic and international conditions, the limited size of domestic markets and the uneven distribution of income.

The role of agriculture in the "outward-looking" economic development model

Macroeconomic stabilization and structural reform programs were implemented in our countries in response to the economic crisis of the last decade. In the 1990s they have come to be regarded as one of the most important instruments for achieving a new fit in the international context, and a key element in the search for a new style of development for Latin American and Caribbean societies.

The main components of this new style of development are: opening and economic integration; the deregulation and liberalization of the economy; the trimming-down of the State and the privatization of public enterprises; efforts to achieve macroeconomic balances and stabilize the economy; and attempts at and progress toward the harmonization of the macroeconomic and sectoral policies of the countries participating in integration processes. Other elements underpinning this style of development are the democratization and pluralism of societies, the fight against poverty, the inclusion of the most vulnerable and unprotected groups (native peoples, women and children), educational reform, health and the protection of the environment, and efforts to combat corruption, smuggling and drug trafficking.[3]

Since 1982, LAC has been undergoing what could be described as a transition from a model which had run its course, notwithstanding the fact that some of its elements and inertia are still being felt. What has been taking shape in the region since 1982 is a development model very different from that of import substitution, although admittedly this model is not yet firmly rooted, nor is it fully developed.

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3 See: "Declaration of Principles," Summit of the Americas, 1994.

Agriculture and the new macroeconomic policies

What was it that changed for agriculture following the implementation of the stabilization and adjustment programs from 1982 onward? In fact, its entire orientation was transformed, and the nature of its relationship with the rest of the economy took a whole new shape.

The implementation of the **stabilization and structural adjustment programs** changed the system of relative prices, resource allocation in the economy, and the way agriculture fit into the domestic and international economy. In general, a new approach to agriculture was adopted, creating a less restrictive and more favorable framework by eliminating the anti-export and anti-agricultural bias that had been the hallmark of the previous model.

Exchange-rate policies changed considerably, as local currencies were brought into line with market reality through nominal devaluations. Broadly speaking, the exchange rate policy is used to enhance external and internal competitiveness by encouraging exports and efficient import substitution.

This policy heralded important changes for agriculture. It directly benefitted farmers geared toward exports, as they now found themselves in a better position to compete, and also those whose products were intended to replace imports (more expensive under this policy). It also brought about changes in the structure of relative prices in favor of marketable goods, the category to which most agricultural products pertain. Specifically, it enhances the external and internal competitiveness of agricultural and agroindustrial goods.

Trade policy was geared toward deregulating and de-monopolizing international and domestic trade by promoting the opening of the countries to foreign trade and regional and international integration, especially through gradually lowering tariffs. A range of measures was implemented, such as the elimination of red tape and export restrictions, the abolishing or reduction of quantitative and non-quantitative restrictions on international trade (abolishing of import and export quotas, permits and prohibitions, gradual lowering of tariffs, etc.), the freeing of prices and subjecting the economy to aggressive foreign competition. These measures tend to improve the terms of trade between the countryside and the city. They also reconnect the producer with internal and external markets and encourage technological transformation and the harnessing of productive potential and comparative advantages.

The management of **monetary policy** also underwent major changes in relation to the previous period. This has been a critical area of the adjustment, as it is being used to bring about a contraction in aggregate demand by reducing credit and pushing up interest rates. This results in a sharp rise in the cost of money and, therefore, in production costs.

Credit correction measures make it possible to put the system on a sound footing and turn credit into an instrument for reactivating and encouraging efficient production. This policy also eliminates subsidies and boosts domestic savings, efficiency and competitiveness, the creation of private banks and the promotion of financial brokerage. The anticipated impact on agriculture is an increase in available credit and greater incentives to use credit rationally and efficiently, thus improving allocation. The inertia that subsidies have engendered among large numbers of small and large producers can also be expected to disappear.

In general, **pricing policy** was geared toward eliminating distortions, sending clearer signals, and promoting private investment. Efforts were made to deregulate prices and bring them into line with regional and world prices by removing subsidies or penalties.

Policies on fiscal management and public expenditures have undergone radical adjustments, and their compensatory role has been eliminated. A reduction in the fiscal deficit is being achieved by drastic cuts in public spending, investment and subsidies. Fiscal revenues are also rising through higher taxation and hikes in the cost of public goods and services. As this was one of the main tenets of state intervention, the implementation of this policy during the adjustment had a negative effect on the overall process of productive investment, the general level of economic activity and, in many cases during the initial stages of the process, on government social spending.

Wage and income policy was definitely downward as part of the campaign to force down aggregate demand, raise the profitability of investment, and improve comparative advantages. In agriculture, where the lowest wages are usually paid, this reduction compensated for the high cost of imported inputs, intermediate goods, and money. However, it especially favored commercial farming operations which basically use hired labor, and thus adversely affected the peasant economy that supplies the labor force.

This transformation of the macroeconomic context was therefore a radical departure from the previous fit of agriculture in the domestic and world economy. The anti-export and anti-agricultural bias had theoretically disappeared, and the subordination of the sector to the rest of the economy, along with it.

A deregulated and transparent economy, open to foreign trade and increasingly integrated and closely interwoven, should logically result in a more efficient allocation of natural, human and productive resources. As resources become scarcer, they recover their true value, leading to better use of opportunities. In the case of agriculture this basically means: the growth of efficient primary and agroindustrial production; higher prices and better quality products; market creation triggered by forces in the rural areas themselves; more transparent markets; favorable terms of trade and a reduction in the transfers of economic surplus; a greater savings and investment capacity; the generation of more productive employment; high incomes, more foreign exchange and greater food security; and greater protection of natural resources.

Attaining the above goals, however, requires major changes in the structure of production, industry and trade; the elimination of certain products and the emergence of others; even the crowding out of inefficient farmers and changes in their methods; a reduction in the use of marginal land and in the "mobility" of the land resource; the emergence of positive externalities to underpin this change in the production structure and greater competitiveness; the inflow of credit and investment; a new type of public and private institutional framework; a renewed juridical and legal framework; and more information which circulates widely.

If these natural expectations are compared with recent trends in the region's agriculture, as discussed below, the only possible conclusion is that what has been done so far in agriculture is insufficient and that a long and complex task still lies ahead.

The performance of agriculture since 1982: Is there cause for concern?

In general terms, there is a significant difference between the changes in agriculture that were expected to result from the transformations that have taken place since 1982, and the changes that have actually been achieved over a decade later. The following is a summary of some of the main trends recorded recently in the agriculture of the region:

Production is growing very slowly. Because of this long-term characteristic, agriculture may have difficulty becoming more dynamic.[4] While basic commodities and products for domestic markets fall behind, the production of export and agroindustrial goods and the products of livestock, fishing and forestry are on the rise (FAO 1993; Arroyo et al. 1988). Even production for export is not as dynamic as one would expect. The exceptions are Chile, Costa Rica, Paraguay, Venezuela, the Bahamas, and a few other countries, where exports are growing very rapidly. Agriculture's share in the region's total exports has fallen from 30.3 percent to 16.2 percent over the last 10 to 12 years (FAO 1994:40).

Although acreage under cultivation grew very little, total production rose by 2.2 percent over the past two decades. This was due to greater per-hectare productivity in the form of higher physical yield, and the use of land for more profitable crops. The use of fertilizers, tractors, improved seeds and irrigation is also rising slowly, while the use of labor is declining, with a drop in the average number of workers per hectare (IICA 1993).

The capital stock is stagnating. The decline in the rate of public investment impacts capital formation, while private investment is also sluggish.

The modernization of agriculture is having a polarizing and excluding effect. This continues to vary from region to region and from one type of producer to another. It is selective and biased, and this has polarized the production structure even further (IICA 1990; Twomey and Helwege 1994).

Instead of creating jobs, agriculture is generating underemployment. In recent years, employment rates in agriculture have stagnated, and the population in rural areas is emigrating as fast as it grows. In the 1950s, it grew by an average of 1 .1 percent per year. By the 1980s this figure had fallen to 0.4 percent, and zero or even negative population growth is predicted for the 1990s. In 1970 the rural population accounted for 41.6 percent, while in 1990 the figure was 26.4 percent.

Poverty is becoming an urban problem. The majority of poor people are to be found in urban areas, where their numbers are expected

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[4] During the 1970s the sector grew by an average of 3.5% per year; in the 1980s, by 2.6% in the first half of the decade and 1.6% in the second; and between 1990 and 1994, it averaged slightly less than 2% per year.

to grow rapidly. The population in the cities is growing by four percent, but in the country as a whole, by only two percent (FAO 1994).

Food problems are growing more serious. The food shortages of the 1970s were overcome, and an oversupply and lower prices were achieved. As a result, the situation changed from one of relative self-sufficiency to one of "universal availability." Today's food problems are due, not to lack access, but to insufficient income. (Schejtman 1994)

Natural resources are being depleted at an increasingly rapid pace due to both modernization and poverty. Competitiveness is mainly based on the intensive use of natural resources and labor[5].

If we compare the tenets of the new model with the actual situation of agriculture, and its performance with that of the other activities of the economies of the countries, the conclusion is that in many cases it is being left behind. The question that then must be asked is whether this is a reflection of the role that the new model assigns to agriculture, whether agriculture is performing the specific role assigned to it, or whether the model itself is functioning properly.

Effects on agriculture itself

These trends would appear to suggest that the region's agricultural and forestry activities are slowly being reactivated, but that increases in production are not keeping pace with the needs of a growing population, or with the demands of the rest of the economy, and much less with their true potential. Nor is there sufficient financing to modernize agriculture and increase its competitiveness in the presence of a market economy and strong international and domestic competition.

The interdependence of the foregoing trends gives rise to the following phenomena:

The **rate of growth in the production of marketable goods**, particularly for export, is lower than expected and is therefore a cause for concern, as these products have a bigger impact on rural incomes than non-marketable goods. Also worrying is the fact that agricultural productivity in general is lagging behind that of other activities,

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5 For example, the rate of deforestation is over seven million hectares per year. In the last 30 years 200 million hectares have been deforested. The land is being deforested at a rate of 0.8% per year, and only 10% of the land deforested is reforested. The forest is mainly used for fuel (charcoal and fire wood - 66%).

particularly where non-marketable products are concerned. Higher productivity has a bigger income effect on market goods[6].

The current **modernization of agriculture** in the region is far from reaching the levels, scope, rates and areas required to bring about a meaningful change in the production structure. Investment levels are low, not only compared to previous decades, but also in terms of the amounts required to make up for the capital depletion that occurred in the 1980s. Investment is also too low to raise competitiveness to the levels needed to meet present and future challenges. It is insufficient to keep pace with market opening, as halting technological transformation at the farm level combines with the slow modernization of infrastructure, including irrigation, warehouses, roads, highways and ports.

Static comparative advantages are seemingly greater than dynamic comparative advantages, a situation that, in view of market opening and economic integration, could mean that many farmers will be unable to rise to the challenge. This applies not only to many in the peasant economy, but to modern farmers also. Documented cases of agricultural modernization (Arroyo and Escudero 1988; IICA 1990) are merely exceptions to the rule. The general picture is one of immobility and a form of modernization that affects agriculture only tangentially and has been felt by a minority of its actors. A particularly instructive case is Chile, where agriculture, despite having grown by 6.5 percent last year, is in crisis due to the fact that modernization was achieved on only 30,000 units, while 260,000 units were excluded from the process.

Inputs and services in general (fertilizers, machinery, credit, energy, information, etc.) tend to be developed through market mechanisms, in an atmosphere of transparency, but accessibility remains a problem for many producers (IICA 1993). Even more pronounced is the absence of either a public or private rural institutional framework. Aside from the market mechanism, it has so far been unable to establish other complementary and temporary means to provide greater market access.

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6 "A one per cent increase in the productivity of market goods generates an annual increase of 0.2% in rural incomes. However, an increase in the productivity of non-market crops (many of which are produced by peasants) would have more limited effects: for each increase of one percentage point in the productivity of non-market goods, rural incomes would rise by 0.06% (Lora and Herrera 1993).

Effects on food and nutrition

These trends in the performance of agriculture are having an adverse effect on the food and nutrition of large sectors of the rural population.

First, while rural-urban flight can in practice mean that farmers cease to produce foodstuffs inefficiently on marginal lands, it ultimately results in a drop in food production. Although this is not necessarily bad, the setting of urban poverty and the lack of alternative employment is exacerbating the problem of access to foodstuffs faced by this sector.

Second, falling employment, lower wages and underemployment, however much they may improve the profitability of firms that use hired labor, have a direct and fundamental impact on the purchasing power of workers and peasants, and their access to food and nutrition.

Third, the lower rate of growth in production, be it for the domestic market or for export (IICA 1993), impacts the incomes of farmers and workers, thereby reducing demand and making greater access to food impossible.

Fourth, the problem of insufficient capital formation resulting from inadequate investment has an impact on employment, production and incomes.

Increased agricultural modernization means, on the one hand, higher productivity and production, with a resulting reduction in the unit costs of production and the generation of productive employment, and therefore, greater access to food. On the other hand, however, it also reduces absolute employment, which has a polarizing and excluding effect and, in the absence of alternative jobs, be they within agriculture or outside of it, creates a barrier to access to food by large sectors of the population.

Effects on rural poverty

The problem of rural poverty is basically one of access to the minimum resources needed for production and to the income-earning opportunities which allow an individual and his/her family to satisfy their basic needs. The agricultural trends discussed above have an especially adverse impact on the poorest members of society.

In fact, the relative reduction in agricultural employment (whether due to a slump in production or mechanization), along with underemployment

and a fall in real wages, contribute directly to making people poorer. However, the effect tends to be less acute when the family's income strategy involves the diversification of sources of income (production, paid employment, leasing of plots, etc.).

The modernization of agriculture in practice generally means greater capital intensity and a decline in paid employment. When combined with the absence of other alternatives, this factor exacerbates rural poverty via the fall in employment levels. On the other hand, when the production of foodstuffs for widespread consumption is modernized, output tends to rise and the cost of the products falls (making them more accessible).

When modernization takes some form other than capital intensification, as occurs in peasant agriculture, workers lose their jobs. However, given the high levels of underemployment in this subsector, it allows farmers to diversify their sources of income through the alternative use of this surplus capacity.

The failure to increase the productivity of non-tradable goods has an adverse income effect on producers, who are usually found in the peasant economy; this contributes significantly to their impoverishment.

Finally, the modernization of agriculture essentially has the effect of excluding and impoverishing, and in the absence of other job and work alternatives, deepens bipolarity in the countryside and reinforces structural heterogeneity through greater poverty and exclusion.

Effects on natural resources and the environment

There are many reasons for the deterioration in natural resources, and most of them are to be found in agriculture. Poverty and agricultural modernization play an important role in the depletion of natural resources. In consequence, recent trends in agriculture have had a basically negative effect.

The type of modernization involved exhausts resources, as growing use of tractors affects soil structure and makes the land susceptible to erosion. More energy is also expended due to the use of fertilizers and pesticides. Irrigation increases, but poor management results in the salinization of the land.

Changes in the technological model, leading to more intensive use of resources and the conversion of natural ecosystems to other uses,

create, among other problems, deforestation, pollution and the overuse of resources and valuable species (IICA-GTZ 1992). A particularly critical case is the expansion of shrimping enterprises in mangrove swamps (Ecuador, Honduras, Guatemala) and depletion of groundwater due to flower production in Columbia.

The slowdown in demographic growth in rural areas to some extent alleviates the pressure on, and the additional destruction of, resources. But the lack of financing and investment for agriculture and the high cost of credit make it difficult to protect natural resources.

Finally, the lack of awareness and education, absence of regulations, and lack of effective government, private and social control[7] play an important role in the destruction of resources (IICA 1992; Moreno 1993). Likewise, corruption is also an extremely dangerous element, as it tends to thwart any attempt to provide a solution.

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7 The problem lies basically in establishing a legal framework and an institutional structure that would guarantee effective control in order to penalize productive activities that generate negative externalities for the environment and natural resources, and establishing incentives for those that make efforts to avoid causing damage of this kind.

THE EXPANDED AGRICULTURAL SECTOR: WHAT HAS BECOME OF LINKAGE?[1]

The process of agroindustrial linkages in Latin America and the Caribbean (LAC) has followed clear trends in recent decades. Production and consumption have experienced relatively dynamic growth, while agricultural production has faltered and agroindustrial and agri-food activities have remained very narrowly focused, and more recently, have undergone a sort of destructuring.

As economies have opened and deregulated, two closely interlinked phenomena have emerged. In the first place, when economies become more open and integrated, companies come under heavy pressure to compete domestically with foreign products and to seek out external markets, where they discover that competition is also fierce.

At the same time, public enterprises have entered into active processes of privatization, and public and private roles have been redefined. In fact, some public functions are actually being dismantled in certain areas that are strategically important services in the agroindustrial chain because of their implications for agriculture and agroindustry. These are: research, technology transfer and extension; financing and banking services; production of seeds, fertilizer and other inputs; animal health and plant protection; and quality control.

Competition and a more efficient private sector can be highly beneficial. They must, however, exist alongside processes and in environments in which producers and enterprises will have unhindered access to technology and know-how in the quantity, quality and prices they need. Only then can agriculture proceed with productive transformation, become more competitive, and pursue horizontal and vertical integration.

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1 Based on the document "Problems related to and the Implications of New Economic Development Models for Agriculture, the Food Supply, the Environment and Rural Poverty", presented at the Eighth Meeting of the IABA, Costa Rica, 1995.

In general, these processes and environments have not changed enough in LAC. Borders have opened very quickly[2], but under highly adverse external market conditions, as will be seen later. Because developed countries have offered very little reciprocity, and conditions of competition are frankly unequal for producers in the region's countries. Probably the most striking failure has been the lack of policies and actions that would encourage a more aggressive response to economic opening.

The main concern is how quickly the changes come about. More particularly, policy makers must be constantly aware of the need for import liberalization and export promotion to take place symmetrically and gradually.[3]

As a cautionary note, consideration should always be given to the possibility of transforming existing production capacities, rather than dismantling them. Otherwise, liberalization might move much too quickly, without foreseeing some of the implications.

The present situation is worrisome, as actions taken so far are insufficient to consolidate a full-fledged, efficient structure of services to back up the transformation of production and trade in agriculture and agroindustry. Below is a description of the main characteristics of each link in the agroindustry chain.

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2 "Most historical experiences, as well as the cases examined here, disprove the hypothesis that by neutralizing incentives, dismantling protection and eliminating subsidies, a country can bring about a spontaneous, low-cost reallocation of resources toward those sectors in which it has comparative advantages. Chile's experience demonstrates the high costs of drastic liberalization, when all selectiveness is abandoned. These costs (essentially transitional) are not easily offset by the greater growth that might eventually come about after adjustment is complete (Agosin and French-Davis 1994).

3 Experience shows that imports can be liberalized more effectively if sustained export growth is achieved first and the production structure has already undergone dynamic transformation. The East Asian countries bear clear evidence (Sachs 1987).

Consumption and its Impact

Consumption, the first link, is experiencing the following trends:

The consumption model of developed countries continues to spread and is gaining ground in Latin America and the Caribbean, where native products find their popularity waning.[4] The new pattern is characterized by high-energy, high-protein foods, growing reliance on animal protein, and burgeoning markets for industrialized products that are highly differentiated, produced and marketed by an increasingly monolithic structure, and disseminated massively.

New trends are emerging in developed countries, and the watchwords are "Natural!" and "New!" Products that contain no chemical additives or environmental contaminants are highly valued. New types of products, or "exotics," are also becoming very popular.

Broad groups of society are adopting partial or differentiated imitations of the consumer habits of developed countries. As part of this trend, industrialized foods account for an increasing proportion of local diets, the tertiary sector of the food industry is developing rapidly, with more added value in the form of services, and local diets are increasingly differentiated. Moreover, the process of "universalization" of consumption has intensified in recent years. Consumption is becoming increasingly industrialized, especially in the form of fast food and street sales in the region. This is a by-product of trade opening processes, entry of women into the work force, and growth of the informal economy.

These consumption trends interact in complex ways. Consequently, today's consumer model seems to hold ambiguous repercussions for agriculture, nutrition, poverty and natural resources. For **agriculture**, both in developed countries, and in this region, they have tended to make the sector more diversified and sophisticated. This, in turn, brings new possibilities for reorienting farming methods, and opens interesting marketing niches. The growing popularity of natural, innovative,

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4 " ... it is instructive to compare consumption trends common in the early 1960s (...) with those of the late 1980s, focusing on the relative weight of native or traditional components, which were the foundation of the popular diet, and the share of ingredients that, for lack of a more specific name, can be called "introduced." The tendency in nearly every region has been for the relative share of the former to decline. Thus, for example, the corn-based diet is losing ground in the Andean countries, Mexico and Central America. The same is occurring with tubers and legumes in Brazil, the Andean countries, the Caribbean, Mexico and Central America. By contrast, wheat and rice are gaining a larger share, as are vegetable oils" (Schejtman 1994).

additive-free consumer goods promises new markets for organic farming and "natural" industrial processing.

Natural resources will feel a different impact. This model continues to be based on a wasteful attitude, despite the increasingly common focus on mechanisms to reduce the use of and impact on natural resources. Therefore, the emergence of niches for natural, innovative products may be favorable for the conservation of natural resources.

The impact on **poverty and nutrition** has also been ambiguous. Nutritional levels are bound to improve with the development of balanced, nutritional, natural consumer products; but this impact will generally be felt only by high-income groups. Given current patterns of income distribution, the rapid spread of this consumer model intrinsically bypasses the majority of consumers in the countries of the region.

As societies increasingly adopt various parts of this consumer model, social costs will be higher per each calorie or unit of protein produced. Nutritional levels will inevitably suffer from the consumption of foods that have a high commercial value, little nutrition, and are widely, massively distributed. This will be felt above all by low-income consumers.

The market and its impact

Domestic and foreign markets are extremely important in the current economic model, providing the essential grounds on which agricultural and agroindustrial producers should base investment and production decisions.

Several current market trends are relevant::

World trade is much more dynamic than world production, but the region's export position is rapidly declining on world markets. LAC exports totaled 12 percent of world trade in 1950, but had fallen to only four percent by 1990 (World Bank 1994).

Nonetheless, the region is becoming more export oriented. In the 1970s and 1980s, exports hovered at around 15 or 16 percent of total GDP, but by 1993, the figure had risen to 23 percent.[5] **Basic commodity**

[5] From 1980 to 1993, GDP increased by only 29 percent, while production of goods and services for export rose by 89 percent.

exports are losing ground, while manufactured goods are occupying a growing share of total exports.

Heavy trade protectionism in developed countries in the form of tariff and non-tariff measures keeps our products from entering their markets. In 1991, the OECD countries transferred a total of US$320 billion to agriculture. Per-farmer subsidies averaged US$16,000. Farm producers in the United States received US$22,000 on average, and Scandinavian farmers averaged US$35,000 (FAO 1994). Under the terms of the Uruguay Round agreements, these barriers will be sharply curtailed by the year 2005.

The demand for agricultural products is falling worldwide. Many causes can be cited, including improved agricultural production in regions which previously suffered deficits. Other factors are declining population growth rates (1.8 percent annually in the 1980s), slowdown in the world economy and falling income levels in many underdeveloped countries.

The region's total export activity continues to be concentrated in only a few countries and in less dynamic sectors.[6] Mexico, Brazil, Argentina and Venezuela continue to ship over 70 percent of the region's total exports. Only five countries (Brazil, Argentina, Chile, Mexico and Colombia) account for over two thirds of the region's agricultural exports.

The international prices of most agricultural products have been experiencing a prolonged slide. World prices fell by over 68 percent from 1950 to 1993. Hardest hit were tropical commodities (coffee and cocoa, nearly 70 percent; sugar 60 percent; rubber 50 percent; cotton 45 percent; and oilseeds 40 percent) (FAO 1994).

The terms of trade continue to be very unfavorable for the region's agricultural products. The international ratio of goods traded fell by 63.6 percent from 1980 to 1993. In 1993, Latin America exported over twice as many goods as in 1980 (214 percent). However, it received only 50 percent as much foreign exchange (FAO 1994).

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6 "This mainly includes: textiles, foodstuffs, raw materials of agricultural origin, petroleum, grains, tropical products such as sugar and tobacco, and mineral raw materials for metallurgy and iron and steel production. By contrast, the most dynamic sectors, such as high-technology products, electric and electronic supplies, computers, telecommunications, plastics and automotive parts, are concentrated in very few countries and are not representative of the region's exports" FAO 1994).

Our products are faced with competition from newly-emerging countries whose comparative advantages are similar to or even greater than our own (low-cost labor, natural resources, proximity to markets, etc.), or that have dynamic competitive advantages. This raises the pressure to compete for markets in developed countries, and even in the region's own home markets.

Domestic demand is extremely low and international and national trade practices are becoming extremely complex, with the following features standing out: i) an active, dynamic international marketing mentality; ii) successful implementation of sales strategies, marketing logistics and advanced market intelligence methods; iii) accurate, up-to-the-minute knowledge of markets and their structures, dynamics and preferences; iv) more competitive marketing; and v) growing influence by a market in which "demand creates its own supply," and "production creates its own demand;" these are consumption-inducing tactics practiced basically by the large transnational consorcia and companies.

These complex trends and the dynamic ways they interact are having an ambiguous impact on agriculture, nutrition, rural poverty and natural resources.

The outward orientation has had mostly positive effects on **agriculture**; it also has certain negative characteristics that are detrimental to the sector. First, it is true that the boom in world trade has created a favorable environment and a new orientation for the region's economies; however, it is also true that our countries' relative share of world trade has fallen drastically. In the majority of the countries, the agricultural sector has lost market share and even absolute volume of trade on the world agricultural market and even in the countries' own structure of exports. This has coincided with a slump in the worldwide demand for agricultural products, all of which has minimized the benefits of market growth.

Second, when new products enter the international market to compete with our exports and even with our domestic products, the effect is negative if competition is less than transparent or genuine; but when competition is honest and reflects transparency and healthy trade and production practices, it induces transformation that leads to greater competitiveness and more efficient allocation of resources.

Third, agriculture may find a strategic avenue for expansion by pursuing the still-incipient but significant trend toward increased exports of products that are novel, organic, agroindustrial, highly profitable, value-added, highly technological, and competitive.

Fourth, while the new markets are very complex, they also offer the instruments, information and know-how necessary for taking an active stance toward trade. The positive impact on agriculture is three-fold: a) markets become more transparent, and because producers have a degree of bargaining power, the old, distorting trade structures begin to disappear; b) production is systematically, continuously attuned to market signals; and c) production tends to become more stable and efficient.

Fifth, as international prices have declined drastically and terms of trade have crumbled, the sector has suffered. When international price declines cannot be offset through increased productivity or other mechanisms, agriculture becomes less profitable.

Sixth, the region's agriculture can only be hurt when producers in developed countries receive generous subsidies and heavy tariff and non-tariff protection. It is true that the payment of fat subsidies to agricultural producers in industrialized countries has an impact on international prices, albeit usually a minimal one; it is equally true, however, that producers in developing countries are operating in an environment of open borders in which their competitors have a usually substantial level of artificial profitability, guaranteed ex-ante. From every angle, the possibilities for sustained growth in agriculture are threatened by the failure of the developed countries to exercise reciprocity as our countries open their markets and curtail subsidies.

In terms of **nutrition**, market trends have been mostly favorable, although in some senses, the benefit has been limited. The booming domestic and international market inevitably improves the food supply. These benefits are being inhibited by certain problems. Over the short term, subsidized foodstuffs may be more accessible. Over the medium and long term, however, such practices are of little value and become unsustainable. They discourage farmers from producing these foods and eventually push up food prices. It is also true that the increase in exports generates foreign exchange and can improve nutrition by making foods more available and easily accessible. However, as was stated, the ultimate impact is low and limited.

Unregulated, open markets can be expected to have a beneficial impact on reducing **poverty**. As we have seen, more trade means more

food production, more transparent price structures, generally lower prices, and a greater food supply. All this would tend to reduce poverty. If the opposite were to occur, poverty rates would rise.

It should be stressed that the persistence of distorted, noncompetitive marketing processes and market structures would worsen poverty levels, forcing the poor to sacrifice undue amounts of their scarce monetary or other kinds of resources. For many of the poor in Latin America and the Caribbean, especially in rural areas, this is the reality. However, both formal and informal trade activities generate employment and income, even for street vendors, many of whom are of peasant origin.

Agroindustry and its Impact

The region reports the following trends in agroindustry:

Agroindustry continues to account for a large share of overall manufactures (nearly 20 percent) and of the total agri-food industry (over 80 percent). It is more buoyant than agriculture per se, even during times of economic recession.[7] Agroindustry in general, especially food agroindustry, continues to be highly heterogeneous and polarized.

"In Mexico, for example, 8 percent of all agri-food companies generate over 50 percent of production, while at the other extreme, 63 percent of the units generate less than 4.5 percent of total production. In Colombia, the eight largest agri-food companies generate 55 percent of gross production value (Urriola and Cuvi 1986, as cited in Schejtman 1994); in Chile, 11 percent of the establishments accounted for 75 percent of aggregate production value, while at the other extreme, 41 percent of the companies generate only two percent of the aggregate value" (Martner 1989, as cited in Schejtman 1994).

New agroindustries are emerging. Various countries of the region have recently embarked on a fast-moving process of creating new agroindustries. Basically, these companies are highly profitable, very integrated, export-oriented, and specialized in new types of products. They have modernized very quickly and target specific market niches.

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7 Nonetheless, agroindustrial products continue to make up a much smaller share of total agri-food consumption than in developed countries. Agroindustry accounts for less than 30% of consumption in most of the countries of Latin America and the Caribbean, compared with 80% to 90% in developed countries (Schejtman 1994).

Large agroindustries are consolidating. These companies first appeared under the momentum of new urban growth processes in the region in the 1950s, gaining speed in the 1960s and 1970s. Although most are transnational companies, generally associated with agri-food production, the trend has also swept through large locally-owned firms, some of which have begun to internationalize their trade and even their production within the region. This has happened mostly under agreements for economic integration, liberalization and opening of borders.

Traditional agroindustries such as sugar and cotton have lagged behind. This trend is not universal, as many traditional agroindustries in such fields as bananas, coffee, cocoa and others have undertaken total or partial processes of technological modernization (IICA 1992). This is especially true in countries where public enterprises have been privatized.

Many rural agroindustries, especially the peasant companies created in the 1970s, have survived; others have folded, and a few have consolidated. At the same time, contract farming, bringing industry and agriculture closer together, is still a weak movement but has recently been showing signs of development. Some countries have seen the formation of bipartite partnerships (business / farmers) or tripartite arrangements (farmers / state / business).

All these trends interact in a dynamic relationship. As in the cases already described, whether their net impact is positive or negative depends largely on the nature of relationships among the parties involved, how much knowledge and information they possess and can wield effectively, and how much clout they have, especially in the form of bargaining power.

For example, when agriculture and agroindustry are fully and directly interlinked, transaction costs are lower. If integration extends to product marketing, agroindustry generally provides a greater transparency to the markets. In many cases, agroindustry can provide a source of production financing. Thus, it offers a means to modernize agriculture and to introduce technological innovations, raising productivity and lowering production costs.

Agroindustry generally serves as a driving force for **agricultural production**. It nearly always raises employment levels and generates greater added value. It can become an agent for consolidating agricultural production, especially among small and medium-scale

peasant production units that tend to be widely scattered. Thus, it offers excellent possibilities for obtaining economies of scale.

Agroindustry is generally associated with better-quality products that have a more attractive appearance. When it engages in export activities, in many cases it is able to buffer or even reverse international price declines and deteriorating terms of trade.

Agroindustry has generally lived side by side with the skewed brokerage structures that continue to be the norm in many rural areas, and that usually block any real integration among activities. The anticipated benefits of agroindustry become distorted in the face of resource flight and transfer of farm income. This occurs, for example, when agricultural producers find that they are expected to shoulder the added risk[8] unilaterally.

Moreover, several major barriers stand in the way of introducing new agroindustries, mostly involving economies of scale and control over certain technological processes that require massive investment. Another visible impediment is that production in certain types of agri-food or agroindustrial activities is highly concentrated.

The most beneficial impact of agroindustry on **poverty** is that it generates employment and income for poor laborers and peasant farmers in rural zones. The impact on employment is greater in agriculture and agroindustry than in any other economic activity.

Agroindustry has a generally healthy impact on **nutrition**, despite certain drawbacks. On the positive side, it preserves highly perishable foods, thus improving prices and reducing seasonality. It also facilitates food handling and preservation, improving hygiene, quality standards and nutritional levels. On the negative side, methods of food processing, hygiene and quality control can jeopardize nutrition when preservatives are used incorrectly, or when the focus is on products harmful to human health because of their low level of nutrition and poor hygiene.

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[8] Agroindustry generally requires agricultural producers to engage in monocropping, which is inherently risky. Typically, farm producers become dependent on the industry's timetables and find that they alone must bear the greater economic risk. Thus, the processing company is able to cut its own risks by raising those of the farm producer.

Services and their Impact

Many public services prior to the transition were inadequate and inefficient, and access for most producers was limited and selective. As services have been privatized and the government has moved away from an active role, the private sector must necessarily become more involved. This means services become more market orientated and are designed to meet real demands. However, in many countries and service sectors, very little participation has been forthcoming from the private sector, NGOs, producer organizations, and the like.

The needs for technology have changed in response to numerous factors. First, as markets have opened, competitive pressure has grown fierce. Dynamic competitive advantages have become the key to winning new markets, which will require transformation of technology, trade and management. All of this means new priorities, new technologies and new services.

Many new problems and challenges are arising from this state of transition. One of the most critical is the very difficult task of modernizing services for financing and human capital, which for too long responded more to bureaucratic concerns than to true demand.

The three main problems to be overcome in the short and medium term are: a) production and supply; b) producer access to services; and c) setting priorities and protecting them through laws and regulations.

In nearly all the countries, the need for most services far outweighs supply. As a few examples, information services are still in their infancy, animal health and plant protection services are a crippling bottleneck, research and extension are inefficient, and marketing services are inadequate.

Finally, before priorities can be set or rules and regulations can be defined to govern services, a clear picture needs to be available of the scope and orientation of existing services. The final solution will depend to a great extent on the "mix" between public and private functions, and above all on the extent to which an institutional structure is needed for this purpose.

Under the import substitution model, technological progress was desirable but not absolutely essential. Under today's model, it is desirable, essential, and an absolute prerequisite for anyone who hopes to continue being present in the markets.

Services provide the material and technological foundation for boosting competitiveness all along the agroindustrial chain and in agriculture itself. Forms of modernization that exclude certain production sectors have begun to spin in a vicious circle with poverty, malnutrition and destruction of natural resources. It is a circle that can be broken only by injecting needed technology services, information and knowledge.

In summary, the entire chain of agricultural linkages is severely atrophied. The current model of consumption is characterized by exclusion, poses high social costs, plunders natural resources and produces nutritional imbalances in the diet. At the same time, domestic markets are often limited and lack transparency and vitality. Finally, international markets are extremely complex and forbidding.

Moreover, the structure of agroindustry is very underdeveloped and imperfect, and the system of agricultural and agroindustrial services is inadequate. Finally, the agricultural sector is lagging behind the rest of the economy in terms of growth and modernization and is failing to meet up to its own potential.

AGRICULTURE AND MACROECONOMICS: IS THE ANTI-AGRICULTURE BIAS GONE? IS THE RESULT SUSTAINABLE?[1]

Before proceeding to analyze the performance of agriculture under today's model, we will take a brief look at the adoption of stabilization and structural adjustment programs in the region in the late 1980's, which began to show macroeconomic fruit immediately.

The first stage of stagnation and economic and social recession lasted basically until the end of 1980s. The 1990s saw the beginning of a new phase of economic and social recovery (Rosenthal 1995).

Economic indicators began to grow once more, starting with total GDP (by 3.4 percent) and per-capita GDP (by 1.7 percent). Plummeting employment figures gradually began to rebound. Productivity improved, which had not occurred in the adjustment phase.

Inflation had soared everywhere, becoming hyperinflation in many cases; but now it was dropping to moderate or even low levels. Public finances came into balance. Exports took on new vitality, although quickly surpassed by imports. Previously low net flows of external capital pointed skyward, and net transfers of financial resources became positive, offsetting ballooning deficits in the current account. Savings and investment rates moved from low to moderate and rising. After poverty rates soared throughout the 1980s, matters began to improve somewhat in the 1990s. Wages, which had collapsed totally, began to recover during the same period.

It is still too early to tell whether the events in the region in early 1995 mark a turning point in this stage of recovery, or merely a passing blip. However, it would be wise to remember that stabilization and adjustment programs are being reinforced.[2]. Thus there is no compelling reason to believe that these events signify a reversal in the road to economic recovery or to the impressive progress achieved in the 1990s. Nonetheless, it is undeniable that progress is slowing down in such areas as employment, reduction of poverty and economic growth.

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1 Based on the document "Problems related to and the Implications of New Economic Development Models for Agriculture, the Food Supply, the Environment and Rural Poverty", presented at the Eighth Meeting of the IABA, Costa Rica, 1995.

2 In Mexico, Argentina, Venezuela and Costa Rica.

A number of problems have resurfaced during the decade that began in 1990. First, the **trade balance** and the current balance of payments have once again gone into the red. The deficit in the region's current balance of payments grew from US$35 billion in 1992, to US$45 billion in 1993 and US$53 billion in 1994. The trade balance in the countries of Latin America and the Caribbean posted deficits of US$10 billion, US$15 billion and US$21 billion in the same three years. These deficits are placing the countries under relentless pressure, especially over the past two or three years.

The deficit coincides with the widespread, abrupt, drastically liberalizing trade reforms that took place in the majority of the countries over the two or three years from 1989-90 to 1992-93 (Agosin and Ffrench-Davis 1994).

The second problem has to do with the characteristics of **external capital** flowing into the region. When capital started entering the region once again, net flows became positive beginning in 1991; even so, these flows are highly volatile and extremely speculative. In fact, from 1991 through 1994, an average of US$50 billion entered the region every year on the average. Mexico and Argentina alone accounted for nearly 70 per cent of this, mostly in form of short-term resources.

Beneficiary countries are not exempt from running destabilizing risks, given the very volatile, short-term nature of these resources. The money is not connected to production activities, oriented instead toward seeking high returns that can be quickly converted into cash. ECLAC had already started warning of this situation in 1991, and Venezuela in1994 and Mexico, Argentina and other countries in 1995, demonstrated how very volatile this capital can be.

The third problem is the gradual appreciation of **exchange rates** in many countries of the region. This was partly triggered by the shift in international capital flows, and also reflects the fact that productivity has not grown fast enough to offset overvalued currencies. Unless the countries make substantial progress toward becoming more competitive or adopting new stabilization and adjustment programs, this exchange-rate imbalance brings a loss of international competitiveness, not only for exports, but also for import substitution. The current account, and the balance of payments as a whole, are thus placed under severe pressure in these countries, and delicate macroeconomic balances come under threat of being destabilized.

A fourth problem coming to the surface is that the countries need to raise local **interest rates** to attract external and internal capital flows. The problem is that savings and investment possibilities become inaccessible because of the high cost of money. The process of modernizing production and trade then suffers lengthy delays.

The fifth underlying cause for concern continues to be the **foreign debt**. Although this issue received much attention in the early 1980's, it has clearly faded from view lately. It would be very encouraging if the situation continued to improve, but in fact, there are no convincing reasons to believe that another crisis is not at hand. At the time the 1982 debt crisis broke out, US$330 billion dollars in debt has been disbursed. By 1995, the total had topped US$550 billion. While these figures represent a worrisome increase from 30 percent to 44 percent of the GDP in those years, during the intervening period it soared to nearly 60 percent. As a reflection of the export push in the countries, debt service has dropped from 42 percent of exports to 18 percent.

However, if the external environment and domestic conditions in the countries were to worsen seriously, the governments would quickly come up against barriers to meeting their present or future obligations, and the debt problem would explode back into the headlines. The debt has not gone away. Even with safety valves and emergency help, as occurred when Mexico quickly received assistance from international banks such as the IDB, the United States and other countries, the problem is not solved.

One of the conclusions that can be drawn from the difficult straits some countries are experiencing is that stabilization programs and economic reforms are not sequential processes, but rather need to be applied simultaneously. In fact, the stabilization programs need to be given new relevance and a leading role.

Many of the countries strengthened their stabilization programs in 1995, including Mexico, Argentina, Venezuela (1994), Costa Rica and Brazil. This demonstrates that such programs continue to be one of the most important priorities on the agenda for the 1990's.

Under these macroeconomic conditions, LAC exports and import substitutes can quickly become less competitive. The countries begin losing their ability to generate and save foreign exchange, and begin withdrawing from their markets. The trade balance deficit deepens, and the current balance of payments comes under greater pressure.

The problems can be ascribed basically to the macroeconomic setting that has been taking shape in the 1990s. Much can be achieved through the stabilization and structural adjustment programs being adopted, along with relevant macroeconomic policies; on the other hand, problems can actually be worsened if these programs and policies are not handled correctly.

Agricultural production trends have followed three distinct phases. Prior to the crisis of the 1980's, agriculture generally grew more slowly than the rest of the economy. In the most critical phase of the crisis, from 1980 to 1985, agriculture was actually growing more rapidly than the rest of the economy. Since that time, its growth has been comparatively slower. The explanation can be found basically in the fluctuations of overall economic growth, rather than variations in agriculture.

Once again, agriculture tends to be free of extreme cyclical changes. It flows a dynamic that is more slow-moving and long-lasting than other economic activities. Indeed, during the crisis of 1980's, agriculture's share of the national economy increased in most of the region. The sector thus served as a buffer to cushion the countries from the crisis.

This happened because agriculture succeeded in growing at a rate that, while insufficient, nonetheless outpaced other activities, and in many cases, surpassed even population growth. This growth took place under many adverse conditions, including falling prices on domestic and external markets, drastic credit and financing limitations, high interest rates combined with insufficient investment, and curtailment of public resources for training and research.

Thus, the vicissitudes of the economy are not clearly reflected in agriculture, which maintains relatively stable growth. In many countries, even during good years, agriculture is in fact one of the slowest growing activities, sometimes with growth rates even lower than population growth, while other economic and commercial activities recover much more quickly.

Because agriculture has seen very little influx of investment, credit, and capital for many of its activities in the region, transformation of the sector has been impossible. This in turn prolongs the sector's backwardness, capital depletion and low competitiveness. The heavy loss of capital dates back to the time when import substitution models were first adopted, and it became noticeably worse as the sector began to serve as an economic buffer in times of crisis.

Although structural trends from the past have strongly influenced the recent unsatisfactory performance of agriculture, certain additional problems are arising even now, and need to be discussed openly. These latter-day problems have at least as much impact as the earlier ones, sometimes even more.

Taking stock of the overall economy, it is now time to ask: Has the anti-export, anti-agriculture bias been eliminated sustainably? The answer can be found in the complex interactions between agriculture and the newly emerging development model.

We appear to be witnessing the final curtain of the economic recession that characterized the entire decade of the 1980s. The turnaround, which began in 1991, should provide new possibilities for attacking poverty and improving nutritional levels.

Per-capita GDP growth rates had remained stubbornly negative, with a cumulative nine percent decline from 1980 to 1990. However, they appear to be on the rebound, with annual rates averaging 1.7 percent from 1991 to 1994 (ECLAC 1994). Most notably, numerous countries, including Argentina, Bolivia, Chile, Mexico, Uruguay and Venezuela, managed to reduce absolute poverty rates in both urban and rural zones during the early years of the 1990s.

Because economic growth and poverty reduction are so closely intertwined, at least two questions must be asked about how long this association can be sustained.

i) The first question is two-pronged. On one hand it looks at growth, which in a number of countries is based mostly on an influx of foreign capital and appears to orient investment more toward speculative and tertiary activities than toward production or processing, or to improve productivity and competitiveness.

ii) The second question is whether the alleviation of poverty in this process of resuming economic growth reflects productive employment of the poor, or simply stronger social assistance programs.

In either case, it is clear that the alleviation of poverty will not be sustainable if it is based only on assistance measures, and not on productive employment. Equally important, growth of the economy needs to be sustainable, meaning that production must be transformed and made more competitive in ways that go far beyond mere exchange-rate

manipulation. An overvalued currency is not the solution, as it actually tends to inhibit the transformation and modernization of production.

It is very likely that agriculture has made only a small contribution to relieving poverty and improving nutrition. In fact, improvements are associated more with appreciating exchange rates, investment and growth in other activities, and the implementation of narrowly focused aid and poverty relief programs. The failure of agriculture to contribute to the alleviation of poverty was due to very slow growth in the sector. Agriculture also did very little to improve under-employment problems in the cities, in fact worsening the situation because of its tendency to generate underemployment and rural-to-urban flight. Moreover, it played a negligible role in generating skilled employment, although it probably did contribute to lower inflation.

Even when macroeconomic policies hold sway over agriculture, structural conditions in the sector tend to counteract the impact. Examples of these structural conditions include: very little resource mobility; most activities are subject to such biological factors as long-term production cycles and heavy space requirements; particularly complex processes of price formation and markets; and most of all, generally low income elasticity of demand for its products.

Why has agriculture failed to grow as much as the rest of the economy, or even to live up to its own potential? A number of causal factors can be cited. Some interpretations stress four different realms of analysis: macro, micro, meso and meta.

At the macro level:

i) The macroeconomic environment has been favorable for recovery; thus, the sector's shortcomings must lie inside agriculture itself.

ii) A favorable macroeconomic environment, in and of itself, is not enough to trigger the anticipated changes in agriculture.

iii) This environment still needs adjustments, some of which are not favorable for agriculture; this requires more attention.

iv) A number of macroeconomic policy constraints can be cited, including: overvalued currencies, which jeopardize competitive positions on both the domestic and international markets; local interest rates which continue to be higher than international rates; the trade balance and balance of payments in the countries continue to post growing deficits; a

resurgence of high inflation rates in some of the countries; measures are needed to deter the spurious flow of external capital; mismatched savings and investment cycles; and even errors in managing macroeconomic balances.

v) Many adverse factors lie in the external environment, such as; economies are opening up and tariff levels are at a minimum, but the developed countries have not fully reciprocated; impenetrable barriers continue to block the entry of our products; demand for these products is contracting; unfavorable terms of trade and declining international prices; high subsidies for producers in developed countries; and so forth.

vi) Even though the macroeconomic framework is favorable for reactivating production, agricultural and forestry producers are failing to pick up the signals of this new environment.[3]

At the micro level:

i) Structural adjustment in agriculture, where it has existed at all, has lagged behind or taken place inefficiently.

ii) More time is needed before current structural reforms produce visible change.

iii) There is still resistance to change because of the force of social, cultural and political factors that need to be reconsidered whenever transformation is induced.

iv) The various regions, products, producers, production conditions, marketing processes, resource endowments and production potential are extremely heterogeneous. As a result, all policies have differential impacts.

v) The agricultural sector is severely eroded. First it was placed at the service of the import substitution model. Then it needed to redouble its contributions during the crisis of the 1980s, when the countries turned to agriculture to extract economic surplus and resources. The sector ended up with chronic capital depletion.

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[3] In other words, certain obstacles or "brokerage structures" distort the price structure and the process of price formation; ultimately, they distort the efficient allocation of scarce resources. This situation particularly works to the detriment of small-scale producers and the different segments of the peasant farm economy (Escudero 1991).

At meso level:

i) When the government began to redefine its role in providing services, and to pull out of many areas of activity, a large vacuum was left behind at key points for agriculture. Economic agents of civil society are slowly beginning to fill these gaps, but it is not enough.

ii) Even when these gestures by the private sector are somewhat effective at micro levels, they continue to be limited, isolated efforts. Higher-level processes need to be set up to strengthen and unify such localized efforts.

iii) There is a need for "sectoral" policies per se, or meso-level policies to drive the processes of transformation, recovery, opening and external integration.

iv) The signals exchanged between agricultural production units and the environment are subject to interference and often distorted by negative brokerage structures that block transparent communication between the transmitters and receivers of these signals.

At the meta level:

i) There are large gaps in the ensemble of public and private institutions in the expanded agricultural sector, both in institutions that play a productive, regulatory or service role, and those involved in participation, dialogue, consensus-building, monitoring and follow-up on commitments. This also affects relationships among the people engaged in these activities and their relationships with other macroeconomic, macro-social and macro-political institutions.

ii) The agricultural system[4] is barely governable because of the problems present in every dimension; this is heightened by institutional gaps and the lack of information and communication.

By combining these different positions, it is possible to derive two broad provisional conclusions:

i) First, it needs to be recognized that each of the above statements contains part of the truth. However, these partial truths can be fully

[4] This embraces all activities that target agriculture and its interlinkages in the four dimensions described here.

identified only in each different country of the region. The task still pending, then, is to begin this type of analysis.

ii) Second, agriculture is subject to powerful influences by the macroeconomic environment and by different dimensions in which the sector operates, including its linkages with agroindustry, its external markets and its own limitations. It is this full array of dimensions, in which the macroeconomic environment stands out, that will determine the role agriculture is to play.

The current model, despite its inherent limitations, is unquestionably less restrictive and more favorable for the development of agriculture than the import substitution model. However, it is also clear that this policy environment does not go far enough and is not entirely favorable.

THE VISION AND MISSION OF AGRICULTURE IN THE YEAR 2020[1]

This chapter will take a new look at the trends in agriculture mentioned in the preceding chapters. These are discussed in the context of the wide-ranging, comprehensive transformation of the economy that overthrew the economic development model of the region.

Agriculture is now in a completely different position than it had been heretofore, inasmuch as it now plays a different role than under the import-substitution model.

Furthermore, agriculture has become highly interdependent with other dimensions and variables, both in the external, macroeconomic and agroindustrial context, and in the microdimension in which it operates. It is also closely linked to food production, nutrition, poverty, the deterioration of natural resources and competitiveness.

In this chapter, an effort is made to project some of these trends to the year 2020 with a view to reflecting on what might be the most appropriate approach for action strategies for the present. The first question to be asked is whether it is possible to define and implement short- and long-term strategies that would respond to the challenges arising from changes in economic policy and to improve the situation of agriculture, food production and the environment in the Americas, looking towards the horizon of the year 2020.

It is extremely difficult to project trends based on a situation such as today's, which is so fraught with transformations and ambivalence, and in which it is not clear what the environmental situation will be over the next few decades. Change, in fact, will be the only factor that remains constant. Beyond this difficulty, however, the search for answers will be Interesting, inasmuch as the question itself calls for reflection on the current view of agriculture. In fact, this view is being severely tested by the turn of events themselves and by the challenges in the present and the foreseeable future.

Three provocative statements reveal the extent to which the rigid traditional view of agriculture is being brought into question.

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1 Based on the document "Problems related to and the Implications of New Economic Development Models for Agriculture, the Food Supply, the Environment and Rural Poverty", presented at the Eighth Meeting of the IABA, Costa Rica, 1995.

In the first place, it might not be unreasonable to say that trying to imagine what agriculture will be like in the year 2020 is just as much a challenge as it is to imagine it today, in 1995. This is so because those who hold the rigid traditional view of agriculture cannot understand that the world, including agriculture, is changing rapidly, and hence, all kinds of boundaries are being erased, i.e., economic, ecological, social, political, scientific and technological boundaries, and especially, the boundaries of know-how and of world views.

In the case of the economic and social agents concerned with agriculture, especially those involved in analysis, production, policy making and management of programs and organizations, and even those responsible for globalizing the economy, changes are taking place too rapidly to allow for a proper decoding and understanding of their impact on agriculture.

In the second place, it is not unreasonable to suggest that agriculture itself does not hold the solution to the problems of the environment, food and nutritional security, rural poverty and even production of and trade in agricultural products, although it can make a substantial contribution to that end. The solution is not to be found solely in agriculture. It is more universal than that, inasmuch as account must also be taken of overall rural issues, as well as of services, urban issues, industrial aspects, macroeconomic factors, and the entire economy and society of a country. The world economy and societies are also increasingly important.

By the same token, solutions will not always be of a similar type, inasmuch as they will involve economic, ecological, scientific and technological, social, cultural, institutional and political factors.

In the third place, it should be noted that an understanding of current changes and their impact on agriculture will greatly help in meeting the challenge of trying to picture agriculture and define an action strategy aimed towards the year 2020. This is the case basically because the changes that have taken place since 1982 have and will continue to have significant and lasting effects on our countries over the coming years.

The Probable Scenario in the Year 2020

The probable scenario in the year 2020 will be one in which countries are almost entirely interdependent on each other from the economic, technological, ecological and probably, also, cultural and political standpoints. The globalization of the economy will have been

consolidated and national boundaries will be no more than demarcation points between countries that have already become deeply involved with each other.

Let us now project ourselves into the year 2020 and imagine the scenario, based on some of the more visible medium-term trends that are already taking shape.

The globalization of the economy has been consolidated. As we imagine ourselves in the year 2020, we can state that worldwide integration in the field of trade, investments, capital flows, technology, communication and manpower has created a network of ties among nations that have made them vitally interdependent. The establishment of trade blocs has facilitated multilateral agreements that are leading to hegemonic patterns of world economic leadership.

International trade flows are multiplying rapidly. International opening to trade of goods, services, investment and capital, manpower and technologies, has lent great vitality to world trade, which is growing more dynamically than world production, thus reinforcing the trends that had been taking place since World War Two.[2]

The growth of world trade will be furthered as a result of the successful agreement reached at the Uruguay Round of GATT, as well as with the entry into force of the North American Free Trade Agreement (NAFTA) and the various free trade treaties and economic complementarity agreements signed by many countries, especially in Latin America. The Summit of the Americas provides a significant incentive to trade integration processes in the hemisphere.

The world market and national markets are already free of without major distortions. Distortions that do exist are short-term and circumstantial in nature, whether they are the result of unfortunate State intervention, the existence of monopolies or power groups, other market failures, or poorly developed markets. Competition and price systems operate more freely, but sometimes work simultaneously with specific intervention measures aimed at correcting distortions and market failures.

The markets of developed countries are open, on a reciprocal basis, to products and services from other countries. Free access to markets of the developed countries would allow the developing countries to obtain additional revenues from exports, in amounts equivalent to the

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2 According to World Bank estimates (World Bank 1994).

amounts received in aid from those countries during the 1990s. According to different estimates, the underdeveloped countries of the world stand to benefit from an additional agricultural market of up to US$70 billion per year, at least twice the annual value of agricultural exports from LAC during the 1990s (World Bank 1994).

The fact that the main macroeconomic variables are stable throughout the world is a factor that fosters the growth of the underdeveloped countries. Another positive factor is the recovery of the economy of the United States and, in general of the Group of Seven (G-7), whose growth rate over the next ten years will be more than double the 1.2 percent recorded between 1990 and 1993. In addition, the inflation rate of these economies will decline to an estimated 2.7 percent per year. International interest rates will also remain low, and international prices of major products are expected to stabilize. All the above will go hand in hand with a strong capital flow towards the underdeveloped countries.

It is well known that a stable macroeconomic environment is one of the most important public goods that the government can guarantee. The macroeconomic imbalances that occurred during the mid-1990s and created significant vicious circles have evidently been quickly deactivated, given the experience gained by the countries over a long period of time.

The third industrial revolution is fully underway, and continues to be one of the fundamental moving forces behind economic and commercial growth. The world is different now, as a result of the rapid changes that took place after World War Two. These changes have occurred over a wide range of fields, including science and technology, information and communications, art and culture, welfare, health and the economy. The economy, the society and the state have undergone a metamorphosis. What has taken place has been what Peter Drucker called a "dividing line," i.e., a transformation of major proportions, of the type that happens only rarely in the history of mankind and which leads to a new world – "where the world view, the basic values, the social and political structure, the arts, and the key institutions of society undergo major adjustments" (Drucker 1994).

Technological progress plays a central role in all this. The first technological revolution, from the late eighteenth to the mid-nineteenth century, was characterized by the invention of the steam engine and the use of coal and steel. The discovery of oil and the use of electricity and the internal combustion engine were the hallmarks of the second

industrial revolution from the late nineteenth to the mid-twentieth century. The distinguishing feature of the third industrial revolution, from the mid-twentieth century to the present, is the exploration and manipulation of the structure of matter. We are now living in a "global village;" the world has shrunk as technology has advanced at a dizzying pace, allowing almost absolute intercommunication and integration. Economic, ideological and conceptual barriers are falling down everywhere.

Open economies and integration arrangements have greatly encouraged innovation and the dissemination of working methods, as well as better resource use. Technical progress has allowed for a much more productive use of resources than at any other stage in history. However, productivity has been growing more slowly in the underdeveloped countries than in the industrial world.

Emulating countries such as the Republic of Korea, the United States, Japan, Singapore and the more prosperous economies of Europe, the countries have been making an effort to gain competitive advantages on the world market, following the principles of competition.

The free circulation of technology has helped encourage national producers to reduce their production costs through the adoption of new techniques, and to create new and better products. Opening up to trade in goods and services, as well as to foreign investment, and minimizing the use of quantitative and non-quantitative restrictions allowed for an international flow of many types of tools, such as foreign investment, study abroad, technical assistance, export licenses, transmission of know-how through the movement of manpower, and exposure to foreign goods, and techniques used in the import of capital, equipment and intermediate production inputs.

Know-how is the fundamental factor of production. With these changes, know-how has become extremely important, as it is now the main factor of production. Thus, information has become the basic input in almost every sphere of life. The importance of know-how transcends its role in the economy, as a factor of production, inasmuch as it now is the source of power throughout society and the government (Toffler 1990).

Investment in human capital is still one of the fundamentai levels of technological and economic development of a country. Obviously, education accelerates the adoption of new techniques and makes the domestic economy more productive. Investing in human capital is highly profitable from the economic standpoint. In the

underdeveloped countries, this activity (as well as health, nutrition and social security) has not been left to the free play of market forces, especially in order to ensure that the poorest sectors of the population have productive jobs, education, health, food and social security (ECLAC 1992).

There is agreement among the different schools of thought in economics, as well as among international agencies, governments and business in general that intellectual endeavor and the human resources involved in it are the key elements of any technological revolution and of economic, cultural and social change, and that they are essential to any effort to consolidate a new development style.

Industry rules supreme. As a result of the first two technological revolutions, the hegemony of industry over all other activities was well established, and processes became increasing interdependent, as economies were globalized and countries were integrated. But with the third technological revolution, this hegemony was further strengthened and extended, as it became much more specialized, diversified and universal. In this process, industry has led all other economic activities, not only triggering and shaping its own production and commercial processes, but also forcing industrialization on other activities.

Agriculture was also affected by the universalization of industry in many countries, especially in the developing world, where it had been making significant progress towards industrialization on its own. This has been the case, although to different extents and in different ways, of the Eastern Asian countries, China and several Latin American and Caribbean countries.

In these countries, there has been a rapid increase in the use of computers on farms and the application of modern irrigation techniques. The analysis and assessment of soils and of organic components and nutrients has been automated and computerized, improved seeds have been developed that are resistant to pests and droughts. Other techniques are biological controls based on the use of microorganisms, self-fertilization of plants, accelerated plant growth, advanced diagnosis of plant and animal diseases, reproduction and genetic breeding of animals, embryo transplants, and the use of information science and telematics in marketing.

Another significant development is the use of biotechnology in the food industry; the increasing use of raw materials of agricultural origin; and the use of agriculture for nontraditional purposes, as well as the

discovery of new applications for agricultural products, byproducts and waste materials. The recent burst of globalization in the economy has drawn much of its momentum from technological transformations taking place in industry; under the impetus of the same globalization, emerging technology is now becoming ubiquitous.

The world economy is characterized by the predominance of flexible productive structures that make it possible to compete with lower unit costs and to meet the demands of markets that are increasingly specialized and dynamic. This has meant that production lines have had to be integrated both vertically and horizontally, so that they are perfectly symmetric, interdependent and versatile. Consequently, the relationship between agriculture and industry has become so close that the two are barely distinguishable.

The rate of growth of the world population has continued to slow. By the year 2010, the world population will be 7.2 billion, by comparison with 5.3 billion in 1990. Ninety-four percent of the total population increase (1.8 billion people) occurred in the developing countries. Nevertheless, the rate of growth continued to decline; thus, the annual growth rate between 2000 and 2010 will be 1.4 percent, compared with 1.9 percent between 1970 and 1980.

The gap between real incomes in the industriai countries and in the more advanced developing countries has continued to shrink; this has not been the case, however, in the more backward underdeveloped countries, where progress has been slow. Outside the Eastern Asian and some Latin American and Caribbean countries, the differences between industrial countries and developing countries are obvious. For many underdeveloped countries, the so-called lost decade of the 1980s, was a period of regression which set back their recovery. It should be remembered that at the end of the twentieth century, many of the poor countries still had per-capita incomes significantly lower than those common in the United States at the beginning of the nineteenth century (World Bank 1991). Despite dramatic progress made by some countries, there are still significant disparities in per-capita income from one country to another and from one region to another .

Standards of living have risen significantly. The time required to achieve notable changes in quality of life has been reduced gradually over the centuries, making it possible, by this time, to improve living standards quicker than in the late twentieth century.[3]

During the first two decades of this twenty-first century, significant and visible progress has been made in overcoming poverty in the poorest countries of the world. Development indicators for different countries have begun to converge, although more in some countries than in others. One of the more significant developments is the improvement in health and life expectancy. Infant mortality is also declining rapidly in most of the countries, including the low-income countries. Literacy rates are improving more rapidly than at the end of the twentieth century.

This progress has been possible thanks to improvements in food, housing and medical coverage, increased family incomes, progress in medicine, and public investments in health and hygiene, waste removal and the development of health services. Basically, however. the greatest factor of economic progress is technological development.

Technological innovations have led to significant advances in agriculture, industry and services. Famines disappeared from Western Europe in the mid-nineteenth century, from Eastern Europe in the 1930s and from Asia in the 1970s. Africa, the last bastion of this scourge, finally managed to overcome it during the first decade of the twenty-first century.

Sustainability is no longer a policy goal but a present reality. From any angle, agriculture always comes around to the issue of sustainability. Although the term has been defined in many different ways, the question of the continuity of agricultural activity, i.e., its reproduction, is a consideration that is always present, whether implicitly or explicitly.

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[3] It took the United Kingdom 58 years to double its per-capita production during the period 1780-1838. It took the United States 47 years to achieve the same result between 1839 and 1886. It took Japan 34 years to double its per-capita production during 1885-1919. After World War Two, many countries did better: Brazil doubled its per-capita production in 18 years (1961-1979), Indonesia achieved this in 17 years, the Republic of Korea did it in 11 years (1966-1977), and China achieved it in 10 years (1977-1987) (World Bank 1991).

Originally, the problem of sustainability was considered in terms of the deterioration of natural resources and the environment observed in many regions of the world. Farmers and other inhabitants of rural areas, whose work is most directly linked to natural resources and the environment, are no longer being blamed for resource degradation.

Moreover, sustainability, considered as an issue of reproduction and well-being, is not seen as merely the repetition of the same act of production over a given time; rather, bearing in mind the whole issue of development, the notion of upward, or expanded reproduction has been introduced. At the same time, the horizon of repetition of activities is expanded to cover not only a lifetime, but an entire generation and even succeeding generations. In this regard, the concept has been directly linked to the cross-generational relationships of mankind.

It is now universally recognized that a cost is involved in the use of natural resources such as water, air, mangroves, seas and rivers, as well as microorganisms and other elements of flora and fauna, all of which had been considered to be freely available, and of no economic or social value. From the macro standpoint, they have in fact been included in national accounts. From the micro standpoint, natural resource values also figure in the formulation, evaluation and negotiation of investment projects.

Ultimately, sustainability is a multidimensional concept. It is applied from the very beginning, with integrated action, development of institutions for monitoring it, strengthening of international awareness and solidarity.

Success now depends on the inclusion and interdependence of social agents. Multidimensionality and interdependence are not only abstract ideas; they are, above all, a reflection of the circumstances and phenomena of real life. A procedure that tends to isolate basic factors or sectors that are essential to the overall process of developing concepts and implementing programs would reflect a reductionistic approach and, if carried too far, could lead to failure.

So many different interests have a bearing on agriculture that management in this sphere of activity is an extremely complex matter. It has therefore become necessary to develop an effective management model, whereby agroeconomic and sociopolitical aspects are recognized and linked, in an overall process of consensus building and broadly inclusive dialogue (De las Casas 1987). The dynamics that work in these groups, and the linkages that develop among them, create power and

negotiating relationships that are now being taken into account. Analysis of power structures at all levels is based neither on analysis nor on the management of actions, policies and programs.

Agriculture and the new institutional structure. After the collapse of the import-substitution model, one of the most prevalent reactions was to take a short-term approach, sometimes drastic and compulsory, to introduce structural adjustment processes that attempted to redefine the terms "public" and "private."

In many countries, the sudden withdrawal of the government from many activities was seen as a quick way to transform institutions and, above all, to create a new institutional structure. Over the long term, however, because civil society was so slow to fill in or take over those spaces and other, newly created ones, the process was deficient, and was probably more protracted and costly than it should have been.

In the new scenario, it is perfectly feasible to have a deliberate development strategy that is in harmony with the market, and does not entail a simplistic, artificial confrontation between government and market, intervention and laisser-faire. This situation has been demonstrated by the successful experiments of the Eastern Asian countries or Japan itself (World Bank 1991).

There is consensus regarding the need for selective intervention in areas such as those pertaining to the social, physical, administrative and legal infrastructure, the war on poverty, social and distributive investment, equilibrium and macroeconomic stability, the incorporation of technical progress in production and trade, education and training, and environmental conservation.

In seeking a new type of intervention, however, two key issues must be considered. The first is the accelerated pace of institutional change, and the creation or re-creation and strengthening of the institutions responsible for meeting these objectives and implementing the new style of intervention made necessary by the changing circumstances. The second aspect of the new intervention has to do, essentially, with its efficiency. Not only is it necessary to make up for shortcomings and gaps caused by the free flow of market forces, as well as those caused by corrective government action, but this intervention must precisely target the object of intervention and clearly define the steps to be taken.

Moreover, the problem of institutional structures is not limited to the new sphere of action of the government apparatus; it must also take into

account two factors. The first is the need for civil society, especially the organized groups of society, to participate in public functions. These groups will no longer be playing the role of counterparts as they did under the old patemalistic state, nor will they be cast in the outdated role of seeking government patronage. On the contrary, their relationship with the state will be reoriented so that democracy is strengthened and public resources are decentralized. The apparatus will thus become a part of the mechanisms used to develop the broad-based dialogue that is needed between the forces of society and the government.

In the second place, new institutions are emerging out of civil society, many of which play a role that had previously been played by old government apparatuses, and which are now within the private sphere, or a combination of government and civil society. Some examples are the marketing firms, banks, companies, schools and research and extension centers, planning offices, production and marketing service centers, that have emerged over the past few decades, but more rapidly since the government withdrew from production and commercial activities and generally stopped intervening, as under the old economic model.

All these trends are likely to be features of the landscape in the year 2020. The scenario is one which will be characterized fundamentally by the qualities of inclusiveness and sustainability. The economy will be a global one, with a high level of technological development, and a less unjust and more inclusive social order. In particular, the need for a proper balance between growth and social development will be recognized as a prerequisite for competitiveness, growth, and good governance.

In general, the overall conditions will exist to allow for sustainable development, in harmony with nature and with economic integration. Above all, the social order will encourage technological change, make the most of human resources, and facilitate rural development.

The Paradox of Agriculture

What can we conclude about agriculture under this probable scenario of the future?

The situation of agriculture in many countries of the continent is a paradox. Agriculture is much more important than is usually understood. Its importance is often not acknowledged. In fact, it would not be an exaggeration to say that the real and increasing importance of agriculture is inversely proportional to the degree of recognition and

acknowledgment it is given. In other words, the more important it is, the less its importance is recognized.

It is quite accurate to say that it is common knowledge among those who are involved in agriculture, from farmers and public officials to international agencies concerned with funding as well as with technical cooperation, that over the last several years, less and less attention is being paid to agriculture.

There are many phenomena that point to the apparent decline in the attention paid to agriculture. For example, it has not even been mentioned at a number of regional or world summit meetings that have dealt with issues closely related to agriculture; this was the case with the Summit of the Americas, or the Summit on Social Development, both of which were held recently. Moreover, the Inter-American Development Bank (IDB) and the World Bank, which both underwent major reorganization recently, no longer include the field of agriculture in their organization charts.

There is much talk of the importance of agriculture, but when it comes to action, the sector is virtually ignored. The countries of the region are not backing up with action or with adequate budgets and investments, both public and private, the so-called "priority of agriculture." The ministers of agriculture have been hampered by a lack of resources, and thus, they have not been able to carry out their duties effectively or to exert a constructive influence on decision making in other spheres of policy that have a key impact on the performance of agriculture.

Another tactic often used to prove that agriculture is no longer important is to hold up the traditional view of the sector in Latin America, and thus to draw the misleading conclusion that agriculture's contributions to national economies are minimal.

Another significant fact that tends to reinforce the idea that agriculture is declining has to do with the performance of the sector over the last ten or twelve years. As mentioned in previous chapters, agriculture has suffered, in many countries, from backward production methods and an absence of change.

By contrast, there are many arguments that show definitively that agriculture is not declining in importance, that it is not a marginal activity, and that, on the contrary, it is growing.

The production of food and its relation to social peace and the promotion of democracy in the hemisphere, the continued presence in rural areas of significant contingents of population, and the value added by agroindustry and agribusiness in the context of hemisphere-wide integration are all irrefutable examples of the importance of agriculture.

Beyond these commonly used arguments, there are others that have to do with the issues discussed in this and previous chapters. The scenario projected in this chapter is particularly eloquent as a reflection of the broad structure or network of interdependencies between agriculture and the many variables that pertain to other dimensions, such as:

_ The relationship between agriculture and each of the domestic macroeconomic policies, and the relationship between these and the world macroeconomic context and the external sector.

_ The clear interdependence between agriculture and food and nutrition, human health and jobs in production.

_ Technological progress with increased competitiveness in agriculture and the formation of human capital in the sector.

_ The evolution of these relations along the entire chain of agroindustrial activities and the building of system-wide competitiveness.

_ The interdependency of agriculture and natural resources and the tremendous potential for adding value to biodiversity.

_ The improvement of human, animal and plant health through the generation of foreign exchange from agriculture and from hemisphere-wide integration.

_ The contribution of foreign exchange earnings to savings and investment, re-engineering in production and trade, and technological change.

_ Institutional structure, as related to good governance and the strengthening of the synergies in society.

Another set of arguments has to do with the potential benefits which the Uruguay Round agreement offers the agricultural markets of the LAC countries, inasmuch as they have the opportunity of increasing their exports and their intraregional trade.

These opportunities offer such promise to our countries that it could become possible to eliminate the international aid they currently receive from the developed countries. Likewise, these amounts could be used to make up for potential deficits in the current account of our countries' balance of payments to the year 2005, and still help improve their current capacity to pay for imports. It is also worth mentioning that agriculture plays an Important role in processes whose growth is uncertain, as in Latin America and the Caribbean.

A somewhat less optimistic macroeconomic scenario, such as that predicted by the World Bank, would be extremely difficult for countries such as those in sub-Saharan Africa, and would be especially bad for the Latin American and Caribbean countries (World Bank 1994). With a slight deterioration in this regard, LAC would decline, in per capita terms, at a rate of -0.7 percent per year. In other words, the per-capita decline, in real terms, would be more serious than even in sub-Saharan Africa.

Growth rates for the economies of the region of slightly over three percent are still indicative of a healthy agriculture which makes efficient contributions to the economy; however, lower rates of growth of the economies (0.8 percent) and regressive rates at the per-capita level call for an agricultural sector that is able to improve its efficiency and even its rate of growth, in order to offset, to some degree, the potential deterioration.

Along this same line of thinking, it should be noted that agriculture could play an important role in offsetting the current macroeconomic imbalances that exist in many of the countries of the hemisphere. This would be possible, in particular, through the generation and savings of foreign exchange based on greater competitiveness and sustainability, in order to overcome the trade deficit and the deficit on the balance-of-payments current account.

Finally, another argument that clearly shows the importance of agriculture and its great potential, and which, furthermore, reflects the network of interdependencies between agriculture and other spheres and factors, has to do with the so-called prospecting for biodiversity, i.e., the exploration of biodiversity in an effort to find genetic and biochemical resources that have commercial potential. The creation of what might be called bioindustries is already a reality, as evidenced by many examples throughout the world and in the region. (World Resources Institute et.al 1994)

Actually, there is a whole new trend towards emphasizing the value of the space and territoriality of agriculture and its genetic resources, from the standpoint of productive conservation, through the combination of factors such as technological progress, especially biotechnology, advanced know-how and information, the use of information science and computers, the development of human resources and an awareness of the issues of sustainability and development.

Getting out of the Maze

If agriculture is truly important to the economy and the society of a country, but the paradox prevails—there is no awareness of the importance of agriculture, and it is even systematically ignored-- and if agriculture is likely to play an increasingly important role under the model of economic development being implemented, but its recent performance has been deficient and unsatisfactory, how can we begin to get out of this maze of problems?

There are many complex issues and causes behind this contrast between "what we see in the future" and "what we see at present" in regard to agriculture, its importance and its performance. There is, however, a clue which can help us resolve the contradictions.

This clue is to be found in the approach that is taken to seeing, managing and attempting to transform agriculture. The approach is an inoperative one that makes it difficult to understand the multidimensionality and the interdependence of agriculture with other components which, at first glance, might not appear to have much to do with agriculture, but which actually interact with it.

In the first place, it should be noted that those who are engaged in agriculture still tend to hold a traditionally autarchical, partial and static view of agriculture and of the world that surrounds them. In the second place, the changes that have taken place in the world and in the economy are so dynamic that this traditional approach does not allow room or time for properly interpreting them, or even decoding them. And in the third place, there is a serious lag in knowledge of the phenomena affecting the sector.

This apparent decline of agriculture, its actual backwardness in economic and social terms, is due to a large extent to the inefficiency and anachronistic structure of many of the institutions and agents, both public and private, that are involved in agriculture, in one way or another.

The whole range of public and private, national and international institutions, as well as economic agents, are all responsible, either directly or indirectly, for the inadequate performance of agriculture in the region.

While it is true that in recent years, something has happened to agriculture, this does not mean that it is being neglected. What is being set aside, rather, is the traditional and rigid view that still prevails regarding agriculture and its relationship with its environment. Some saw it as an isolated, primary production sector. Even those who appreciated the broader context, as expanded agriculture with agroindustrial linkages, were still very inflexible and biased, usually towards economic or technical and economic issues, and with a short-term approach.

In view of the prevailing trend towards globalization and the breakdown of economic, political and conceptual barriers, this approach simply does not work. This is why the true importance of agriculture has not been appreciated and, in the final analysis, why the sector has not been reactivated and developed.

PART III
TECHNICAL COOPERATION IN THE SUSTAINABLE DEVELOPMENT OF AGRICULTURE

A NEW UNDERSTANDING OF AGRICULTURE AND THE RURAL MILIEU[1]

IICA is promoting the adoption of an alternative approach to agriculture throughout the hemisphere, one that understands the true importance of its interactions with the rural economy as well as with other economic sectors. The alternative approach is based on the need for renewed thought and action regarding the role of agriculture in the development process of the countries of the Americas.

The approach recognizes the roles of government as facilitator and promoter of development, markets as allocators of resources, and civil society as socioeconomic and political actors and beneficiaries of the process. The participation of grass roots organizations assures system governance. Other factors such as private sector initiatives, globalization, trade and economic liberalization, new forms of open economic integration, and advances in information technology are also critical elements of this alternative approach. At the same time, the approach should help in identifying and understanding the complexities and challenges entailed in relieving poverty, improving nutrition and health, boosting individual earning power, using natural resources rationally, preserving the environmental balance, engaging in peace processes, and consolidating democracy in the hemisphere.

This approach recognizes the challenge of tapping the potential benefits of greater participation in international markets, economic integration, structural adjustment and institutional reforms, and the need for a closer relationship between the modernization process and the on-going process of democratization. Modernization and democratization must be made mutually reinforcing, so as to expand the base of support among the economic and social agents who will benefit from agricultural and rural transformations.

Why an Alternative Approach?

A new approach in needed, first of all, because the multidimensional nature of the agricultural sector, as well as its interdependence with other sectors of the economy (health,

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[1] Document submitted by IICA at the Eighth Meeting of the IABA, Costa Rica. September 1995.

nutrition, education, environment, peace and even democracy), are complex and often not fully appreciated.

Among other reasons, this can be attributed to:

a. A view of the agricultural sector by many of its principal actors, which is autarchic, static and devoid of linkages to other economic sectors, the rural milieu and the global economy;

b. The rapidity of the current pace of change such that, viewed from a traditional perspective, it is difficult to obtain a timely understanding of the manner in which these changes affect agriculture.

c. A lack of knowledge about the agricultural sector, its well-being and linkages to the economy (for example, the state of rural nutrition and health and the impact of stabilization and structural adjustment programs, the true cost of natural resources depletion and environment degradation, the implications of new international relations, etc.)[2]

The second reason why a new approach is needed is that, in recent years, agro-industrial processes have become increasingly complex and sophisticated, expanding and diversifying, quantitatively and qualitatively the supply of new products available to consumers. By the time products reach consumers it is often difficult to recognize their origin and to measure the true contribution of agriculture. The problems of measurements may be aggravated by the use of indicators which for one reason or another may not capture the processes being examined. The Gross Domestic Product (GDP), when used at the sectoral level, underestimates the contribution of agriculture by understating the importance of intermediate products which themselves are inputs to other productive activities.

For over a decade, the import-substitution model of economic development has been losing ground. It was built on a conviction that the origins of development were endogenous. This model is being replaced by another, that recognizes the close inter-workings

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2 These conclusions were reconfirmed in a workshop entitled Vision for the year 2020 for Food, Agriculture and the Environment, which took place from March 20 to 22, 1995, in the city of Cali, Colombia, at the invitation of IFPRI, CIAT and IICA.

of the technical, production, socio-political, cultural and environmental dimensions. The new model transcends the "sectoral" boundaries that formerly confined all actions involving agriculture to narrow definitions of a "primary sector." Even conceptual and methodological development over the past four decades was confined to this conceptual straitjacket, and the resulting economic policies failed to value the sector's true role in the development process. One of our major challenges is to overcome these conceptual constraints, which so readily translate into operating restraints.

Finally, this renewed approach to agriculture is necessary because, for several years now, national and international forums attended by political leaders and high-level public officials, along with international financial and technical cooperation agencies, have mistakenly attached less importance to agriculture. While it is true that in some cases, the sector continues to by paid certain lip service, these fine words stand in contrast to the facts, as agriculture is actually left out of the allocation of resources and of the implementation of policies and programs that would foster true, deep-running transformation of the sector.

Rationale for the Approach

IICA has devoted an important part of its efforts and resources to the creation of a hemisphere-wide movement that will recognize the critical productive and social functions of agricultural development among the countries of the Americas. The approach takes cognizance of the fact that agriculture is a way of life for a large rural community linked by complicated socio-economic, cultural and political ties to the rest of the economy. It also takes cognizance of the fact that agriculture, as a productive activity, has pivotal links with the natural resource base of countries of the region, their national economies and the global trading environment.

It is important to understand the real contribution of agriculture to growth and development among the countries of the Americas and to identify the changes needed to enhance its contribution to the national level and to the rural economy. This enhanced understanding and the identification of the necessary changes will hopefully assist in convincing governments, international financial and technical cooperation agencies and socioeconomic agents

operating within the agricultural sector of the need to re-examine the values which they attach to the sector.

At the center of IICA's effort is the development, application and dissemination of an approach to agricultural development which we refer to as the "holistic approach to agriculture and the rural economy." This framework will facilitate a more comprehensive understanding of the multidimensional nature of agriculture, its interdependence with other sectors as well as its linkages with the rest of the economy.

The expression "holistic approach to agriculture and the rural economy" is a simplified, convenient term for describing the re-evaluation of agriculture among the countries which constitute the Americas. As the expression suggests, the systems approach is used to more clearly articulate the functional relations which the sector must assume under the development models currently being applied in the countries of the region. This alternative vision of agriculture and rural environment requires the re-examination of the linkages between modernization and democratization and is intended to better understand and ultimately replace the traditional static, sectoral and production-oriented concept of agriculture that has prevailed. In addition, the systemic approach, by emphasizing inter- and intra-sectoral interactions, provides a more accurate explanation for the changes occurring within society. IICA considers this approach to be central for the execution of its priority actions among Member States.

What is this Approach? Where did It Come from?

The new approach re-examines and adds to the concepts of expanded agriculture, agro-industrial complexes, agri-food chains and comprehensive modernization which the Institute has promoted over the past several years. The technological and economic components are combined with the ecological, social, cultural and political dimensions inherent in rural, national and international scenarios.

The systems approach has one **purpose**: accelerating progress toward sustainable development of agriculture, including the development of the rural milieu. As a **strategy**, it serves as a framework for guiding the actions needed to foster change in the agricultural and rural areas in order to achieve this goal. Finally, it embodies an **interdisciplinary conception** which will facilitate an

interpretation of agriculture's multidimensional nature and the complexities of its relations with the rest of rural society and the economy.

The **purpose** of the approach is to contribute to the sustainable development[3] of agriculture and rural areas as a multidimensional and inter-temporal process. It incorporates competitiveness, equity and sustainability as a trilogy based upon ethical, technological and productive, socio-economic, cultural, political, institutional and ecological factors. The components of this trilogy are:

« **Competitiveness**, understood as achieving and sustaining competitive advantage, which makes it possible to increase profitability and market shares. Competitiveness must therefore be based on economic fundamentals (productivity, efficiency, innovation, market strategy etc.) and must also incorporate the social and environmental costs of production and trade. In addition, competitiveness requires the strengthening of entrepreneurial capabilities among producers, marketers and traders, which will consolidate the linkages among the different levels of the commodity chain. Adding value at successive levels of the agri-food chain is one means of benefitting all market participants.

« **Equity**, a means of organizing society to ensure that the benefits from improved competitiveness and human resource development reach the majority of the population.[4] Equity goes beyond overcoming economic inequalities and refers to the enhancement of individual and group capabilities.[5]

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3 Our definition of sustainability differs from the one restricted to the conservation of natural resources and the protection of the environment. This definition recognizes that the sound use of natural resources for production, while respecting the environmental balance, is part and parcel of the development style, in which social, economic and cultural considerations play an important role, making it necessary to balance short-term pressures and future concerns. This is not to say that modernization in many cases has been based on technologies that are harmful to the natural resource base; the idea is to put environmental considerations in their rightful place, without overlooking their interrelations with other basic economic and socio-cultural issues.

4 Understood as the combined result of productive employment, education, nutrition, health, social security and the like.

5 For greater detail on the meaning and use of the terms "capabilities" and "rights," originally developed by A. Sen. See Plaza and Sepulveda (IICA 1993:20).

* **Sustainability** is defined as the rational use of natural resources and the environment. It attaches full value to the environmental dimension of human well-being, and seeks to avoid massive and systematic degradation of the natural resource base for development. Managed land use by economic agents is very important for this purpose, as are conservation and learning to use biodiversity. Education needs to focus not only on conservation, but also on introducing new agricultural production practices that will not affect the environment and the natural resource base adversely, thus impeding future generations from using and enjoying them.

The **strategy** for action requires that four different types of transformation be undertaken: productive, commercial, institutional and human resource. These transformations are necessary elements in creating a modern and sustainable agriculture.

« The **transformation of production** is aimed at increasing productivity and promoting the transformation and diversification (both product and process) of agriculture, based on technological innovation, including production efficiency, management skills, human safety and environmental protection..

« The **transformation of trade** has redefined the linkages between the domestic and international markets. It works hand-in-hand with the transformation of production to raise standards of competitiveness in the national and regional agri-food, agri-textile and agri-ornamental systems in the framework of a new type of open integration by subregions.

« The **transformation of institutions** is oriented toward shaping political and institutional systems under which decision making can become more democratic, and both the public and private sectors can redefine the notion of the public role. The transformations should also engender a new attitude of cooperation within both sectors and between them. The emphasis should be on finding ways for the two sectors to work together in closer coordination, molding them into more effective institutional systems and organizations that are technically and economically efficient and socio-politically effective. This will facilitate the transformation of production and trade to make them sustainable, and will enhance the re-definition of public and private sector functions.

* **Social and human transformation** is the means by which the aforementioned processes are integrated to support the development of a more just and democratic society.

Finally, the **interdisciplinary conception** offers a multidimensional view of the different levels of the structure and processes generated by the evolution of the phenomena linked to agriculture. The concept's validity stems from the complexities and diversities of agriculture among the countries of the Americas and the linkages between these same sectors and their economies. These linkages include the following:

a) The full array of relations of production in both agriculture and forestry, and relations with the rural environment. These relations are forged by the various parties, acting as economic agents, through whom the nation makes productive use of its natural resources and environment, with an inter-generational vision. Production relations also include additional non-agricultural activities conducted by similar economic agents as members of the rural society, to ensure their sustenance and improve their kind and quality of life (the micro-level of structure and dynamics).

b) Intersectoral linkage between agricultural and forestry activities with economic activities in other sectors, such as services to support production, agro-processing, input supply, marketing and consumption, nutrition, health, leisure, etc. as well as the "sectoral" policies which impact the performance of the sector (meso-level).

c) The set of macro-economic, social and international relations which condition the performance of the system. This involves two types of balances: i) macroeconomic equilibria in the new world economic order, which are essential for sustained development; and ii), international equilibria which complement economic integration processes aimed ultimately at the establishment of a Free Trade Area of the Americas (FTAA) (macro-level).

d) Social relations of good governance throughout the structure and dynamics of agriculture. This includes the relationship between the agriculture and the other sectors of the economy aimed at ensuring the effective guidance of the various processes which are themselves linked to sustainable development (the meta-level).[1]

At this level two aspects are critical: i) the balance between the political institutional system and the social structure, on which the new institutional structure is based through new relationships

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[1] For a more detailed conceptual and methodological discussion of the idea of "effective guidance," see Chapter V of "La Crisis, el papel del Estado y la planificación en la conducción del desarrollo agrícola y rural; un nuevo enfoque y guía para la acción, bajo condiciones de conflicto y poder compartido," by De las Casas (IICA 1987: 37-55).

between the government and civil society; and ii), the appropriation of knowledge, including information, as the keys to power relations.[2]

Incorporating the Human Dimension

The systems approach understands agriculture as a way of life for a broad spectrum of rural dwellers and for a large sector of urban dwellers as well. All these members of the agricultural collecting share economic, social and political links with one another and with the rest of society, and present great cultural diversity.

This systems approach also gives top consideration to society and social subjects, both in the rural setting and as part of the social collective, for three main reasons: a) because social subjects are the ultimate target of transformation processes; b) because they are the principal means and highest-order level by which these processes will take place (this is why we are able to talk about "human resources"), so long as the forces of history are shaped by the intentionality, will and transforming practices of individuals; and c) because human development is the essence of competitiveness, a condition for equity and, as a social process, the very fabric of solidarity. In other words, human development, or raising the economic value of people, is ultimately what makes modernization of agriculture viable and sustainable over the medium and long term.

The systems view of sustainable development being proposed emphasizes knowledge, and thus human resource development, as the foundation of today's economy and tomorrow's society. In this regard, Alvin Toffler writes:

"...despite how badly wealth is distributed in the world, unfortunately divided between rich and poor, it turns out that, compared with two other sources of power, wealth has been, and is, the least badly distributed. Even given the size of the abyss separating the rich from the poor, there is a still greater chasm between those who possess weapons and those who do not, and between the educated and the ignorant.... Today, in wealthy nations that are so hurriedly changing, and despite inequalities in incomes and wealth, the future struggle for power will gradually come to focus on the distribution of knowledge and access to same.... This is why, unless we

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2 In general, the term "data" refers to facts that are more or less unconnected; "information" is data that have been sorted into categories, classification levels or some other system; and "knowledge" is information that has been processed in the form of more general statements (taken from Toffler 1990:42).

understand how knowledge flows and toward whom, we will not be able to protect ourselves against the abuses of power or create that better and more democratic society that the technologies of tomorrow promise.... The control of knowledge is at the heart of a world struggle for power that will be played out in each and every one of our human institutions..." (Toffler, A., 1990: 44)

Building the New Approach to Agriculture

IICA's 1994-1998 Medium Term Plan, taking into consideration the configuration of a new world order and the changes taking place in the countries, offers guidelines for working together to build a new holistic approach to agriculture and rural areas.

Efforts will need to be closely coordinated, using an approach that has not been common in this hemisphere, where subregional and regional integration have fallen short. The new efforts must move consciously toward dynamic, loyal and equitable integration among our countries, that are being called by history to build a common destiny.

In this sense, the renewed approach to agriculture should be the outcome of a group endeavor, although the level and specificity of each country, of the five regions identified by IICA in its Medium-Term Plan, and of the inter-American whole need to be clearly distinguishable. The diversity of identities so clearly observable in the inter-American region, and which need to be preserved as the cornerstone of collective wealth in the region, is perfectly compatible with the kind of dynamic, loyal and equitable integration described above.

Contributions are needed from national, regional and international sources including producer organizations, public officials, the private sector, academia, researchers, and many other members of society. New areas of concern need to be raised through strategic alliances with other national, subregional, regional and international institutions. To foster participatory processes, it will be important to seek imaginative support from integration organizations and similar bodies that already exist in the inter-American domain, and for which the task of building a renewed approach to agriculture holds out an exceptional opportunity to acquire greater visibility and purpose.

One of the major tasks that IICA has taken on is to promote and support the countries in transforming agriculture and the rural milieu, and to bring about modernization with democracy in the framework of sustainable development. As we look ahead to the 21st this task emerges as the cornerstone of IICA's mission as an inter-American technical cooperation agency. This is why the Institute has taken the lead in putting forth this vision and is deploying its best efforts to drive a collective undertaking built around participation and integration

IICA is vigorously pursuing participatory reciprocal technical cooperation among agencies, institutions, organizations and groups in each country and throughout the Americas. This initiative will be the true test for validating the renewed approach as proposed. The collective task of improving the approach is already underway, as production, trade, institutions and social relations are transformed, learning processes unfold, and human resources develop.

TOWARD SUSTAINABLE DEVELOPMENT[1]

The 1990's have been characterized by the redesign of the economic policy guidelines which govern international economic relations as we approach the new century: redefinition of the role of government and its relationship to civil society, globalization and multilateralism in trade, new momentum in processes of regional integration, and the free flow of financial capital.

The reconfiguration of Eastern Europe may alter the flow of development assistance and foreign direct investment, mainly from Western European countries to the countries of Latin America and the Caribbean. The European Union has already declared its intention to negotiate wide-ranging trade agreements with the various subregional trading blocks, especially the Regional Common Market of the Countries of the Southern Cone (MERCOSUR). Simultaneously the "Asian Tigers" and China have began to seek new partners and markets. The Japanese economy shows signs of burnout, and the picture in Africa is shifting with the end of apartheid.

The worldwide focus on certain social groups, including women and children, concern for the environment, and interest in labor conditions have had a particular impact on agriculture and rural areas in the countries. At the same time, in today's more democratic environment, most of the countries of the hemisphere have been adjusting their economies, correcting yesterday's distortions, and lining themselves up with world trends in hopes of resuming growth and improving relations with the rest of the world.

At the same time, these countries have reactivated processes of subregional integration, redefining them to favor a new style of "open integration." Under this new style, they take on fewer commitments and are subject to fewer restrictions and obligations. This open integration is well suited to the new challenges described above and integration guides the partners into a free market without setting up trade protection from outside parties.

Conflicts sometimes arise between rapidly advancing integration processes and the domestic economic environment, which in turn interacts with the external setting by holding it back, giving it new

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[1] Based on the document submitted by IICA at the Eighth Meeting of the IABA, Costa Rica. 1995.

momentum, or forcing it to change. Economic agents in the agri-food chains and other local producers have had to face increased, often unfair competition from subsidized or program-assisted products and services on both domestic and international markets.

Among renewed integration initiatives, NAFTA is regarded as a model regional accord among three countries with economies of different sizes and stages of development, which epitomizes the possibilities for inter-American integration. The 1994 Summit of the Americas in Miami ushered in a qualitative change in favor of integration, injecting new life into the inter-American process with the commitment by the heads of State to create the FTAA. commitment was reinforced by the Ministers of Trade in the 1995 Denver Joint Declaration which promoted the establishment of task forces to accelerate the process.

The Morocco Act and the creation of the WTO transformed the institutional trade scenario for all nations by binding members to all the agreements and understandings formalized in 1994 in the GATT Agreement. Equally important, they solidified mechanisms for settlement of trade disputes.

The explicit inclusion of agriculture in the Uruguay Round was a watershed in global trading relations, since for the first time, agricultural trade and animal and plant health barriers received special global treatment. As a consequence, multilateral GATT 94/WTO disciplines will be applied from now on to agriculture. The impact on national policy-making will be substantial, especially because national policies strongly influence foreign trade, marketing and domestic production.

IICA recognizes that this international scenario, together with national processes of structural adjustment, economic liberalization and trade opening, tends to shape and drive trade and production transformations to raise the level of competitiveness. None of this can be done without institutional reform in response to the requirements of these agreements. At the same time, international concern is increasingly focused on natural resources, marginalized groups of society, and labor conditions; this generates further pressure and contributes to social and human transformation.

IICA supports countries of the Americas in their efforts to successfully cope with the various challenges and to take advantage of the opportunities presented by the changing global scenario. It

closely monitors the course of events, analyzes the impact and identifies alternatives to help each country respond effectively.

IICA's strategy is based on the need for complementary efforts to enhance national capacities for: (i) agricultural economic and trade negotiations; (ii) the harmonization of economic policies among trading partners in accordance with the integration processes and GATT 94; and (iii) the monitoring of compliance with the international commitments assumed by the countries.

IICA is also supporting the efforts of the countries to develop strategies to strengthen their competitiveness. This requires that concerted action be taken in the areas of economic and trade intelligence, the development of analytical models for forecasting policy impacts, and studies of emerging markets, products and technologies to capitalize on opportunities in production and trade.

Furthermore, the Institute is promoting horizontal cooperation among the national technology generation and transfer agencies, national and regional actions for the conservation and rational use of natural resources (especially genetic), and the development of biotechnology.

IICA also supports national and regional systems for the detection, prevention and control of pests and disease and the harmonization of health measures among countries, bringing local regulations into line with international standards.

Finally, the Institute is collaborating with the countries in the promotion of exports, the identification of investment opportunities at key points along the agroindustrial chain, and the creation of strategic alliances with other international technical and financial cooperation agencies.

Making Agriculture Competitive: How to Transform and Modernize Production and Trade

In response to the crisis of the 1980s, many LAC countries have been implementing economic reforms aimed at eliminating fiscal deficits, restoring equilibrium to the balance of payments, liberalizing trade and reducing market distortions, thereby creating a favorable investment environment that will promote changes in the production

and trade structure, enhance the competitiveness of the country concerned and speed up its development.

In some cases reform measures of the kind instituted by most countries resulted in short-term hardships for the rural agrarian sector and for the rural poor in particular. However, these measures have also offered new opportunities for agri-food production, trade and investment. They have cast new light on the importance of trade and macroeconomic policies for the agri-food sector, as well as the key role of macroeconomic and sectoral policy analysis.

The economic reforms have also stressed the importance of agricultural diversification strategies and programs in assisting the agri-food sector of LAC countries to adjust to the newly emerging market changes. While neither the importance of agri-food diversification nor efforts aimed at finding suitable diversification alternatives are new, they and the modernization of systems and processes have become more crucial to the success of sustainable agricultural development.

Economic reform and the new international context call for the adoption of comprehensive strategies for the modernization of agriculture that will make it more competitive, both in domestic markets and in the external environment, and thus able to capture new markets.

A modernization strategy of this kind entails a change in the production structure at the farm level, meaning that all production units require improved management capacity; technological innovations leading to the more efficient use of natural, human and capital resources so as to diversify production; access to information; quality control and sufficient resources for investing in competitive activities and opening the way for transformation of the production structure.

If agri-food chains are to become competitive, they must undergo a market transformation that will provide the different links with better access to domestic and external markets. This, in turn, calls for consensus-building all along the chain to make sure the interests of every link are in harmony with those of other national and international agents and with the government. It is also important to encourage businesses that offer support services. New marketing mechanisms need to be created, such as cooperatives, agricultural commodity exchanges, and organizations of exporters.

The move toward greater competitiveness is a nation-wide task that demands commitment by the entire society and cohesion between the public and private spheres, based on four key ingredients: production units; groups of producers and businesses within agroindustrial systems; trade-union organizations; and government institutions.

The producer and business groups in the different agri-food chains will be responsible for building consensus and taking joint positions in dealings with other parties, such as consumers and the government. They will also put forth strategic plans and projects for transforming production and trade.

The task of government in this strategic picture is to see that the overall environment is conducive to investment and trade and that labor is covered by a suitable legal framework. The government is responsible for a stable macroeconomic climate and for managing inflation, exchange rates and interest rates. It makes sure that efficient services, social infrastructure and production support, as well as appropriate information systems, are available. It should promote policies and projects for technological innovation. Finally, it needs to exercise leadership in trade negotiations and in deliberations with international organizations.

The search for competitiveness therefore requires the development of an alternative institutional framework to facilitate agreement on concerted action and shared responsibility between government and private sector in the design and implementation of policies, investment in infrastructure and services to support agriculture and the development of the "market and economic intelligence" that will make it possible to identify and respond to opportunities, problems and challenges.

Against this backdrop, technology research should abandon the model that emphasized an ever-present, quasi-monopolistic government. A better approach would be a public-private system in which the government would support basic research and work in partnership with the private sector, so as to respond more effectively to the technology demands of sustainable development.

IICA's activities are aimed at helping the countries reach better informed decisions on regional and hemispheric integration, competitiveness and domestic policy formulation and harmonization by assisting them in:

- Better assessing their market options.

- Negotiating regional and hemispheric market access.

- Improving the empirical and analytical content and timeliness of the "economic and market intelligence" work which makes up such a large part of the day-to-day work of ministries of agriculture;

- Improving the quality, timeliness and availability of data to provide better, more widely accessible data bases for policy analysis and for assessing competitiveness.

- Including issues of social equity and rational use of natural resources as an explicit component of economic policy objectives.

Specific activities and services planned and underway in support of public and private institutions in countries are focused on:

- The development of economic intelligence and market analysis tailored to individual needs of countries and readily adaptable throughout the region.

- Combining efforts with the countries to analyze and identify the areas and extent of changes in relative prices, market organization, and performance of agriculture under different scenarios of regional and hemispheric integration.

- Coordinating analytical studies with countries to assess competitiveness of the agri-food sector and options for investment and technological change, including leading-edge practices and equity.

- Organization of regional and hemispheric clearing houses to facilitate information exchange, analysis and discussion of shared concerns.

At a more detailed level these activities will include initiatives to:

- Assist with the analysis and harmonization of socioeconomic policies (macroeconomic and sectoral) and with the identification of new instruments for improving the competitiveness of the agri-food system among LAC countries.

- Contribute to improvements in the institutional structure, including upgrading skills in the public and private sectors in the area of policy analysis; as well as the skills necessary for broadening linkages with the agri-food sector and other sectors of the economy.

- Promote organizational and consensus-building initiatives between the public and private sectors at the national and regional levels to foster trade, capture new markets and increase investment in the agri-food sector of the countries.

- Facilitate the transfer and adoption of relevant technology for high-priority production and agro-processing activities, including improvements in national and regional information systems for technology generation and transfer.

- Assist in the design of GATT-consistent regulations and support the development of quarantine services to prevent the introduction or spread of both plant and animal diseases:

- Support the design of policies and strategies for sustainable rural development, that can be translated into programs and projects for boosting agricultural productivity and production, generating employment and providing outlets for rural incomes to circulate.

Helping Rural Areas to catch Up: The Productive Potential of Small-scale Farmers

One of the greatest dilemmas to be solved by the countries of the region in the short term is the apparent conflict between rural and urban areas, which is caused by the need to produce food at low cost while simultaneously increasing income in the rural sector. This dilemma has been solved in a number of ways in industrialized countries, where high-income consumers pay prices above those of the international market under policies to subsidize producers by transferring resources from the urban to the rural sector. In most of our countries, this dilemma has been resolved in favor of urban consumers.

The effect of this bias is reflected in the negative social impact (dramatic in most countries) of macroeconomic policy. Even in countries that are well on the way to full economic and trade liberalization, the "acquired social debt" has persisted. In some

countries at least 35 percent of the population is unable to meet its basic needs.

The pauperization of the rural population has not decreased substantially in most countries, and conditions of poverty are gradually becoming situations of conflict, as is the case in certain rural areas in the Andean countries and in Central and North America. Poverty in the rural sector has lead to emigration to urban centers, thus the lingering problem of poverty is transferred to highly marginalized areas of major urban centers.

The Institute needs to ask the following question: what set of policies can safeguard macroeconomic balances while simultaneously minimizing domestic economic imbalances so as to redress issues of equity and redistribute costs which have traditionally been borne by agriculture and the rural population? National development strategies, in addition to including macroeconomic and sectoral policies aimed at promoting the modernization of agriculture, should also be geared toward improving social conditions in rural areas and correcting economic and social inequities.

The great challenge for the countries is to see that substantial numbers of small-scale farmers can become more productive and boost productivity and income. At the same time, these producers need to bring about qualitative improvements in production if they hope to remain competitive and successfully tap into new market niches. They also need to take care to protect the capacity of their natural resources. If family farming is ever to become significantly more competitive, this subsector will need to overcome areas in which it has fallen behind due to structural problems and deficiencies in social infrastructure, production support infrastructure, and the like.

For this reason the Institute, in its support activities, always seeks a balance in the allocation of social costs. It encourages the development of economic policy mechanisms that will apportion production risks and costs more equitably between consumers and producers. Indeed, some countries are already using specific policy instruments for this purpose. A small number of countries has also received support in designing national sustainable development strategies for the rural sector.

New public and private institutional arrangements are being promoted to provide access to support services for production and

agroindustry, including rural credit, access to appropriate technology, marketing, management training, market information, and the like. These diverse arrangements must be sufficiently flexible to be easily adapted to the economic and social constraints of low-income producers. All these activities are promoted through the hemispheric and regional networks for sustainable rural development and rural agroindustry. IICA has also supported the majority of the countries of the hemisphere in consolidating small-scale agroinudstry, with clear support from the French technical cooperation agency, CIRAD, and Canada's IDRC.

There is consensus that the limited access by women and young people to services which are designed to improve their aptitudes and skills is a major deficiency. To overcome this the Institute has been carrying out projects, with the support of Canada's "Societe de Developement International des Jardins" (SDID) in the Central American Isthmus and with the International Fund for Agricultural Development (IFAD) in the Andean region. The two projects share a common purpose: to design teaching materials and train producers in the technical and financial management of small enterprises and rural development projects. The training materials are also being used as teaching aids in many other projects that receive technical cooperation from IICA.

In the case of rural women and youth, the Institute has adopted a specific approach which, while promoting activities responsive to the particular demands of this group, constitute part of economic and social development actions of a wider scope. The Institute, in collaboration with the IDB and the Kellogg Foundation, is working in several countries of the region on the basis of the Specialized Hemispheric and Regional Networks. These networks, in turn, receive IICA support in the form of technical assistance in a number of areas, including business training and financial management.

In the field, the issue of sustainable rural development has been played out on the basis of territorial units, specifically, microregions or regions. Within these units, a multi-dimensional perspective is taken as a basis for outlining specific sustainable development strategies that will mobilize producers and help them overcome their main production constraints. This approach facilitates rational management of natural resources and provides a means to weigh and select investment priorities. It focuses activities on the basis of social group and territorial space, with an emphasis on strengthening municipal governments and seeking the participation of producer

organizations. These activities take place through strategic alliances with national institutions and receive financial support from the World Bank, GTZ and IDRC.

Finally, most of our actions in the field of sustainable rural development concentrates on designing, monitoring and evaluating rural development projects. The joint work with the OAS in formulating and supporting negotiations for proposed sustainable development projects in border areas, such as the Trifinio project (Honduras-Guatemala-El Salvador), deserves special mention in this regard.

The guiding premise behind the four main lines of action in the sphere of sustainable rural development—institutional modernization, business management, support services for production and rural agroindustry—is that specific actions must converge in economically depressed regions. Actions targeted in this way can make a meaningful contribution clearly focused efforts to fight rural poverty at the level of each country.

In short, the Institute's action proposal expresses the need to promote a new approach to transforming production, that will also include small-scale peasant farmers. This means the countries will need to make substantial investments to do away with the constraints imposed by inadequate social infrastructure and production support services, thus keeping this subsector competitive so it can find a long-term, sustainable, fit in the new development model. Similarly, the Institute encourages the modernization of public and private institutions to strengthen their capacity to respond to the needs of social groups and to environmental and natural resource concerns, to make sure that the development process will be sustainable..

Striking a New Political and Institutional Balance: Institutional Transformation for Modern Agriculture

Actions aimed at the reform of the government, especially privatization, have been motivated by fiscal considerations and the idea that the public sector should reduce its size and the extent of market interventions. This limited approach to state reform has led to incomplete actions that are out of step with macroeconomic adjustments, contributing to the further weakening of agricultural institutions.

Countless agricultural policy instruments have been eliminated, and the closure of institutions and programs has been proposed as a means to reduce public expenditures. In short, the government of agriculture is in a process of transformation and modernization, equipping it to take on a new role and redefine its relations with civil society.

The strategy for sustainable development calls for in-depth institutional changes prior to and during the process of productive and commercial transformation. Institutional transformation should be structured in a manner consistent with the perceived roles of the public and private sector. It is essential to adopt a renewed vision of the potential and limitations of both market and government, and to strengthen relations between the two in support of sustainable development objectives.

At least three processes are taking place in the private sector. First, private enterprise is undergoing reconversion to become more competitive and is showing interest in providing services for agriculture. Second, the organizations are reacting to the new environment as they see their lobbying clout diminish. The third process is characterized by the emergence of nongovernmental organizations seeking to fill a vacuum in the provision of services and mobilization of financial resources.

The institutional reforms under way are not improving the ability of private organizations to manage change, and are not designing mechanisms to effect human and social transformation. This means that new organizations and forms of government can be expected to appear, providing leadership in conditions of uncertainty, conflict and shared power resulting from transition processes. Few means are available for making attempts at democratic participation fruitful. Moreover, there is insufficient capacity to analyze problems, pinpoint opportunities and simulate the impact of alternative policies.

In the field of services, there is a need to design new alternatives to promote forms of organization for private and joint provision of services. There is a need to strengthen institutional frameworks by modernizing and expanding them so that they can support the productive structure and enhance competitiveness to increase the export-market share of agricultural and forestry products and ensure the supply of foodstuffs and raw materials at the national level.

Experience has shown that it is not possible to rectify the

sector's endemic imbalances, including low productivity, limited access of producers to markets, poverty and degradation of natural resources, through limited, scattered measures aimed at mitigating the symptoms of underdevelopment. The Institute is therefore supporting the consolidation of institutional mechanisms at the national level, in order to eliminate the root causes of these imbalances. IICA helps its member countries design and implement processes to reform and consolidate institutional systems that will incorporate different economic and social forces into the processes of decision-making and taking action. Support is being extended to various countries to help them strengthen and/or modernize various organizations (ministries of agriculture, agricultural banks, agricultural producer associations), markets (creation of commodity exchanges), and private sector enterprises.

The Institute is convinced of the need to design an institutional framework for the public sector aimed at achieving concerted action among activities traditionally consigned to separate "sectors." The first step is to build consensus among ministries and other institutions responsible for different sectors of the economy. IICA's support in this area will cover the design of institutional mechanisms (such as national networks or national agricultural councils) for analysis, dialogue and joint action between public and private agents, in order to improve the process of decision-making and make governance of the agri-food systems more effective.

Support for civil society will focus on skills development and on promoting organization so the private sector can take on tasks that in the past were supplied by the government. Thus private enterprise will be offering the services needed by a modern, competitive, equitable and unified agricultural sector.

The Institute has been supporting a number of countries in this field, and has concluded that solidarity is an essential building block for establishing new, more participatory forms of government. Such government would need to rest on shared public and private networks and would concentrate on building consensus among the various parties. This type of mechanism would be essential for following up on compliance, revision and modification of commitments acquired by socioeconomic agents.

In regard to the modernization of agriculture, the Institute is providing support for the transformation of national research and technology transfer systems and for developing networks that will

¡ink cooperative activities among the countries through regional mechanisms. It is also working to create the "Inter-American Consortium of Foundations and Private Organizations in Support of Agricultural Research" (CIFA).

Finally, in the area of natural resources, IICA is helping the countries improve institutional capabilities in the public and private sectors of agriculture and agriculturally relevant natural resources, for formulating policies and implementing reforms that will encourage the conservation and sustainable use of natural resources.

Our Legacy for Future Generations: Environmental Balance and Natural Resource Management and Conservation

Since the Brundtland Report and the approval of Agenda 21, global concerns regarding natural resource conservation and management and environmental degradation have greatly increased.

If population growth continues at current rates, pressure on the natural resource base will intensify, seriously undermining the natural resource base. By extension, biodiversity will also be at risk, with its potential to unlock competitive advantages in the future and ensure food production for a population that will grow by 70 percent over the next 30 years.

This growing population and its access to natural resources is without a doubt a fundamental factor in the economic growth/population/environment dilemma. Therefore, the premise on which any sustainable development proposal should be built is poverty reduction. Moreover, the social and spacial imbalances engendered by the development model distort patters of natural resource management. Commercial agricultural businesses overuse toxic agro-chemicals and dump wastes and other effluents into the rivers and destroy the forest. Meanwhile, small rural enterprises must make intensive use of the soil and forest to survive, thus feeding the classic vicious circle of poverty and natural resource degradation.

It is important to stress the failure of market signals and macroeconomic policy to effectively incorporate the environment and natural resources into economic calculations and policy decisions. This argument does not negate the fact that all economic activity implies some degree of environmental degradation; on the contrary, it considers that economic activity has a limit equal to the cost of

replacing the resource in question, which needs to be figured into the final product price. Even as market failures have come to the surface, so too have Institutional failures, due to the use of old methods and working mechanisms that inhibit progress toward a new development model. In effect, the emergence of private efforts, which sometimes complement and in other cases substitute public sector agricultural action, could affect the management of natural wealth.

Society's demands to reduce environmental degradation presents challenges to institutions linked with agriculture. Current technological models are largely out of date; the institutional framework and innumerable policies were designed for a different context and with fundamentally production-oriented objectives.

In the Americas, the main environmental problems in agriculture are deforestation, loss of biodiversity, excessive use of pesticides and fungicides, siltation of reservoirs, and river contamination due to industrial waste. Therefore, there is an increasing demand for specialized technical cooperation on subjects related to rational use of natural resources and the environment, including soil, water, and plant cover. Along these lines, the Institute carries out water and soil management activities and supports the formulation of strategies, programs, and projects for irrigation. The implications of this kind of work are becoming increasingly significant in areas confronting water shortages. Policies and other land use management instruments, forestry, and genetic resource management are some of the themes requiring substantial improvement on the country level. The Institute's regional networks are carrying out a project on natural resources and hillside soil conservation entitled Recuperation and Sustainable Management of Degraded Savannah and "Cerrado" Soils

Technological progress in agriculture increasingly depends on genetic improvement, the identification of useful new species, and the preservation of genetic resources. This requires new policies on intellectual property rights, conservation, and state and private support of technological innovation in order to be able to take advantage of the fact that almost 90 percent of the earth's biodiversity is located in only 18 countries, half of which belong to this region.

All this suggests that biological diversity, which includes genetic information, species, and ecosystems, is an issue of world-wide

importance which poses many new opportunities. Genetic manipulation through biotechnology opens new frontiers for using diverse animal and plant species as possible sources of raw material for the pharmaceutical, food and other industries.

One of the Institute's most import achievements in this area in the present decade was: the creation of subregional networks for reciprocal horizontal cooperation among countries in research and transfer and animal and plant genetic resources. An objective of these networks is to design a joint action framework for biotechnology and biosafety policies. The Institute is also supporting the creation of a hemispheric cooperation mechanism so that the Region can enter the World System of Genetic Resources.

The establishment and standardization of regulatory norms and mechanisms to minimize potential risks to public health and the environment are vital aspects of developing and exploiting the new biotechnologies. In effect, the commercial agreements imply the development of strategies, norms, and mechanisms on intellectual property rights in agriculture and raise the need to establish *sui generis* protection systems. The Institute is working in this direction with institutions in the countries and with the FAO, IPGRI, CATIE and the GTZ to strengthen institutional capacity in the countries and support coordinated efforts to promote the conservation and safe, sustainable use of genetic resources.

The countries' delicate environmental balance and the immense productive and ecological potential of their natural resource base offer favorable conditions for achieving competitive advantages which could become their economic mainstay. This has spawned a large demand for technical support, and the Institute is responding with a variety of actions.

In order to conceptualize and design strategies for sustainable tropical agriculture in the Americas, IICA maintains an alliance with CATIE. It is also an active member of inter-institutional consortia such as CIMMYT and IFPRI. By nurturing these working relations, Institute is able to address the issue more effectively and promote activities for brain-storming, exchange of experiences, training and project formulation.

IICA has also initiated strategic alliances with international agencies such as the GTZ and IDRC, nongovernmental organizations, universities and national institutions. Together they design

sustainable development strategies at the national, regional and micro-regional levels and formulate working tools for situation assessment and for preparation of development strategies for specific territorial units. The idea is for civil society and local or regional governments to participate actively.

Strengthening the Inter-American Group for Sustainable Development and participating in the Alliance for Sustainable Development in Central America are fundamental to the Institute's strategy. The ultimate objective is technical strengthening of actions so that the issue of sustainable management of natural resources can take on the political importance it deserves.

In summary, the Institute's views on this dimension of sustainable development are an attempt to promote an alternative approach between two extremes—the all-encompassing view of environmental problems, and a view that focuses on the meso- and micro-levels, evaluating environmental impacts as a way to solve the problem. IICA's approach seeks to strike a balance between generating new development strategies at the national and hemispheric levels, explicitly incorporating a long-term view, and at the same time adapting them to real-world institutional, socioeconomic and environmental conditions.

Investing in the Future: Human Resources Development in a Setting of Social Transformation

The productive transformation of agriculture and the rural economy must of necessity include investing in the development of human resources. Hence, the Institute continues to place emphasis on supporting institutional initiatives which seek to improve the capabilities and skills of the rural population.

However, educational institutions[2] are confronting a difficult challenge. The problems they face are derived from the crisis of the 1980s and fallout from development models applied at that time, as well as difficulties inherent in today's world of adjustment and economic opening. Rural areas have fallen woefully behind, and the

[2] Educational institutions are understood to include not only formal entities with medium- and long-term academic programs, but also any center that offers training activities and processes by which the different parties involved in the processes of agriculture and development of rural areas can keep up to date.

problem has accumulated. Basic structural weaknesses have had their impact both in the field of science and technology, and in education in general. This is partly because of the challenges of new international conditions for agriculture, which have a direct impact on the countries by increasing the pressures and demands of competitiveness; all this raises the standards of performance and poses ever-changing challenges.

Institutions associated with the development of agriculture and rural areas are thus obliged to take on new roles in the transition toward new scenarios. They need to redirect their institutional strategies in fields of research, human resources training (whether formal or nonformal) and extension, anticipating change and providing on-going support for development in the countries.

Many of the social distortions afflicting the countries of the Americas appear to be caused by an overly narrow view of the meaning of "human resources." Society and social subjects can be considered "resources" only in the presence of a binomial view in the sense that the individual is always the means and the end of transformations. This means: i) complete self-actualization is the main purpose; and ii) full participation by the individual is the means for this actualization to occur.

This, then, is a basic component of the human dimension which is inherent in the renewed, systemic approach to the role of agriculture. The following postulate needs to be added, as it is an inevitable part of the dynamics entailed in the necessary transformations: without a widespread increase in human capacities, no transformation of production, trade, institutions or society itself can take place.

An especially important action strategy in the countries should be to place human resources development processes back at the top of the social agenda. Such a change in priority would mean raising human resources development to a higher position in institutional structures and strategies, and reallocating resources accordingly. Another important action would be to promote new, universally applicable models of sustainable human development intended to build skills for grappling with the problems and constraints common in rural areas, designing solutions to the demands of globalization, reconversion and modernization of production, and most of all, seizing the opportunities and productive potential that will emerge as the new development paradigm gains strength. If this is not done,

conditions can never be favorable for achieving needed transformations. Moreover, education would fail to make any meaningful contribution to rural and human development, which is ultimately the only real purpose of human development processes.

The challenge, then, is to bridge the gaps that have left rural dwellers behind in the area of human resources development, and providing these people with the skills they need in today's new setting. A ful array of social processes will need to be planned and carried out, obeying at least the following criteria: i) attaching greater urgency and higher priority to know-how, abilities and attitudes that have direct, immediate relevance for transformations taking place in production, trade, institutions and society; ii) favoring those trainees who, in today's world of asymmetrical, inequitable relations, find their skills most sharply divergent from the skills needed in the new setting and in the one to come; and iii) devoting attention both to systematic, formal education (elementary and secondary schools, universities, etc.) and to non-systematic, nonformal teaching (training plans and programs, community self-education processes, and the like).

The Institute supports public and private sector institutions among member countries to define national programs and strategies for human resource development, in both formal and nonformal settings. Emphasis is placed on keeping education consistent with development strategies, modernization of agriculture and sustainability of production resources. Specifically, IICA supports the performance of assessment studies that will lead to the formulation of policies and programs for training and communication; development of networks of universities, other educational institutions and research and training centers; and curriculum review and staff training in agricultural education institutions at both the university and secondary levels.

IICA also helps national institutions begin providing an effective, timely response to all these demands and needs. It cooperates with the countries in providing management to the training and communication components of sectoral modernization and rural development projects, and in the preparation of manuals, technical resources, and other teaching materials for both formal and nonformal educational uses.

The Institute also offers complementary courses, seminars, workshops and technical meetings on important agricultural themes,

as well as on aspects of management and methodology pertaining to human resource development. Most importantly, IICA contributes to skills training for small farmers so as to more fully incorporate them into the mainstream of the development process. IICA believes that this is the surest means of ensuring social equity.

Forging Stronger Linkages in the Americas: Communications and Information

Communications and information and informatics have always played an important role in production, economic and financial activities. Nevertheless, in recent years and as a result of technological breakthroughs, the relative importance of these components has increased significantly, until they have become one of the key factors of competitiveness in all sectors of the economy. In agriculture's case, this presents challenges and opportunities for enhancing the transformations in production, trade and institutions that are needed for development.

The situation in the countries of the region shows, in general, a limited and dispersed array of fragmented and frequently inconsistent information, which hinders policy making, prospective analysis, the formulation of strategies and investment programs for agriculture, among other things.

In addition, communication and information exchange among the countries at the regional or hemispheric levels is still in its infancy. This handicaps the decision-making process by economic agents and governmental authorities, hinders regional integration and inhibits possibilities for growth and expansion in the area of international trade.

Finally, most of the countries of the hemisphere are just beginning to benefit from advances in computer sciences; this is particularly true in the public sector due to insufficient financial and technical capacity.

In essence, in order for the countries to be able to efficiently tap into regional and subregional markets and achieve a greater degree of agricultural competitiveness, they must be able to organize, manage and exchange updated, reliable and timely information. To this end, it is necessary to develop compatible information systems

that facilitate technical, production, commercial, financial and managerial interaction through access to common sources of data.

In the case of IICA, communication, information and computer technologies are basic components of all technical and administrative activities. In the Institute's technical work, these tools are basic to the formulation of diagnoses, strategic plans, design of future scenarios, and policy definition. Moreover, they enable the Institute to serve as a coordinator and facilitator between national, regional and international data bases, and institutional end users. Plans are under way to connect national systems over the Internet with data sources at institutions such as the World Bank, IMF, FAO, ECLAC, and other United Nations agencies.

Moreover, IICA's work with differentiated strategies in its five regions demonstrates the need to manage special sets of information that facilitate efficient decision making.

In this context, IICA has begun modernizing its information systems, making use of new technologies and information services. Modernization is taking place through a more intensive use of Internet and other avenues of information, and through access to specialized information, such as prices and products, geographic information systems, and technology for developing data bases in economics and biology.

In addition, the Institute has designed several specialized information systems that it uses to provide support to the countries in solving common problems identified as being of priority to them.

In the area of policies, trade and investment, IICA, with initial support from CIDA, has been working since 1989 to develop an information system (SIAPA). It is now being used to support the countries in conducting economic and market intelligence work, to simulate the impact of socioeconomic policy, and to provide guidance in such areas as protection, competitiveness, equity, policy harmonization and investment opportunities. This is an open system that grows in response to the problems raised by the countries. Each of its four structural components targets one of the four functions of problem solving: data organization and management, information analysis, advisory reports and applications (computerized models and procedures). This system draws on many different information sources such as FAO, World Bank, IMF, ECLAC, USDA, as well as countries interested in sharing in the system.

With the collaboration of CIDA, Agriculture Canada and the University of Guelph, the program HandiSTATUS (support system on the current status of animal diseases, for trade purposes) was initiated to provide information on the global distribution of animal disease. It is useful for assessing relative risks of exposure to specific diseases in the different countries and facilitating import/export decisions on animals and animal products. It also provides access to the recommendations in the OIE animal health code for the safe importation of products, lists of reference laboratories and information on the transmission of disease.

In the area of agricultural research, and with the support of the IDB, IFPRI and CIAT, IICA will have access to geographic information systems for the classification of agro-ecological zones and assessing the production potential of regions and micro-regions, and advanced systems and models of analysis on the impact of technology. These systems can be used to support national research programs in upgrading their mechanisms for identifying priorities and targeting research resources more appropriately.

The Institute's vision for the future calls for the establishment of the Inter-American Reference Center for Agricultural Information (CRIIA) (IICA 1994:7). The primary objective of the Center is to store and disseminate statistical information that has been organized and updated by the Technical Cooperation Agencies, Directorates of Areas of Concentration and Directorates of Specialized Services.

CRIIA's core node will be linked with the most important information sources in the world, and will also be linked with each of the countries of the region through existing electronic media. Information stored by CRIIA will be available to the countries and will serve as the basis for the analyses performed by IICA.

PART IV

AGRICULTURE IN THE AMERICAS ON THE EVE OF THE TWENTY FIRST CENTURY: FORUM OF MINISTERS

FORUM: AGRICULTURE IN THE AMERICAS ON THE EVE OF THE TWENTY-FIRST CENTURY[1]

-Report-

1. The Forum held to discuss the outlook for agriculture in the Americas on the eve of the twenty-first century was moderated by the President of Costa Rica, Mr. **Jose Maria Figueres**. The Ministers of Agriculture and Heads of Mission attending the Eighth Regular Meeting of the Inter-American Board of Agriculture took part.

2. After some opening remarks by the Director General of IICA, **Mr. Carlos E. Aquino**, who stressed the importance of the event, the forum proper began with a thought-provoking speech by President Figueres who underscored the fact that the context for agriculture had changed, with macroeconomic balances being given priority over the use of economic policy instruments.

3. While it was true that obtaining macroeconomic balances was important to create a favorable climate for the investments needed to make productive and commercial transformations possible, and thus achieve greater levels of competitiveness, he maintained that it was also important to address the microeconomic situation, i.e., the question of production.

4. He also said that agriculture had not "gone out of fashion," but that this sector did need to be modernized and analyzed with a fresh vision. If agriculture was to be modernized and assigned importance once again, actions needed to be taken in three major areas, with a view to: strengthening the policy-setting role of the agricultural sector; creating public/private service networks; and reviving the idea of strategic projects.

5. In order to strengthen the policy-setting role of the agricultural sector, management capabilities needed to be enhanced and a productive focus abandoned in favor a multidisciplinary one that was more integrated and allowed for greater sectoral participation in macroeconomic decisions. This would need to be done by bringing policies into convergence, coordinating with other institutions and areas (such as education, health and

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[1] See the List of participants in the Appendix.

infrastructure), and through strengthening alliances with other sectors.

6. Public/private service networks needed be created in order to provide systemic support within the framework of downsized public sectors (e.g., applied research, the organization of production, market information). Through these networks, the supply of services to the sector could be organized and the old research and extension models revised.

7. **President Figueres** further stressed the need to view the market as a magnet for the sector; carry out more applied research; increase credit and make it specialized; lower financial costs and reduce arrearage; organize production; and facilitate market information. Since a large public sector was no longer possible, the private sector had to organize itself in order to create intelligent linkages with the public sector and the rest of the economy.

8. It was also important to consider the possibility of new strategic projects to boost national economies and serve as focal points for development that would take better advantage of the synergies and comparative advantages, where the government could create incentives and the setting needed to stimulate investment from the private sector.

9. In conclusion, he stressed the need for the issue of agriculture to be on the agenda at the highest political and regional levels—for example, at the Summits of Central American Presidents and fora such as the hemispheric meeting held in Denver. There was a need to readdress problems in agriculture common to all countries; therefore it was important that more emphasis and political space be given to representatives from this sector.

10. In response to the general points mentioned by the Speaker, **Emiliano Ortega** (Chile) referred to the overriding concern that "Agriculture was in a state of crisis." This raised two questions: a) was agriculture manageable within the current general policy framework? b) Would the concern for macro balances leave room for sectoral policies?

11. He was of the opinion that the crisis had nothing to do with economic opening, as there had been a systematic decline in the real prices of agricultural goods, especially foodstuffs, since

World War II and the energy crisis in 1974. He cited the dairy industry in Chile as an example. When reforms were implemented, prices fell to $600-$800/mt and there was no incentive for producers. Today prices stand at $2200/mt, so the speaker wondered what would have happened in the previous situation if dairy producers had been eliminated.

12. He pointed out that there had been an upturn in international markets. The agricultural system that had developed in the post-war period had changed (e.g., reserves had fallen to a quarter of their previous level) and the outlook was promising (for example, a recovery in grain, rice, corn, fodder and meat prices). He noted that 1995 was an unusual year.

13. The situation in Chile had been characterized by two phenomena: a) external opening (i.e. the influence of international prices and markets); and b) a systematic effort aimed at agricultural diversification. He also said that as a result of this effort, exports had risen from US$150 million to US$3.5 billion in twenty years. Thus, the crisis in agriculture was related to basic food needs.

14. As a result of the adjustment process, the importance of the public sector had declined but the private sector had been strengthened. He also emphasized that it was important that the opening process be gradual in order to reconcile the increase in products with higher value added and a decrease in basic products that are not as competitive.

15. He further stated that there was a need to analyze what the international agricultural order of the future would be, and that it would depend on situations such as the future participation of China and the results of the implementation of the 1994 GATT agreements. He highlighted efforts such as the one carried out by IICA in regard to the publication distributed among the participants[2], as they pointed to the situation of agriculture in the year 2020.

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2 Based on the document "Problems related to and the Implications of New Economic Development Models for Agriculture, the Food Supply, the Environment and Rural Poverty" (IICA 1995)

16. Lastly, Ortega discussed the need to analyze how agricultural development could be made compatible with rural development. Given that poverty continued to exist, the current crisis should be seen as a challenge to assure small farmers that they had a future; and this would not be possible unless we knew what was going to happen in the market for their products.

17. The moderator of the Forum, **Jose Maria Figueres**, responded to the Chilean Minister of Agriculture's statements with the following remarks:

    - It had to be borne in mind that the poor had no weight in markets, as they did not play a role in either supply or demand.

    - The adjustment had resulted in a decrease in subsidies and an increase in poverty, for example, due to the negative effects on the production of staple grains.

    - Subsidies were necessary to prevent poverty, and he was critical of the idea that subsidies were only valid in rich countries and not accepted for poor countries.

    - The cost had been greater in terms of government spending, because the elimination of subsidies to grain producers had led to bigger housing subsidies in poor urban areas where there was an influx of immigrants from rural areas. In Costa Rica, for example, the subsidy to grain producers had been four billion colones, while subsidies for low-cost housing had risen to 35 billion colones.

18. **Gustavo Castro Guerrero**, reading a written statement by the Minister of Agriculture of Colombia, said that in view of the current crisis in agriculture, the agrarian (sectoral) bias needed to be replaced with a more integrated approach, with an interdisciplinary emphasis and as part of a larger system.

19. He pointed out that economic openness had in some cases resulted in internal surplus (of some products) and in other cases, large-scale imports.

20. Unemployment had increased and poverty had become more acute. A solution had to be found to poverty, not only for reasons of social justice, but also to guarantee the governability

and sustainability of the process: openness with a human face in which small farmers, human beings, were the object of rural development.

21. The indications were that market liberalization and integration would take hold. Colombia favored agreements on products in international markets in order to maintain prices to farmers, as in the case of coffee.

22. However, he stressed that free trade continued to be a myth, as there were many subsidies, exemptions and non-tariff barriers, and they continued to grow. That was why practical adjustments had to be made to the liberalization process, including greater government intervention. The market and the government had to complement one another, in a creative and practical manner.

23. Lastly, he emphasized the need to seek areas for international cooperation and the exchange of technology and information.

24. **Luis A. del Valle** (Guatemala) stated that in Central America, social and political developments would largely depend on what happened in agriculture.

25. He pointed out that there was a paradox: who will manage agriculture and how? The role of the Ministers of Agriculture (MAG) had been restricted, but they would continue to be the only actors. They had lost ground because they lacked an overall vision, and he therefore urged that a new style of management be developed that provided for shared management with other nongovernmental organizations and actors.

26. Because of this, a third forum for action needed to be created for non-governmental organizations (NGOs), as they represented a non-conventional resource and were new actors that made greater interaction possible.

27. In order to regain ground in the political sphere, alliances with other actors were needed. This would necessarily redefine the role of Ministers of Agriculture as a permanent source of technical guidance and a forum for interaction, and they had to be given the financial instruments to meet the needs of the NGOs.

28. International cooperation (and in particular, that of IICA) should be geared towards making this process visible and developing working instruments for a new style of management, within the specific space afforded it by its legal mandates.

29. The Moderator of the Forum, **Jose Maria Figueres**, responded to the concerns expressed by suggesting that IICA could help the MAGs to regain the political high ground and facilitate the exchange of experiences. He further suggested that IICA demonstrate which models were being followed by the countries, and what reforms the international organizations had adopted.

30. **Franciso Labastida** (Mexico) stated that action needed to be taken to raise the profile of agriculture. This involved two challenges: how to increase agricultural production at a faster rate than population growth and how to alleviate poverty and make the sector profitable again, as income from agriculture and livestock was decreasing. He pointed to three basic elements.

31. First of all, the sector had to be competitive in several areas, in the domestic market as well as internationally. He stated that the conditions in agriculture could be changed by means of technological development, and that this was one of the few options for growth available to most LAC countries. There was a need to reexamine the question of whether cheap imports were preferable to domestic production.

32. Secondly, each country would be individually responsible for this transformation process. External aid played a very limited role. The former was not the job of the government alone; the private sector should also be involved, and financial and trade instruments adapted.

33. Thirdly, the strategy of overall needed to be replaced by intensive growth, since it was not possible to incorporate more land. Thus, an ambitious program of technology transfer and training had to be implemented in order to increase productivity and prevent this growth from being concentrated among a handful of farmers.

34. There needed to be coordinated and integral management of all instruments in the public sector. The Heads of State were responsible for coordinating the use of these instruments, as such a task exceeded the mandate and capabilities of Ministers

of Agriculture. Presidents were key players in making change feasible.

35. The speaker also maintained that the role of agrifood security needed to be reviewed. That was why it was important for IICA to carry out more in-depth studies on how global supply and demand would grow.

36. In conclusion, he pointed out that production had to be improved if it was to be sustainable and create employment. He stated that technical assistance and training had an important role to play in this. If the farmers scattered throughout rural areas did not receive intensive training, rural poverty would continue to rise.

37. The moderator, **Jose Maria Figueres**, added that this change could be made and poverty overcome. He stressed the importance of self-sufficiency, as the amount of external cooperation available was limited.

38. He agreed that, given the competition for limited resources, decisions needed to be taken at the highest political level for an ambitious program of technology transfer and the diversification and modernization of production. The MAG's should therefore work together more closely with other ministries.

39. **Galo Izurieta Macias** (Ecuador) then addressed the meeting. He listed a series of aspects that had to be considered in analyzing the future of agriculture in the region:

- The limited surface area (land) made it necessary to raise productivity.

- The Cold War had been replaced by an economic and trade war.

- Producers had different reactions depending on the market for their products. Exporters liked openness, whereas it did not benefit farmers who produced for the domestic market.

- The importance of the short-term impact of exchange-rate policy, as opposed to the transformation of agriculture, which was a long-term process.

- Because of financial liberalization and high interest rates, agricultural credit had disappeared. Development banks were practically a thing of the past.

40. He wondered whether producer associations were ready to cope with deregulation and pointed out that the Ministries of Agriculture had lost their leadership role. Fragmented, overly specialized institutions needed to be restructured in order to achieve coherent rural development policies.

41. Finally, he stated that statistics were essential to demonstrate the importance of agriculture and its contribution to employment, exports and production.

42. **Jose Raul Alegrett** (Venezuela) argued for a different approach. He maintained that the crisis was of a broader nature and, therefore, the issue that should be addressed was agriculture's response to the crisis and not the crisis in agriculture.

43. He stated that agriculture should be viewed as an engine for overcoming the crisis. The problems of poverty and malnutrition needed to be addressed. Thus, the food issue should be incorporated in the MAGs' work. He cited the example of Venezuela which had created a food council chaired by the Ministry of Agriculture, as a way of linking the government to the people in solving the problems involved in the crisis.

44. He then proposed some key policy instruments for achieving the modernization of agriculture and increasing its contribution to development. First, he argued the case for supporting low-cost basic foodstuffs in view of their nutritional content. People should be encouraged to consume the nationally produced foods which were gradually being replaced by imported processed foodstuffs. For example, the MAGs should work in coordination with Ministries of Culture, because, in a broader sense, culture involved not only fine arts but also respect for local products and dietary traditions.

45. Secondly, he pointed up the need to complement agriculture with agroindustry. He suggested that agroindustry should be a dynamic force in rural areas.

46. Thirdly, he stated that small-farm agriculture and the rural economy needed to be diversified, so that small farmers could

work in areas other than agriculture and thus generate additional income.

47. He also pointed out that exports should be based on permanent, rather than transitory, comparative advantages. Competitive export programs needed to be established.

48. He emphasized the fundamental need to reverse the trend by which rural areas were losing capital investment in rural areas. People should be offered incentives to invest and save in rural areas.

49. He also pointed to the need to improve market information systems and reduce red tape and the contradictory signals that were sent. Reducing brokerage costs was a fundamental consideration.

50. Finally, he emphasized the desirability of working with productive circuits or agrifood chains.

51. The moderator, **Jose Maria Figueres**, took up the issues raised, highlighting the following five points:

- Efforts should be made to ensure quality.

- Emphasis needed to be placed on the interrelationships among nutrition, health and human resources. Nutrition should be seen as a way of investing in health in order to improve the productivity of the labor force and, in that way, make better use of it to compete in external markets.

- Rural agroindustry was an engine for development that spurred technology transfer and contributed to improving the quality and uniformity of products.

- "Culture" should be seen as respect for what is "ours," and be used to counter the consumption of imported goods. That was why the work of the MAGs should be linked to other ministries such as Culture, Youth and Sports.

- Eliminating bureaucratic obstacles called for major reforms in the MAGs as part of wider state reform. of the state. Institutions needed to be a help rather than a hindrance and eliminate red tape.

52. **Ira d'Auvergne** (Saint Lucia) then took the floor and described how agriculture had been used as a tool for development in countries that were now industrialized, and it was therefore worth analyzing its role carefully. However, he pointed out that in Caribbean countries the budget for supporting this sector bore no relation to its importance; priority was given to other sectors such as tourism.

53. He continued by saying that sectors such as tourism did not generate net income in foreign exchange (due to the high import component), as did agriculture, whose total income remained within the country. Countries that had abandoned agriculture were today having to spend millions importing foodstuffs.

54. He pointed out that agriculture was the base for the development of small Caribbean nations and for their social stability. Because of this, there was a risk in exposing small countries to world markets as they lacked the resources, technology and human resources needed to be competitive and they were dependent on a very small number of products.

55. The diversification of agriculture was important and should be supported in order to make the sector more competitive. Thus, credit was needed for long-term investments, such as fruit growing (e.g., mangoes) and production support services. He mentioned that CARDI had played an important role in this but that this was not enough, and suggested that IICA should support the efforts of this center.

56. Information on and organization of markets was needed. Food security needed to be evaluated and policies examined.

57. In conclusion, he mentioned the importance of training programs through the Ministries of Education for the farmers of tomorrow.

58. The moderator, **Jose Maria Figueres,** emphasized the importance of comparing the value added of different activities (for example, agriculture vs. tourism).

59. **Ramon Villeda** (Honduras) then spoke of the need to coordinate the Ministries of Agriculture and Economy in order to, in turn, achieve a synergy among ministries working in production.

60. He pointed out that support services needed to be reformed. New solutions were needed to new and old problems. Likewise, the efforts of different actors in the production chain should be pooled. He cited the case of melons in Honduras as a good example of the pooling of the strengths and interests of farmers and agroexporters. He suggested that dialogue between the government and small farmers, rather than government intervention, was the best way ahead.

61. He emphasized the importance of food security and the need to use the comparative advantages of the countries in terms of land, manpower, etc.

62. More applied research was needed in order to obtain a prompt and timely solution to major problems. In this, situation assessments were very important.

63. In conclusion, he mentioned the need to establish priority goals for LAC agriculture. In this respect, he called upon IICA to support such efforts in conjunction with FAO.

64. The moderator, **Jose Maria Figueres**, commented on these remarks by speaking of the need to coordinate research efforts, for which it was necessary to prioritize, organize and avoid duplication. He pointed out that there were many duplications in applied research.

65. **Sandy Rivera** (Nicaragua) then took the floor and described the difficulties her country had experienced in the past few decades, which had been characterized by difficult transitions, due to the fact that, for the past 15 years, there had been negative growth in the economy in general and in agriculture in particular. In this respect, she pointed up the importance of macroeconomic stability in making agricultural growth possible.

66. She underscored the concern for sustainability, as increasing the agricultural frontier was no longer possible without jeopardizing the sustainability of natural resources.

67. Growth had to be achieved through technological improvements. With regard to this, she pointed out the problem of access, as technology was increasingly being privatized. How could access to technology be made a priority? How many farmers would be

able to access this technology? She said that producers of staple grains were at a disadvantage.

68. She stated that, in order to achieve agricultural development, it was important to pay special attention to the human aspect of this process and strengthen infrastructure. Investments needed to be made in rural areas, and small farmers provided with training. Human resources had to be transformed, for example, by turning small farmers into entrepreneurs.

69. She expressed concern over trade inequities and the lack of bargaining power. She considered it important to try to eliminate imbalances in trade and that this issue should be raised in fora and argued from a position of strength.

70. **Roberto Rodriguez** (Uruguay) then addressed the meeting. He stated that the future of our peoples lay in the future of agriculture. The sector eneded a higher profile and greater respect, but this depended on the actions of those working in the sector.

71. As a result of the new importance attributed to nature, people wished to spend time relaxing in the countryside. Everyone wanted a natural place for recreation. This was objective, rather than subjective, and should be viewed as a major opportunity for agriculture.

72. There was a conflict between environmentalists and producers. A balance needed to be achieved between these two extremes.

73. The human element was the focal point of all the above, and importance should therefore be attributed to rural producers. Small- and medium-scale producers should be supported as they had the fewest opportunities. Producer organizations should be promoted. This opened the way for technology to be provided, transferred and used, making it possible for producers to compete with greater advantages. The culture of the small farmer should not be underestimated.

74. Small farmers faced severe handicaps. One serious problem was the difficulty in gaining access to credit because of high interest rates and the collateral needed. He pointed out that Uruguay was promoting a new credit program under which farmers could put up their own labor as collateral.

75. Education was a fundamental factor. Educating people, especially farmers, was vital. Efforts were needed to make the tax system more equitable and give tax breaks to farmers.

76. He suggested that Ministries of Agriculture should be organized so as to cover all production chains.

77. In conclusion, he proposed that production zones be established around the world. With the market economy in the ascendancy, tariff and non-tariff problems had to be taken into account. Therefore, he wondered whether production ought not to be organized more than trade.

78. The moderator, **Jose Maria Figueres**, responded by stressing the importance of attributing to nature its true value. Sustainable development should also be "good business" and an opportunity to improve the quality of life. Nature and production were not mutually exclusive, and the former was the base for sustainable development.

79. He also referred to the importance of stressing the idea of work as collateral for credit. In fact, small farmers had good repayment histories as they had much greater need of credit than larger producers, who had other options for financing their operations.

80. He suggested that fiscal policy should be used more efficiently in order to send the right signals to farmers. To illustrate the importance of this instrument, he recalled that the most successful agrarian reforms around the world were, generally speaking, implemented by means of a fiscal instrument, charging taxes on unused land.

81. The last speaker at the forum was **Roberto Solorzano** (Costa Rica), who underlined the importance of having farmers participate in diagnosing the problems in rural areas and in policy formulation.

82. He mentioned that, in keeping with this vision, the Ministry of Agriculture of Costa Rica viewed farmers as managers of development and participants in designing investment projects.

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ACRONYMS

CATIE	Tropical Agriculture Research and Education Center
CIDA	Canadian International Development Agency
CIFA	Inter-American Consortium of Foundations and Private Organizations in Support of Agricultural Research
CIMMYT	International Maize and Wheat Improvement Center
ECLAC	Economic Commission for Latin America and the Caribbean
FAO	United Nations Food and Agriculture Organization
FTAA	Free Trade Area of the Americas
GATT	General Agreement on Tariffs and Trade
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (Germany)
IDB	Inter-American Development Bank
IDRC	International Development Research Centre (Canada)
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Institute
IICA	Inter-American Institute for Cooperation on Agriculture
IPGRI	International Plant Genetics Resources Institute
IMF	International Monetary Fund
LAC	Latin America and the Caribbean
MERCOSUR	Southern Cone Common Market
NAFTA	North American Free Trade Agreement
NGO	Nongovernmental organization
OAS	Organization of American States
SDID	Société de Développement International Desjardins
SIAPA	Information System for Agricultural Policy Analysis in Latin America and the Caribbean
USDA	United States Department of Agriculture
WTO	World Trade Organization

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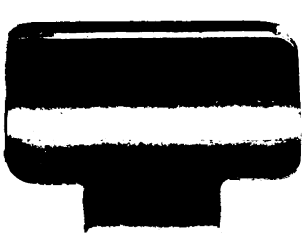

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