

# Strategy for Agricultural Development in Latin America and the Caribbean

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## SUMMARY

The century's end is a turning point in the economic history of Latin America. The economic reform processes begun in the 1980s, together with the globalization of world markets, have had a profound impact on economic structures and political thinking in the region. Now that the adjustment and recession stage is over, the new challenge is to consolidate economic growth and achieve greater equity. In the phase now beginning, the region's integration into the world economy is taking on a new impetus. Of key importance are the restructuring of the agriculture sector, and new opportunities for agricultural trade.

However, in the rural communities of Latin America and the Caribbean poverty is a major social and political challenge. Its ramifications include rural violence, the production and marketing of illegal crops, and insecure land tenure. In most of the countries of the region extreme poverty is concentrated in rural areas and the 1990s have not seen major changes in rural poverty which still afflicts close to 78 million people. The rural poor account for over 60 percent of the poor in Mexico, Central America and the Andean countries. Approximately two-thirds of the rural population living in poverty are small-scale farmers, and the rest are landless laborers. Half of the rural poor have limited access to the productive resources needed to generate adequate agricultural incomes, and projections suggest that this group will grow faster than those rural poor who do have such access. Moreover, there is a strong correlation between poverty and ethnicity: one quarter of the population living in extreme poverty are indigenous people.

This situation highlights the need to move toward a new regional consensus that refocuses rural policy, especially considering that after fifteen years of adjustment the results indicate persistently high levels of poverty and worsening inequality in income distribution. Achieving satisfactory results in

reducing poverty requires complementing the macroeconomic policy framework with social strategies to achieve structural changes in the development of human capital and in the quality of life of rural populations. The *strategy for rural poverty reduction* recently developed by the Bank takes efficiency and equity into account while incorporating a geographical approach that takes into account multisectoral factors and includes differential elements based on the striking diversity of rural life in Latin America and the Caribbean. This long-term strategy seeks solutions to such challenges and stresses the fact that approximately half the rural population living in poverty have few agricultural options for overcoming it. There are a variety of alternatives for dealing with the reality and diverse manifestations of rural poverty: productive agricultural activities (for those rural dwellers having development potential in this area), nonagricultural rural activities (tourism, industry, handicrafts, etc), diversification of sources of income through off-farm activities and traditional migration to urban areas, social networks for those segments of the population that are not able to migrate nor to be employed in. These options for reducing rural poverty exist in a context where the agricultural sector is still the main income source and, as a result, its development affects efforts to reduce poverty.

Hence, as a complement to the strategy for rural poverty reduction, this document looks at development options for the agriculture sector, which is especially important to small and medium-sized farmers. The potentially central role of agriculture for achieving greater efficiency, equity and sustainability is being rediscovered. Clearly, the 1990s have seen a shift from the old paradigm of protected agriculture in a closed economy with excessive State intervention, limited to primary production and with precarious linkages among economic agents, to an agricultural sector in tune with macroeconomic policy, focused on competitive advantages, expanding

into ancillary services, vertically and regionally integrated, and focused more and more on development poles. These facts are increasingly reflected in the activities of countries and international organizations. Examples of this are the new emphasis placed on the rural sector by the IDB and the World Bank, and the impact of Vision 2020 for food, agriculture and the environment, developed by the International Food Policy Research Institute (IFPRI), and the World Food Summit organized in 1996 by the United Nations Food and Agriculture Organization (FAO).

The *agriculture sector* as defined in this document encompasses crop farming, livestock, forestry production, fisheries, plant fiber cultivation, and agroindustry. Although the document emphasizes the first two of these subsectors (crop farming and livestock), it is important to keep in mind the sector as a whole and its linkages with other parts of the economy, especially the rural environment space of which it is a part. It is precisely in this environment space where several sectors come together, including, for example, infrastructure, energy, finance, telecommunications, water, education and health. It is important to note that this document complements several Bank actions and strategies by linking agricultural development with growth, poverty reduction and the sustainable use of natural resources.

*It is widely agreed that the integrated development of the sector makes it feasible to:* (i) meet growing worldwide nutritional requirements; (ii) bring down real food prices (of particular benefit to the poorest consumers, both urban and rural, who spend most of their income on food); (iii) forge important economic linkages in chains of production, both backward (industries producing seeds, fertilizers and machinery, and forward (processing, marketing and transport); (iv) increase employment and income (with a consequent impact on poverty reduction); and (v) through productivity increases (provided these are brought about in a sustainable way), ease

pressures on land use, especially in marginal areas, with potentially positive results for the environment.

In the *Eighth Replenishment*, the Bank received a clear mandate to promote and finance programs and projects to modernize agriculture, although the decision, as it stood, would need reinforcing to fully encompass the agriculture sector. Fulfillment of this mandate would mean restoring the level of funding formerly provided to the sector (following the drastic cutbacks that have taken place since the mid-1980s), and the establishment of an institutional strategy that includes a vision for the sector's future and clearly pinpoints the bottlenecks hindering its development.

This process can be guided by the information collected in recent years by research bodies and *the experience gained by the Bank*, which lead to the following conclusions: (i) agriculture plays a central role in economic growth; (ii) economic policies that are not biased against primary production are important; (iii) public and private investment in infrastructure, technical development and credit, which are essential for modernizing production and improving competitiveness are needed; and (iv) the role of private enterprise in the sector's performance, in the provision of services and in coordination with the rest of the economy is increasing.

Rapid global and regional changes have produced a new economic and institutional context, in which the agriculture sector in Latin America is of increasing significance. Improved conditions for international markets resulting from GATT/WTO agreements, and structural factors in world food supply, are opening up new opportunities for Latin America to increase its share of international trade in food and forestry products. The extraordinary wealth of the region's natural agricultural resources and its improved macroeconomic situation achieved over the past decade are also factors. As a result of these changes, more technically advanced forms of agriculture that are more tightly integrated with agroindustry and more strongly

oriented toward the international market are beginning to emerge in some regions. These changes are necessary to achieve greater productive specialization and improved economic efficiency. At the same time, the existence of very significant levels of rural poverty, and the fragility of certain ecological systems, make it necessary to focus on opportunities for enhancing the competitiveness of the agriculture sector, within a framework of equity and sustainability.

To this end careful analysis of the situation in each country is essential for defining policy tools or investment programs to consolidate the changes that have already taken place. However, quality of these tools and programs need to be improved and the benefits of change must be more equitably distributed among all social sectors related to the agriculture sector. The Bank can have a very important part to play in this process, in mutually reinforcing areas, such as agriculture development, urban and rural poverty reduction and the sustainable use of natural resources.

The challenge now is to move from strategies to actions, identifying investment opportunities that generate a multiplier effect by attracting greater public and private investment nationally. In this respect, certain *investment areas* are of particular interest to the Bank. These areas are analyzed in detail in the document and only mentioned here:

- (i) *Consolidation of public policy reforms* to ensure the reduction (or elimination) of distortions in markets and international price signals, together with the withdrawal of the public sector from productive and commercial activities (parastatal firms), and temporary support for transition programs, with compensatory measures for low-income producers and consumers who are negatively affected by policy reform, productive support to small

farmers, development of new market instruments and backing for the private sector (especially strengthening the capacity of the small and medium-sized enterprises and producers) in order to channel investment to coordinate and reinforce agriculture chains;

- (ii) *Modernization and reform of the State and the development of new market instruments*, including a review of the functions of ministries of agriculture and rural development; strengthening of basic services for the sector (technological development, plant protection and animal health, sectoral statistics and market data, and support for trade negotiations);
- (iii) Development of *land markets* by strengthening the legal framework and organizing cadastres to promote more transparent land markets, the titling and promotion of short-, medium- and long-term leasing of rural land, and broader access to land;
- (iv) Development of *financial markets* to facilitate the long-term investments that are essential for productive diversification and modernization;
- (v) *Sustainable use of natural resources*, including management of natural forests and comprehensive decentralized watershed management; and of publicly-owned agricultural natural resources including soil and water; and
- (vi) Strengthening of *human resources* and the development of *rural infrastructure* for production and to improve the quality of life in rural areas.

This strategy aims to facilitate the preparation of loan and technical cooperation programs,

improving their quality, and building consensus within the Bank and in the region on the critical issues for sustainable development in the sector. It comprises an integrated multisector approach including actions and instruments to complement major areas of the Bank's work; essentially, these are the environment and natural resources, poverty reduction and the search for greater social equity, the development of infrastructure and financial markets, and modernization and reform of the State. Application of these strategic elements and criteria will require a systematic effort, subject to periodic revision, in the formulation and review of operational instruments and financing facilities. The work would be done at the countries' request and would proceed on the basis of dialogues with governments and proposals from national technical offices and the Bank's Regional Departments. The Bank's priorities for action in the sector, which are identified in this document, are intended to guide the institution's resource allocation over the next ten years. Which justifies a review of both the Bank's agricultural policy adopted in 1982 (OP-721) and its rural development policy adopted in 1984 (OP-752).

The *action plan* proposed in this document highlights certain elements for strengthening the Bank's operations in order to implement effectively and efficiently the central ideas presented in the paper. This would comprise: (i) drawing up programs within the framework of sectoral strategies at the country level, focusing on the rural economy as a whole; (ii) placing a major emphasis on preparation, follow-up and evaluation of investment projects; and (iii) mobilizing resources for regional integration.

In addition, the following measures would be needed to provide initial support in implementing the strategy: (i) publicize the proposed initiatives through different activities at the national and regional levels, with the aim of adapting criteria to subregional and national realities and stimulating demand for rural and agriculture

programs; (ii) strengthen internal technical capacity for monitoring and implementation of the proposed actions, and reinforce existing working alliances with specialized technical agencies (FAO, IICA, ECLAC, IFPRI, ISNAR, IFAD, USDA and the World Bank); (iii) conduct technical studies (modernization of public sector agricultural organizations, role of biotechnology in agriculture development and rural poverty reduction, impacts of agricultural trade liberalization and indicators of agricultural sustainability) in order to better define the proposed financing instruments; and (iv) prepare an annual report on the Bank's activities in the rural and agriculture sector as a whole, beginning at the end next year.

Depending on the demands and circumstances of each situation, implementation of the strategy will require activities to be strengthened at various levels, including programming missions and country studies and strategies, subregional and national sector strategies in the Bank's Regional Departments, and the concrete identification of financing mechanisms in each program (from the Bank, the Inter-American Investment Corporation, and various funds, in particular the Multilateral Investment Fund). Assuming that the project portfolio displays moderate growth over the next five years (between 5% and 10% per year), in response to increased demand for financing for rural and agriculture programs, then implementing the proposed actions would mean a rise in costs due to the increased number of operations to be prepared and the application of the aforementioned initial support actions for strategy implementation. This investment can be estimated as equivalent to the cost of between three and five additional staff per year, depending on the level of the project portfolio of each of the Regional Departments. The resources would be assigned in accordance with specific needs, but would not necessarily mean creating new posts. This is certainly a small cost compared with the expected benefits of a gradual but sustainable development of the sector. It is also anticipated that part of the additional technical work derived from greater demand from the countries can be undertaken through working

agreements with specialized technical agencies.

Success in implementing this strategy and the monitoring system to measure it will be based on three elements: (i) annual growth in the project portfolio (number of projects and financing totals); (ii) the quality of the programs measured by the results of technical evaluations; and (iii) progress reports and budgetary adjustments in the Annual Report on the Rural and Agriculture Sector to be produced from the year 2000 onwards. The priority investment areas and the action plan for this strategy should be updated in 2005, and the strategy as a whole should be reviewed beginning in 2010.

The agriculture sector in Latin America and the Caribbean has a promising future; however, there are significant challenges to be overcome. As the main financing agency in the region, the Bank can play a fundamental role by supporting countries in the modernization and development of the sector. A proactive policy to mobilize funds for strategic investments, systematic policy review through dialogue and dissemination of ideas and best practices, and the development of programs combining economic reforms, institutional strengthening and investment projects in priority areas would have a fundamental impact on the region's economic and social development. This is the institutional challenge for the coming decade.

**Table 1: Summary of Priority Investments, Objectives and Key Activities for Agriculture and Rural Development**

<i>Priority area</i>	<i>Objectives</i>	<i>Activities</i>
<b>Consolidation of economic reform programs and transition support</b>	<p>Macroeconomic stability and fiscal balance</p> <p>Economic growth in the sector as well as the overall economy</p> <p>Consolidation of sectoral reforms</p> <p>Rural poverty reduction</p> <p>Temporary support for restructuring the subsectors</p>	<p>Support for highly indebted countries to restructure their debt, reduce the fiscal deficit and improve macroeconomic management capacity.</p> <p>Temporary compensatory measures for producers and consumers affected by economic liberalization, including transfer of resources, food aid and productive support to small producers</p> <p>Development of new market instruments (risk management, future markets, stock financing, agriculture trade boards)</p> <p>Support for private sector enterprises to channel resources to agriculture</p>
<b>State reform and services for the agricultural sector</b>	<p>Definition of agricultural and rural development policies and strategies</p> <p>Increase in sector competitiveness and modernization</p> <p>Greater efficiency in public services for the sector, complementarity with the private sector.</p> <p>Decentralization and diversification of government activities</p> <p>Strengthening of national innovation systems</p> <p>Consolidation of national systems of animal and plant health for the prevention, control and eradication of pests and diseases</p> <p>Development of input and product markets</p>	<p>Reform of the mandate and organization of agriculture and rural development ministries</p> <p>Formulation of appropriate policies and services to promote technological development and animal and plant health, to protect the health of the population and facilitate exports</p> <p>Strengthening of public sector research; encouraging participation by producers, enterprises, nongovernmental organizations and universities in technological development and collaborative research, via competitive funds</p> <p>Market information and export promotion (including modernization and privatization of port facilities)</p> <p>Technical support to improve capacity to negotiate international trade agreements</p> <p>Strengthening of the capacity of the medium-sized business sector and organized producer groups to produce and export quality products</p>
<b>Development of financial and capital markets and risk management</b>	<p>Expansion of sustainable and low-cost financial services in rural areas reliable</p>	<p>Regulatory and institutional reform to reduce transaction costs and informality</p> <p>Support for the private banking system to encourage it to expand into rural areas</p> <p>Support for emerging financial institutions (saving and loan cooperatives, NGOs, rural banks) engaged in providing financial services to the rural community</p> <p>Promotion of linkages between formal and informal credit institutions</p> <p>Promotion of loans to rural microenterprises and the use of nontraditional technologies for implementing systems of collateral to broaden coverage</p>

<i>Priority area</i>	<i>Objectives</i>	<i>Activities</i>
<b>Development of land markets</b>	<p>Improvements in the efficiency of land markets</p> <p>Regularization of land tenure, of rural properties</p>	<p>Modernization of cadastre, registration and titling of rural properties</p> <p>Support for government efforts to facilitate the purchase of land by small-scale producers or to consolidate and emancipate traditional agrarian reform projects</p> <p>Promotion of short-, medium- and long-term rural land leasing, enabling the negotiation and sale of lease deeds and facilitating their use as bank collateral</p>
<b>Sustainable use of natural resources</b>	<p>Conservation and rational use of natural resources</p> <p>More efficient use of water resources</p> <p>Integrated watershed management</p>	<p>Refurbishment and improved operation and administration of irrigation systems and institutional strengthening to improve the integrated management of water resources</p> <p>Granting of water property rights to users and user associations to stimulate private investment and the development of small-scale irrigation projects or projects for refurbishing irrigation systems at the level of private users</p> <p>Promotion of the use of appropriate farming and livestock management practices</p> <p>Reforestation practices in high watershed areas</p> <p>Development of community capacity for action and investment in the sustainable use of natural resources</p>
<b>Development of human resources and rural infrastructure for production and improvements in the quality of life in rural areas</b>	<p>Promote productive employment in poor rural areas</p> <p>Reduction of rural poverty</p> <p>Development of the rural economy</p> <p>Integrate marginal areas into national development</p> <p>Decentralization of government activities</p> <p>Expand opportunities for productive agricultural and nonagricultural development in rural areas</p> <p>Development of the technical and managerial capacity of public and private agents</p>	<p>Training to improve labor market participation in rural and urban areas</p> <p>Expand public health and primary and secondary education services in rural areas</p> <p>Develop capacity for organized action by farmers' groups</p> <p>Develop managerial capacity in the medium-scale agribusiness sector</p> <p>Strengthening of rural municipalities and communities to carry out public investments, and promotion of private productive activity</p> <p>Investment in communication routes (rural roads, highways, railways, navigable canals, electrification rural markets)</p>

## I. INTRODUCTION

Agriculture has been of major importance in the economic development of Latin America.<sup>1</sup> Because of rich natural resources and, in some countries, the absence of other sources of wealth the sector has played a central role in the development of today's modern societies. Agriculture production still accounts for more than 25% of gross regional product (IFPRI 1995) and over 40% of exports (Piñeiro and Trigo 1996); in some countries such as Argentina, Colombia, Costa Rica, Haiti, Guyana, Nicaragua and Paraguay, one or both of these indicators are considerably higher.

However, rural poverty is a major social and political challenge for the countries of the region, and has ramifications in rural violence, the production and sale of illicit crops, and insecure land tenure. Rural poverty has changed little in most countries during the 1990s, and it still affects close to 78 million people; extreme poverty also tends to be concentrated in rural areas. This situation coexists with other trends affecting rural life in the region. These include integration and competitiveness, the new role of the State, an emphasis is on the environment, and the relationship between gender, ethnicity and poverty. The Bank's strategy for rural poverty reduction (IDB 1998a) focuses specifically on meeting those challenges and stresses that about half the population living in poverty have very few agricultural options for overcoming it.

Rural poverty in the region is concentrated mostly among small-scale producers with very limited agricultural potential and

landless persons. Some small-scale producers lack of access to land of sufficient quality and quantity to generate the incomes or products needed for ensuring the survival of the family and its development as a productive unit. Where access to land is not feasible, other income generating alternatives may exist. These include: (i) the creation of nonagricultural rural employment sources, through public investment and incentives to attract private investment in tourism and related services, fisheries, and agroprocessing industries; (ii) fostering small enterprises or self-employment in nonagricultural activity in trade, handicrafts and small-scale manufacturing; and (iii) providing training to enable poor persons living in rural areas (women, men or young people) to enter the urban or rural labor market with greater skills. Such options exist in addition to traditional migration to urban areas, social safety nets for those who cannot migrate or find employment, and productive agricultural activities (for small-scale producers with the potential for such development).

As a complement to the rural poverty reduction strategy mentioned above, this document focuses on options for agricultural development, in recognition of the vital role this sector has to play, directly or indirectly, in rural areas. The Bank has played a major part in the development of the sector: in recent decades, among other things, it has financed projects to develop irrigation infrastructure, roads, credit and rural development programs, and support for technology generation and transfer. During the 1990s, international support for agricultural development has weakened, as can be seen in declines in financing for the Consultative Group on International Agricultural Research (CGIAR) and other research agencies and programs, and in the reduction in total funds allocated to

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<sup>1</sup> For the purposes of this document, the "agricultural sector" includes crops, livestock, forestry, fishing, plant fiber cultivation and the agrifood industry. Although the paper concentrates basically on crop farming and livestock, links are established with the other subsectors mentioned above, especially the agrifood industry in relation to competitiveness and trade.

agricultural projects by both the IDB and the World Bank.

This neglect of the agricultural sector is disturbing given the extent of rural poverty, and the opportunities that arise from changes in agricultural policy taking place in more developed countries, and trade liberalization trends. These shifts offer better prospects for the countries of the region to make efficient use of their natural resources by actively participating in trade in foodstuffs, and forestry and fish products. As a result, agricultural production has the potential to be a key component in a new economic and social development strategy in most countries of the region. This strategy must incorporate a broad and modern notion of a high-productivity sector based on the correct use of available technology, and in which primary production links with agribusiness to capture the value-added resulting from the industrialization of production. This new development model must be economically efficient as well as environmentally, socially and economically efficient.

Implementing such a strategy implies major efforts both from a technological point of view and in terms of human resources training and investment. The Bank can play an important role by collaborating with the countries of the region to generate ideas and proposals, mobilize financial resources and coordinate regional and subregional initiatives to reinforce and complement the individual efforts of each country. This paper presents the central elements of the Bank's working strategy, based on a vision of a modern agricultural sector that is adapted to the new conditions that characterize the region. The sector is visualized as a system that encompasses production and natural resources, together with the population that makes its living from this economic activity. This makes it possible to analyze agriculture with due regard for its important potential contribution to solving the problems of rural poverty in Latin America (more than half of all small-scale peasant farmers in the region

have agricultural options to escape their current conditions of poverty) and the need to conserve natural resources.

This document identifies priorities for Bank action in the sector to guide the allocation of resources in support of the strategic elements and objectives it describes. The paper aims to facilitate the preparation of loans and technical cooperation programs and to improve their quality, building consensus both within the Bank and in the region on critical issues for sustainable development of the sector. The proposed strategy presents an integrated approach including actions and instruments that are complementary to various other areas of Bank interest, in particular; poverty reduction and improving social equity, sustainable use of natural resource, development of infrastructure and financial markets, and the modernization and reform of the State.

The strategic elements proposed focus attention on food and agriculture as a key productive sector in the region. The paper draws on experiences in designing and carrying out projects financed by the Bank (and by other development agencies) to define options that complement other Bank strategies, particularly those relating to rural poverty reduction (IDB 1998a) and rural financing (IDB 1999). Depending on the needs of each country, some of the options proposed could, with appropriate modifications, be used to define an agricultural development agenda on a case-by-case basis.

The Bank's current operational policy in the agricultural sector was approved by the Board of Executive Directors in 1982 (OP-721, document GP-106-3). In recognition of the sector's great productive potential, this policy sought to encourage borrowing countries to pay more attention to its development, with the goal of "achieving an overall improvement in the food system". Although the policy focused on topics that are still priorities, such as enhancing

productivity and promoting sound land and water use, the document reviews the regional agriculture situation at the end of the 1970s and sets out a financing strategy whose aims generally relate to the problems of a stagnated agricultural sector, where priority was given to food crops for the satisfaction of domestic demand and import substitution. Moreover, in 1984, in order to improve rural production, employment and incomes, the Board of Executive Directors approved the Bank's rural development policy (OP-752, document GP-108-3) promoting the financing of productive strategies based on integrated rural development projects. Although some of the aims of these policies have not changed over the past two decades, their design (in the late 1970s) place agriculture in a subsidiary role in the sense that any revitalization of the sector would be subordinated to the interests of other sectors of the economy. This strategy takes into account the scope of the 1982 agricultural policy, viewing the sector as a dynamic one that, together with agroindustry, has the potential to become a mainstay of economic growth in a framework of equity and environmental sustainability.

The conceptual difference between this strategy and the 1982 policy reflects events that have occurred in the region over the past two decades, starting with the crisis of 1982 (the year in which the Bank's agricultural policy was approved), the adjustment and recession of the 1980s and 1990s and the emergence of alternative economic thinking based on growth and equity. These characteristics merit a review of both the Bank's agricultural policy (OP-721) and its rural development policy (OP-752).

International and regional economic changes, lessons learned about the modernization of the sector and the Bank's experience during the past 10 years are the basis for a new approach to the sector which is discussed in the next Chapter.

## II. OVERVIEW OF THE SECTOR

From the 1960s onwards, under the impetus of the green revolution, agricultural production in Latin America grew strongly and significantly, with annual growth rates averaging about 3% during the 1960-1994 period. This, in turn, contributed to a limited increase in per capita food availability. However, up to the mid-1980s these increases varied by country and product, depending on the economic policy implemented, the availability of land and technology and market conditions in each case.<sup>2</sup>

The crisis of the 1980s set in motion a harsh process of adjustment and economic reform accompanied by a deep recession. However, the performance of the agricultural sector was satisfactory during that decade, maintaining a growth rate of over 2%, which underlines its capacity to contribute to the economy as a whole even in times of recession (Pomareda et al. 1989). Agricultural export volumes grew significantly during that decade (by about 3% per year), despite a deterioration in the terms of trade that affected the overall profitability of agricultural production. Latin America is the world's strongest region in terms of exportable surpluses and the most dependent on such exports for its trade balance (Piñeiro and Trigo 1996). The favorable conditions for agricultural trade expected in the coming decade will provide a chance for the region to increase its share of trade and recover the

levels reached in the early twentieth century.<sup>3</sup> Production estimates for 2020 (Pinstrup-Andersen 1998) suggest growth in agricultural output for the region as a whole on the order of 2.3%, somewhat less than the 2.9% experienced during the 1970-1990 period (average annual growth was 3.5% in the 1970s, 2% in the 1980s and 3% in the 1990s). This growth of output will lead to an increase in per capita calorie intake from 2,690 calories in 1990 to 3,000 calories in 2020, and a reduction in the percentage of undernourished people from 13% to 5% over the same period.

This highlights the importance and urgency of paying special attention to the sector in order to exploit the comparative advantages provided by the region's wealth in natural resources, increasing domestic demand and favorable international conditions, especially in light of future food demand (McCalla 1994). Reducing imports of deficit products while increasing exports of those in which the region has comparative advantages emerges as an important principle in the economic development strategy. The expansion of the agriculture sector will have a global impact on economic growth, food security and employment, of great significance for the future of the region.

### *2.1 The Economic and Social Importance Agriculture*

Gross agricultural product (GAP) has grown more slowly than the overall regional economy in recent decades (annual growth of

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<sup>2</sup> Aggregate growth at the regional level was no different from what happened in other parts of the world –a significant fact considering that the countries of the region in general implemented economic policies with an anti-agrarian bias during this period. These policies included overvalued exchange rates, positive protection of industries, restrictions on agricultural exports and controls on food prices. See de Janvry et al. (1997) for a recent analysis of new trade policy directions, input and product markets, land markets, technology and irrigation in the region.

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<sup>3</sup> Although the region's agricultural exports exceeded imports during 1987-1995, imports accounted for a rising percentage of exports (from 33% in 1987 to 50% in 1995, ECLAC 1997). The slowdown in trade in 1998 as a result of the economic crisis in Asia, Russia and Brazil, and sharp downturns in the prices of basic products (IDB 1998f) will probably have a negative short-run effect on regional agricultural exports.

2.7% in the 1970-1995 period compared to 3.3% for the economy as a whole) as economies have diversified, and the output and consumption of other goods and services have grown faster than agriculture. This explains the reduction in the sector's share of regional product from 15% in the late 1960s to below 10% in the 1990s (Reca and Echeverría 1998). Table 2 shows the GAP trend in relation to the total over the past two decades, along with its current weight in the region. In general, although the regional GAP

does not exceed 10% of the total, its share has not decreased over the past 20 years, whereas it has declined in the United States and Canada. Three countries – Brazil, Mexico and Argentina – account for 70% of total GAP in Latin America, equivalent approximately to that of the United States and Canada combined (US\$145 billion). Also noteworthy is the sector's large share of total output in Central America, Guyana, Haiti and Paraguay.

**TABLE 2. ECONOMIC IMPORTANCE OF THE AGRICULTURAL SECTOR IN THE AMERICAS, 1975-1996**

	Gross agricultural product (% of total GP)					Value
	1975	1980	1985	1990	1996	(US\$ millions)
<b>Caribbean</b>						
Barbados	13.3	6.8	6.4	4.6	4.3	85
Guyana	16.5	34.0	37.6	33.6	35.8	252
Haiti	45.2	32.9	32.8	33.2	36.6	785
Jamaica	7.3	7.5	8.0	6.5	8.7	513
Dominican Republic	17.5	17.1	17.8	14.6	14.0	1,848
Surinam	–	9.1	10.5	10.2	11.1	63
Trinidad and Tobago	3.8	2.0	1.8	2.5	2.5	143
<b>Mexico</b>	9.6	8.3	8.6	7.8	7.4	24,823
<b>Central America</b>						
Belize	-	21.0	21.3	18.3	20.3	123
Costa Rica	21.2	14.6	15.6	15.8	15.4	1,390
El Salvador	25.2	19.0	18.6	17.1	13.6	1,410
Guatemala	28.0	24.8	25.9	25.9	24.1	3,798
Honduras	29.3	19.4	19.6	20.0	19.8	811
Nicaragua	23.4	28.4	30.2	31.0	33.7	672
<b>Andean Region</b>						
Colombia	25.2	17.4	16.5	16.2	14.2	12,174
Ecuador	23.0	10.5	10.9	13.4	13.0	2,471
Peru	13.2	5.2	6.2	7.3	7.2	4,403
Venezuela	6.7	4.9	5.7	5.4	4.9	3,450
<b>Southern Region</b>						
Argentina	11.9	6.4	7.7	8.1	6.7	19,692
Bolivia	17.5	13.2	16.3	15.4	11.7	844
Brazil	8.3	6.2	7.1	6.8	7.2	55,898
Chile	9.8	6.5	8.0	8.8	7.6	5,468
Paraguay	34.7	25.0	26.9	27.8	26.9	2,594
Uruguay	15.2	11.5	13.2	11.3	12.1	2,314
<b>Latin America and the Caribbean</b>	11.3	7.7	8.4	8.3	8.0	146,695
United States	3.3	2.4	2.0	1.9	1.7	129,842
Canada	4.1	3.8	2.8	2.4	2.3	13,165

Source: IDB (Economic and Social Progress Reports, various years), U.S. Department of Commerce, Canadian Agriculture Library.

It should be noted that the gross agricultural product accounts for only a fraction (primary production) of the sector's importance in the broader economy. The sector's importance increases significantly when one considers that primary production has linkages with industrial processing and manufacturing activities, and with related transport and marketing services and foreign trade. These activities may generate increases four times greater than the value of agricultural output alone (IFPRI 1995). For example, in Chile, Argentina, Brazil and Mexico, the GAP (less than 10% of total) rises to 30% when related manufacturing and services are taken into account, and to 40% when the whole agriculture sector is included (Pryor and Holt 1998).<sup>4</sup>

The traditional historical tendency for the relative size of the agriculture sector to decline as the economy grows (Figure 1) should not be taken to mean that its role should be reduced so as to "attain" the low percentages seen in more developed economies; rather, it demonstrates the need to develop the sector in order to contribute to the growth of the economy. It should also be remembered that for most countries in the region agricultural growth is essential for economic growth (Figure 2).

The sector's importance increases further when social (rural poverty) and environmental

aspects (sustainable use and conservation of natural resources), and their linkages (for example, the inequities that exist in regions with abundant natural resources (IDB 1998f) are taken into account). In the past, the narrow view of the sector in many cases has had political effects that in one way or another have assigned it a marginal importance. However, the sector's central role in achieving greater efficiency, equity and sustainability is, to some extent, being rediscovered. The 1990s clearly define a paradigm shift – away from the old protected agriculture that operates in a closed economy with excessive state intervention in product and input markets. This was limited to primary production with precarious links between economic agents and had a bimodal structure involving a large number of smallholders (*minifundistas*) with very little agricultural potential coexisting with commercial agriculture. The new paradigm sees an agriculture sector that is in tune with macroeconomic policy and focused on competitive advantages; the sector extends into ancillary marketing and transport services, it is vertically and regionally integrated, and has a greater concern for rural poverty reduction and the sustainable use of resources (Gordillo 1994).

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<sup>4</sup> The primary agricultural sector in Uruguay currently accounts for just 12% of GDP and is a direct source of work for 150,000 people; however, when the different agroindustrial linkages are taken into account, employment rises to over 225,000 people. Moreover, 50% of industrial product is generated by manufacturing enterprises of agricultural origin, and agricultural products and industrial products of agricultural origin together accounted for over 80% of the country's total exports in 1996, or nearly US\$2 billion (*El País* 1998). If one adds to these figures backward linkages (manufactures, agroindustries, exports) and forward linkages to the production of agricultural inputs, the economic weight of the sector increases still further.

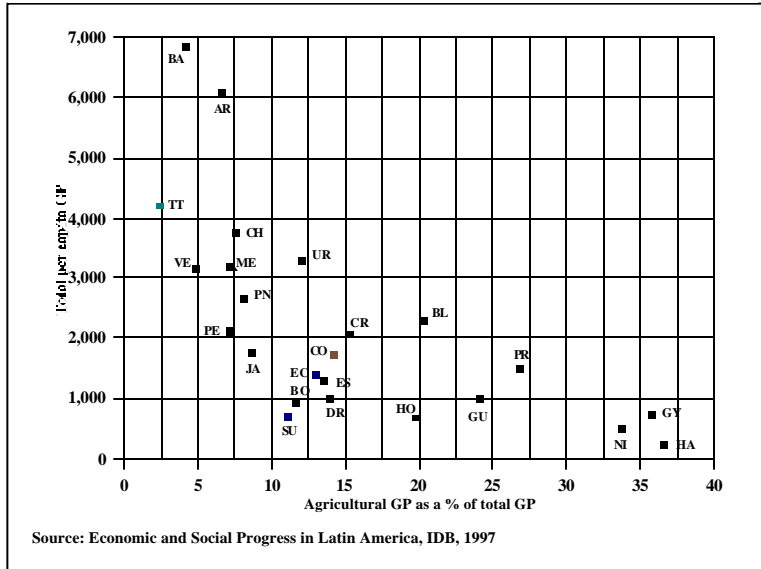
This new paradigm is starting to be built into the priorities of international organizations, reflecting the concerns of the international community. Examples of this are the new importance attached to the rural sector (broadly defined) by the IDB and the World Bank, and the attention received by Vision

2020 for food, agriculture and the environment developed by the International Food Policy Research Institute (IFPRI) and by the World Food Summit on food security organized by the Food and Agriculture Organization of the United Nations (FAO) in 1996.<sup>5</sup>

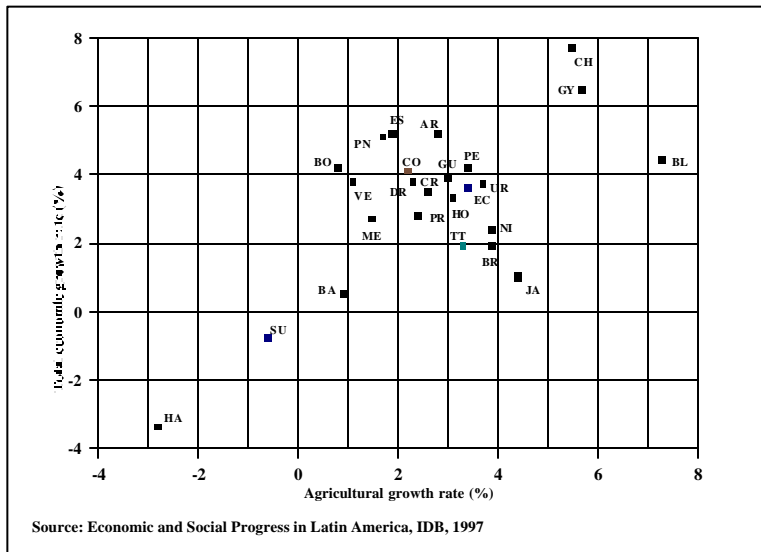
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<sup>5</sup> A recent survey (IICA 1997) shows that there is a regional consensus on the characteristics of the sector in the coming years. These include integration in free-trade blocs (including FTAA 2005 and subregional integration agreements); significant impact from standards approved at supranational levels (including WTO, UPI, Codex Alimentarius, OIE, IPPC, UPOV); a more active role for the private sector; the burgeoning role of technology and high demand for technical and managerial information; greater diversification, flexibility and quality of production to cater to changing consumption patterns; greater integration in agricultural chains, increasing use of environmentally sustainable production techniques; greater demand for skilled human resources; and the persistence of regional inequalities and the prevalence of rural poverty.

**Figure 1: Relative Weight of the Agricultural Sector in Total Gross Product, 1996**



**Figure 2: Relation Between Agricultural Growth and Total Economic Growth, 1990-97**



## ***2.2 Structure of Production and Opportunities for Expanding Agricultural Trade***

Crop farming accounts for 60% of (primary) agricultural production in the region; its growth rate has fallen in the past 25 years, whereas livestock production has gone up during the same period. Output of oil seeds, sugar cane, fruits and vegetables, and poultry and pork has grown considerably recently, as a result of the consolidation of the trend toward the concentration of agricultural activity in the region's larger countries. The productive structure of the sector and the productivity of land and labor varies greatly between regions and among the different countries. As for foreign trade, the regional net positive balance (US\$21 billion in 1995) has dropped from a ratio of US\$3.2 of agricultural export value for each dollar of imports in the late 1960s to below US\$2 in the 1990s. The composition of exports has also undergone significant changes over the same period, with fruit and vegetables (30% of the total) attaining higher values than coffee (26%) and oil seeds (20%) (Reca and Echeverría 1998).

The growth of population and incomes worldwide is causing a considerable increase in demand for agricultural products. The globalization and trade liberalization that have characterized the past decade are creating a new framework for Latin America's agricultural exports. The Uruguay Round accords, together with changes in agricultural policy in the United States and the European Union, will lead to more open markets and less competition from subsidized products on the international market.<sup>6</sup> In addition to this, a

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<sup>6</sup> However, the distortions to trade in foodstuffs caused by policies in more industrialized countries are still significant, particularly involving production and export subsidies, purchase, storage and marketing undertaken by governments, licensing requirements, tariffs and quotas, and complex customs procedures that include sanitary restrictions with no technical basis (M. Figueres 1998).

series of structural factors has begun to cause slower increases in per-hectare yields worldwide, with negative implications for global food supply. In the mid-1980s, per-capita food production stabilized after two decades of rapid growth (FAO Agrostat). This stabilization is expected to continue or even intensify in the coming decade, owing to the exhaustion of the impact of the green revolution on yields,<sup>7</sup> the progressive depletion of irrigation water and ocean fish stocks, and the start of productive restructuring in the European Union and, to a lesser extent, the United States in the wake of the GATT accords. The consequences of this scenario for Latin America are considerable: between 1960 and 1993, the terms of trade for countries exporting food commodities deteriorated significantly, negatively affecting their productive capacity. Price projections suggest a stabilization of price levels somewhat above those for the 1990-1993 period, when they reached their lowest point (IFPRI 1995). These conditions will allow the countries of the region with exportable balances and sufficient competitiveness to increase their international market share.

These new opportunities in the international market highlight the need to initiate actions to improve the international competitiveness of agricultural production through the incorporation of technology, investments in transport and communications infrastructure, the establishment of national food safety systems, and training and development of human resources. In addition, a strategy based on greater participation in international trade requires market data, active export promotion and strengthened regional integration. This will improve the bargaining power of each of the regions with respect to other countries and regional blocs, leading to more favorable trading conditions. In this context, economic complementarity agreements, productive specialization, and collaboration in technological development are important

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<sup>7</sup> Indices of the growth of agricultural production in more developed countries have declined notably since the 1980s (IFPRI 1995).

elements of a common strategy among the countries of each region.

### **2.3 Lessons Learned on Modernization of the Sector**

Valuable experience has been gained in recent years about agricultural and rural development and their relationship with economic development. Some of these lessons are summarized in the following paragraphs, as a starting point for identifying areas of work and for building an action strategy.<sup>8</sup>

*Growth in the agricultural sector is a necessary condition for economic growth and for reducing rural and urban poverty. Agricultural production and rural population have declined (relative to total production and population respectively), as economic development has proceeded. However, in most countries the agricultural sector remains an important source of employment for broad segments of the population, particularly the rural poor. Even in countries where the sector's contribution to the economy is less than 5%, as is the case in several Caribbean countries, it still plays a key role in exports and in supplying dynamic sectors such as tourism. In short, it is difficult to initiate a sustained development process unless it is based on a robust and growing agricultural sector.*

*Agricultural and nonagricultural employment must be created in rural areas in order to reduce poverty. In addition, public investment in basic infrastructure is needed to improve production and the quality of life in rural areas. Rural poverty continues to be one of the major challenges for the region in both relative and absolute terms. Programs to alleviate rural poverty have been relatively inefficient when not accompanied by an economic policy framework that permits*

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<sup>8</sup> See Schuh and Brandao (1992) for a complete review of the literature on the theories, empirical evidence and debates on agricultural for development in Latin America over the past 50 years.

profitable agriculture production with privileged access to productive resources for small producers with agricultural potential, on the one hand, and the fostering of nonagricultural rural activities, on the other. The Bank's strategy for rural poverty reduction (IDB 1998a) builds on these concepts and proposes a series of specific actions to promote the rural economy, especially as regards landless rural dwellers and small farmers with very limited agricultural potential, focusing, for example, on the development of rural land markets and micro- and small-scale rural enterprises, together with the necessary investments in education, health and infrastructure.

*An economic and institutional context is needed that promotes access to productive resources for broad sectors of the population, together with investment, and sustainable management of resources. An agricultural development strategy requires the creation of economic conditions that allow for private profitability and long-term stability. Modernization processes have not been successful where countries have applied economic policies with a strong bias against the sector, even in cases where partial subsidies were used to correct the distortions introduced through relative prices.<sup>9</sup> In the institutional domain, security of tenure and the right to benefit from access to land are*

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<sup>9</sup> Historically, taxation of the sector, applied more through discriminatory policies than direct taxes, has resulted in slower growth in the sector and in the economy as a whole. Developing countries have traditionally taxed the agricultural sector, whereas more developed countries have usually subsidized it; as a result, both have suffered losses in economic efficiency. The agricultural sector should neither bear a greater tax burden than other sectors of the economy nor be more favorably treated (Schiff and Valdés 1998). See the analysis by Mundlak et al. (1989) on the negative effects of such policies on the sector and the economy as a whole; and the explanation given by Olson (1990) on "use and protection" of agriculture in developing and more developed countries respectively, based on the different opportunities for collective action.

crucial for encouraging investment and the protection of natural resources. The development of institutions to provide financial services (insurance, saving and loans) which are timely, low-cost and affordable by broad segments of the population is also necessary to invigorate and improve living conditions in rural areas. The development of public institutions to facilitate private sector growth and development is also necessary.

*Trade liberalization should be accompanied by productive investments and the development of infrastructure and technology to ensure greater economic efficiency and improve the well being of the rural population.* The deterioration of the agricultural terms of trade suffered by many Latin American countries between 1960 and 1994 had a negative effect on the sector's profitability and its capacity to invest and modernize. This process was partly a consequence of poor integration between primary production and industry, which prevented the use of market niches and reduced negotiating capacity in international markets. It was also partly due to low productivity and high production costs caused by low levels of investment in technology. Hence, investments in areas competitive advantages, not limited to primary goods are of key importance. These should be linked to agriculture to generate greater value-added and strengthen multiplier effects in the rest of the economy.

*A development strategy based on the competitive modernization of agricultural production requires an active process of technological innovation.* In past decades, much of the expansion in food production in the region was achieved by bringing new land into production and through the ever greater use of fertilizers and agrochemicals, which had negative environmental consequences. Horizontal expansion of this kind is becoming increasingly difficult and undesirable because less fertile and more erosion-prone lands need protection and in many cases, a continued expansion of the agricultural frontier is not

possible without negative environmental consequences. Production growth must come from higher yields per hectare cultivated, based on genetic improvements and greater precision in the use of inputs. Technology-intensive development requires an institutional framework that will enable people to acquire the necessary knowledge, and a set of mechanisms and programs to ensure ongoing training for those who will be using the available technology. Both elements require the active participation of the State in financing and organization.

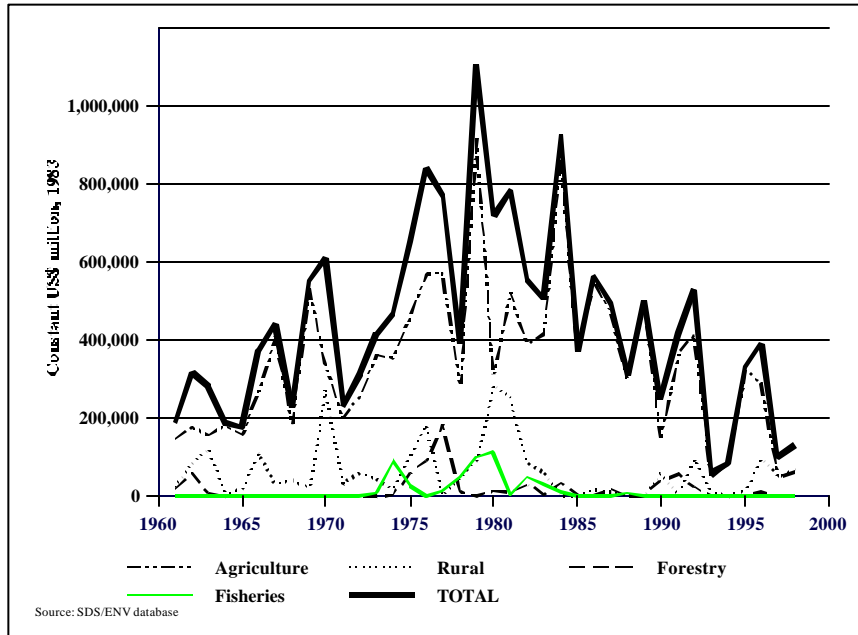
#### **2.4 Bank Experience in the Sector**

The Bank has had an active and significant portfolio of projects in the agricultural sector, with a total volume of loans in excess of US\$16 billion (1961-1998, at constant prices). Figure 3 shows the trend of financing for agricultural, rural, forestry and fisheries projects over the past four decades.<sup>10</sup> The significance of these figures in the 1970s and 1980s can be appreciated, as can the steep reduction that began in the mid-1980s.

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<sup>10</sup> "Rural" is defined here in a narrow sense and includes only rural development projects classified under that category.

**Figure 3: Trend of IDB financing for the agricultural, rural, forestry and fisheries sectors, 1961-1998**  
 (constant US\$ million at 1983 prices)



**Figure 4: Percentage of IDB Financing Allocated to Agricultural, Rural, Forestry and Fisheries Sectors, 1961-1998**

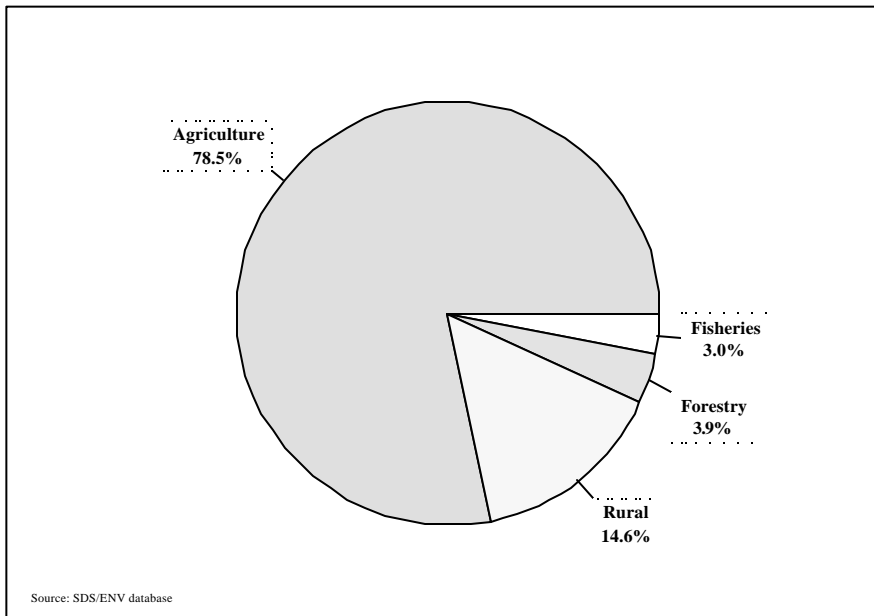
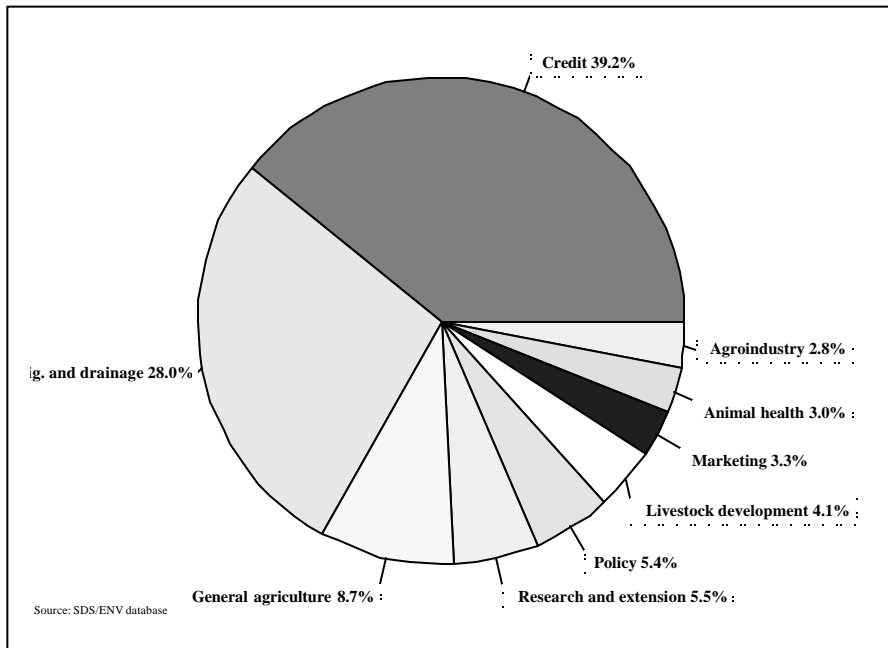


Figure 5: IDB Financing for the Agricultural Sector by Activity, 1961-1998

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The agricultural sector accounts for approximately 80% of the total volume of Bank financing to the four areas mentioned above (Figure 4), being credit and irrigation the main components of total financing from 1961 to the end of 1998 (Figure 5).

Beginning in the mid-1980s there was a drastic reduction in the share of agriculture in the world's foreign aid programs, falling from a maximum of US\$19 billion in 1986 to US\$10 billion in 1994 in real terms (FAO 1996).<sup>11</sup> The Bank's lending to the sector fell by 50%, from an annual average of US\$535 million in 1981-1985 to US\$264 million during 1996-1997; the sector's relative share in total operations declined from 24% of total loans approved up to June 1981, to less than 2% of total regular lending in 1998 (or 1% when emergency lending for that year is counted). This reduction in funding for

<sup>11</sup> Similarly, subsidies to the sector (both direct and indirect) from the European Union and the United States continue to decline; in 1997 they represented 30% of total value of output (compared to over 40% in 1992-1994), and amounted to nearly US\$70 billion in the EU and US\$23 billion in the USA (The Economist 1998).

international community generally, to a fundamental shift of orientation whereby "traditional" projects have been superseded by action in support of policy changes and improvements in macroeconomic management. In the Bank, the reduction in financing has affected virtually all types of traditional agricultural projects, such as irrigation and drainage, livestock development, marketing and commercialization and agroindustry (Figure 6). The most prominent example is provided by loan programs, which declined from 62% and 72% of the Bank's sector portfolio in 1980-1985 and 1986-1990, respectively, to zero in the 1990s.<sup>12</sup>

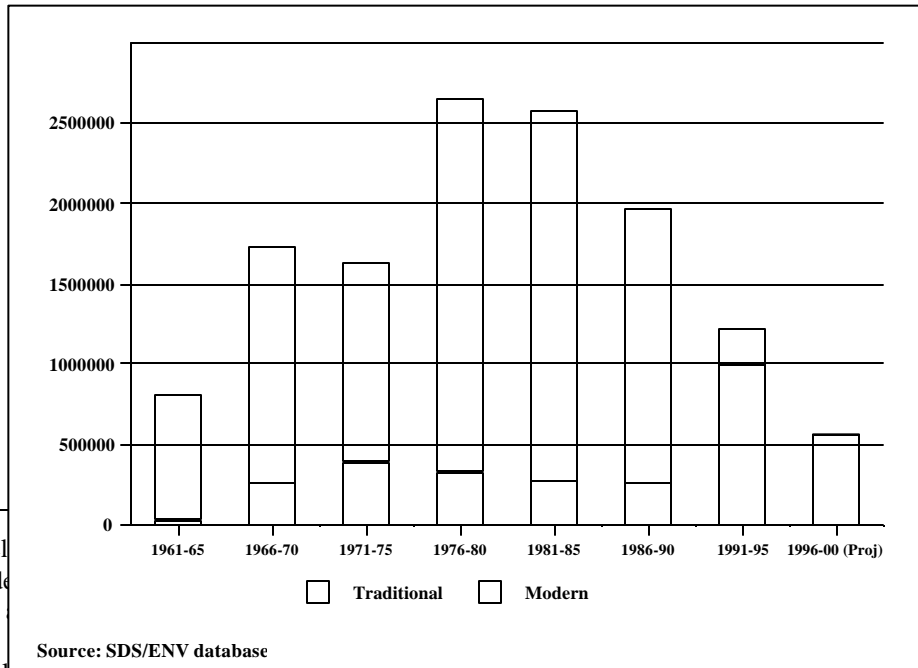
<sup>12</sup> The context in which these changes in orientation occurred in most countries, whether intentionally or as unintended results of inappropriate macroeconomic management, led to the disbursed of loans at negative interest rates. This acted against efficient resource allocation and mostly benefited larger producers; loans were also frequently granted on criteria that lacked technical foundation. The financial viability of development banks was invariably compromised, and it became clear that problems with loan projects were not due to their administration or design, but inherent in the instruments themselves.



aimed at supporting changes in sector policies and the modernization of technology and agricultural plant and animal health services (Figure 7).<sup>13</sup> However, these new instruments have not been able to fill the gap left by the disappearance of traditional projects (Figure 8). Moreover, although the reforms have helped to reduce the subsidies and distortions prevailing in the sector, they had serious shortcomings in terms of what needed to be promoted, leaving in their wake an institutional vacuum incapable of responding to the sector's new requirements.

In summary, only recently has the process of identifying and developing new instruments begun, to make it possible to modernize the sector and enable it to face emerging challenges and opportunities. As regards credit, for example, the expectation was that the formal financial system would expand to cater to the needs of the rural-agricultural sector. This expansion has not occurred, and today the broadening and democratization of rural financial services remains one of the main challenges. Similarly, budget cuts in the public sector have dismantled costly and often bureaucratic support systems, but these have

**Figure 8: IDB Financing for the Agricultural Sector- Traditional and Modern Instruments**



<sup>13</sup> The cl... and "mod... orientation... the 1980s

projects classified under the same heading. Consequently, Figures 8 and 9 should be seen as indicative only. For example, the programs of modernization of agricultural services (PROMSAs) in the 1990s, which include technological innovation and animal and plant health, are characteristic of this period; although the Bank has financed these areas in the past, current instruments (competitive funds, outsourcing of services) are different. The Colombian Agricultural Technology and Health Program and the Uruguayan Agricultural Services Program, both introduced recently, are good examples of this family of programs.

not been replaced with services capable of meeting to the new requirements.<sup>14</sup>

In essence, the agriculture sector lost its prominent role in the development strategies of the region's countries because it failed to put forward a strategic vision to attract government support for a sector with a crucial role to play in growth with equity, and due to the pressing need for resources for macroeconomic reform programs during the past decade. Ultimately, the shrinkage of the agriculture portfolio is a reflection of inadequate technical leadership, both by international agencies specialized in agriculture and the Bank itself. By the mid-1990s, economic reform programs had moved forward, in many cases helping to improve the balance-of-payments situation and reducing the need for external financing. Economic deregulation, trade liberalization and regional integration during the past decade have also created new needs and opportunities in the agriculture sector. In a way, Latin America is rediscovering its competitive capacity in agricultural production and the possibility of creating new conditions for the sector to play a fundamental role in economic and social development strategies.

These ideas underlie the basic outline of the Bank's Eighth Replenishment (IDB 1994), in which countries reaffirmed the importance of

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<sup>14</sup> It was anticipated that the reforms would eliminate the negative bias towards agriculture, and new opportunities for sectoral development would arise. To some extent this did occur, at least in the mid-1980s when there was an improvement in the sectoral terms of trade. Within a relatively short time, private-sector investments increased sharply and there was vigorous sectoral growth. However, the rapid globalization of the 1990s in many cases gave rise to a new period of overvalued currencies and macroeconomic instability. This phenomenon once again turned the terms of trade against agriculture in nearly all the countries of the region, imposing serious constraints on the capacity of countries to counteract short-term problems using the traditional tools of macroeconomic management (Ocampo 1998).

modernizing productive structures to enhance productivity and improve competitive capacity in national and international markets (paragraph 2.34); and the importance of strengthening and modernizing agricultural production both for the national market and for export (paragraph 2.35,f). The mandate gives high priority to sector modernization and identifies technological innovation, together with public sector reform to improve service provision, training and extension activities, infrastructure development, access to land ownership and the elimination of economic distortions as important instruments for that purpose (paragraph 2.35,f). The Bank (at its highest level, IDB 1998d) is supporting this process of rethinking agriculture, as is shown by the new outlook that stresses productivity improvements, efficiency in services provided to the sector, sustainable use of natural resources and rural poverty reduction. However, it is necessary to define more precisely a new approach for the agriculture sector and the rural economy as a whole, and identify the most appropriate areas of investment to carry forward a successful program of support for sustainable development in the sector.

## **2.5 *The Need for a New Approach***

There is recognition of the need to move toward a new regional consensus to improve the orientation of rural policy. This is especially important given the fact that, after 15 years of adjustment, results are precarious in terms of low growth rates, the persistence of high levels of poverty, worsening income distribution and steadily declining profitability. This reveals a certain imbalance between innovation and thinking, analysis and concrete policies. It is also agreed that in addition to an appropriate macroeconomic policy framework achieving satisfactory results on poverty reduction requires social strategies to achieve structural changes in the development of human capital and in the quality of life of the rural population. These concepts are part of the Bank's strategy for rural poverty reduction (IDB 1998a), which incorporates a territorial approach including

both multisectoral aspects and differential elements based on the diversity of rural conditions existing in Latin America and the Caribbean.

The potential for growth and the generation of employment and value-added, together with the need to attract private investment, are central factors in social policy-making in the rural domain. There is consensus that the opening of markets provides opportunities for more efficient and competitive productive structures based on economies of scale, integration, specialization and productive differentiation, market orientation with special emphasis on quality and economies of productive clusters and market niches. However, although markets will contribute to greater efficiency and equity, they are not sufficient for dealing with the broader needs of rural society, for which specific interventions are required to extend opportunities to a larger number of people and achieve true productive restructuring (Echeverri 1998).<sup>15</sup>

By the late 1980s, agricultural production in Latin America (compared to countries with more highly developed agricultural sectors) was relatively extensive in the primary production phase; in other words, it was not capital intensive and used few inputs of industrial origin per unit of agricultural land. This is reflected in the low level of fertilizer and agrochemical use compared with the rest of the world. Moreover, primary production

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<sup>15</sup> Particularly important in the search for new development opportunities is the situation of thousands of small farmers who, for lack of alternatives, engage in the production of illicit crops, with the corresponding legal, social and environmental consequences that this entails. The Bank has supported alternative development as a means of reducing the need for such activities, through crop substitution and rural development. These programs will continue in the short and medium term, as part of national strategies to deal with the illicit crop problem in all its phases, from production and preparation of the different products to their trafficking and consumption.

underwent little industrial processing.<sup>16</sup> These characteristics have begun to change in the 1990s, especially in Brazil, Argentina and Colombia, where agribusiness and the food industry have begun to grow, largely under the impetus of foreign investment from large transnational food companies. This trend will intensify in the future, based on international demand for more highly processed products and aimed at the differentiated market niches in which these transnational firms are strongly positioned. There is a similar trend in the national markets of those countries of the region where demand for higher value-added products for high-income urban sectors is expanding rapidly. In these markets, national production faces increasing competition from other countries as a consequence of regional integration agreements and trade liberalization policies.

Achieving greater vertical integration of agriculture chains in national industry is a strategic element for adapting to new market trends and exploiting the multiplier effects that agriculture production can have on economic activity and job creation. This strategy has important consequences for the organization of the public sector, the institutions of technological development and both public and private investment programs. The latter should aim at improving the competitiveness of agricultural production, creating value-added and encouraging the geographic decentralization of production.<sup>17</sup>

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<sup>16</sup> This is illustrated by two facts: firstly, that only 30% of food consumption in Latin America is in the form of industrially processed products, whereas in industrial countries this varies between 80% and 90% (Piñeiro and Trigo 1996); and secondly, the high share of commodities in total exports of agricultural origin from Latin America.

<sup>17</sup> The recent Guatemalan program for the productive restructuring of agriculture (partly financed with Bank resources) is an example of this type of program where productive modernization is being pursued using a variety of complementary components (technology fund, plant and animal health and food safety services, direct forestry support, integrated management of water resources and commercial development).

The definition of production priorities in the new productive restructuring scenario (new product lines and the expansion of agroindustry to nonagricultural sectors) would be based on market orientation, changes in consumer preferences, greater integration of agricultural chains, the importance of new areas such as chemicals, pharmaceuticals and biotechnology, and environmental considerations. In this scenario, sectoral policy should provide the conditions for better private sector decision-making and expand access to efficient productive opportunities. Private decisions, for their part, should guarantee a system of managerial decisions based on information quality and greater decision-making autonomy, including risk-taking and creativity, to reach a situation in which the definition of new lines of production would be the responsibility of private investors rather than the State (Echeverri 1998).<sup>18</sup>

One of the emerging technological developments with the potential for considerable economic and institutional impact is the “genetic revolution” (based on biotechnology and transgenic crops), especially since multinational companies involved in high-yield seed production continue to invest in the technological development of certain crops (such as maize, cotton and soybeans). The implications in terms of biological and food safety, intellectual property rights and future relations between the public and private research sectors have not been sufficiently analyzed in the region.

To meet the challenge of modernizing the agriculture sector, it will be necessary to understand the nature of the changes that are

occurring at the world and regional levels, and the impact of these changes on opportunities for improving productivity, equity and environmental sustainability in rural areas, in the terms discussed in the previous sections.<sup>19</sup> The priority areas to be analyzed below will form the basis for a new approach to rural and agriculture development, based on trade liberalization and increased demand for food, on the need to increase rural employment through greater agroindustrialization and, ultimately, on the need to emphasize the rural economy as a whole.

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<sup>18</sup> Contracts between farmers and agroindustry and agro-export firms are one of the most effective tools for productive restructuring in the sector. See ECLAC (1995) for a complete review of different forms of linkage, in different agricultural product lines, between agroindustry and agro-export agents and small and medium-scale farmers.

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<sup>19</sup> J.M.Figuera (1998) mentions five reasons for “reinventing agriculture”: (a) helping to alleviate poverty, (b) as a source of food, (c) opportunities for technological development in the sector, (d) future demand arising from world population growth, and (e) the need to achieve sustainable development.

### III. PRIORITY AREAS FOR INVESTMENT

Based on the new scenario described above, and as a complement to essential case-by-case analysis focusing on the particular characteristics of each country and region, six specific priority areas can be identified where the Bank can provide support for the development of a competitive agriculture sector.

#### *3.1 Consolidation of Economic Reform Programs and Support for Transition*

Over the past ten years, the countries of the region have implemented far-reaching reforms that have altered the economic context in which agriculture takes place. These reforms, particularly trade liberalization measures, have occurred even faster than required under GATT (Valdez and McCalla 1996). Following years of high inflation and high nominal interest rates, nearly all the region's countries have achieved a degree of price stability; a long-term strategy can therefore be considered to consolidate an internationally competitive productive structure in agriculture.

Trade liberalization has also affected relative prices in the sector, lowering prices of industrial inputs including fertilizers and agrochemicals. This has facilitated the incorporation of technology and the intensification of production and has improved per-hectare yields. On the other hand, stronger competition from imported foods in the national market has caused difficulties for producers of certain product lines, where costs in some countries are above international levels. This has had a particularly negative impact on small producers. Such situations are a warning signal regarding the speed with which countries with fewer competitive advantages integrate into the international market, all the more so if they are net food importers (Timmer 1996). They also illustrate the need to set up support programs to ease the

transition to new productive frameworks compatible with economic liberalization and macroeconomic stability, and with the needs of small-scale agricultural producers.<sup>20</sup> In short, trade liberalization, the abolition of price subsidies and the withdrawal of the State from direct intervention in productive activities must be moderated over time and accompanied by financing for the changes needed to achieve productive modernization.

Although most of the economic reform processes undertaken with Bank support by a majority of the region's countries are at an advanced stage, they still need to be consolidated, their main instruments refined and undesired effects corrected. Consolidating the reform process includes financing transitional support programs in support of the far-reaching restructuring of production sparked by economic reform programs, and socializing the costs involved; this is an important investment area for the Bank. The productive specialization that accompanies economic liberalization, and the incorporation of capital-intensive technology, generate structural unemployment with a strong geographic bias associated with specific crops such (as sugar production in Argentina, wheat in Brazil and cotton in Central America). State intervention is necessary during the transition stage through rural development programs that include both productive and social components. Not only are such programs justified economically and on equity grounds, but they also ensure the political sustainability of economic reform programs.

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<sup>20</sup> An example of such schemes is the Mexican Program for Direct Support to Farmers (PROCAMPO) which consists of payments per hectare sown, regardless of the level of production. From the mid-1990s on, this program almost entirely replaced price subsidies for production and consumption of basic grains; it was complemented by compensatory measures to support low-income consumers, together with privatization of State agencies, programs to finance marketing, and risk management (Aceves 1998).

In this sense, it is important for the Bank to continue this line of work, especially in countries that have begun the economic reform process more recently and still need significant financial support and technical cooperation to see them through. Possible actions in this field include: (i) compensatory measures for producers and consumers affected by liberalization, including temporary income transfers, food assistance and productive support for small producers; (ii) the development of new market instruments (for example the financing of stocks, risk management and agricultural marketing boards; and (iii) support for the private business sector in channeling private investment to the agriculture sector.

### ***3.2 Modernization of the State and Basic Services***

Changes in economic thinking in Latin America with respect to the reduced role of the public sector, and the short-term needs of the fiscal budget, have given impetus to organizational reform in the agricultural public sector. The structures of agriculture ministries and their component agencies have begun to change in several of the region's countries. However, less work has been done to clearly define the new role of the State or rethink the organizational structure that is best suited to the goals being pursued in each particular case (Piñeiro et al. 1999). The need to redesign institutional frameworks (both public and private) and organizational structures is particularly important in the case of the food and agriculture sector, owing to the need for a certain level of public intervention, especially in financing (in association with the private sector) and regulation of key activities such as technological innovation, environmental conservation, food hygiene and safety and infrastructure provision.

In a State modernization policy, there are two high priority areas for action by the Bank: reform of the mandate and organization of the agricultural public sector and provision of basic services for the sector.

### ***Reform of the Agricultural Public Sector:***

#### ***Toward a New Institutional Framework***

With its weakened institutional capacity, the public sector will find it difficult to meet the new challenges that arise in the agriculture system, especially as the technologies used and the ways in which production itself is organized are becoming increasingly complex. In addition, the sector is increasingly interlinked with food processing and production, which gives rise to new areas of work (process technologies, quality, marketing, etc.). It will therefore be increasingly difficult to visualize the problems of the sector in terms of isolated components, taking each instrument or service separately. The generation and transfer of technology, for example, should not only consider producers' needs and capacities but also take into account the characteristics of their linkages with input and product markets, and the demands of the marketing and processing stages themselves. It is therefore necessary to overcome the separation that still exists between the different agencies providing public services, and find mechanisms to achieve greater integration and horizontal linkages between instruments and forms of action.

From the standpoint of sector policy design, focusing on primary production and the social problems of rural areas is not enough to respond to the needs of increasingly integrated economic processes. Policies should take into account the peculiarities and dynamics of the whole agriculture chain, and agricultural ministries must broaden their field of action to include aspects of agroindustry and distribution, areas which up to now have usually been dispersed among other branches of the public sector. This could be a central aim of State reform in the food and agriculture sector.

Strengthening the management capacity of the agricultural public sector could include some of the following areas (Piñeiro et al. 1999): (i) strengthening of links with civil society, recognizing the growing importance

of nongovernmental public service mechanisms such as the various rural organizations that voice the needs of the rural population and provide information, education, technology transfer and social coordination services; (ii) greater coordination with the private sector, complementing government financing with the production and provision of activities by the private sector through contracts, outsourcing or accreditation; (iii) greater efficiency and effectiveness of public administration, focusing more on products than on processes, breaking down administrative restrictions, developing management contracts and bonus systems based on effective contribution; (iv) integration and coordination of activities with other sectors (industry, commerce, health, etc.); (v) institutional decentralization and municipalization; and (vi) strengthening of capacity to define policies and priorities.

Achieving better management essentially requires a policy on professional development and salaries that makes it possible to attract and retain high quality human resources, and a level of financing and organization compatible with its important mission in relation to the information, technology and health services described below.

#### *Basic Statistics, Market Information and Export Promotion*

The agricultural public sector has a key role to play in gathering, processing, analyzing and disseminating basic agricultural statistics (national census and rural household surveys) to satisfy minimum public information needs and provide the basis for policy-making in the sector. It is also important for the public sector to provide information on markets so as to make them more transparent and encourage competition. Finally, national export promotion programs should be developed, to help add value to primary production through an agricultural processing industry to meet new export demand. In accordance with the needs of each case, the Bank should support the reinforcement of units responsible for updating basic statistics; the institutional

capacity of agriculture ministries and other bodies, and their links with information systems on foreign markets; and the promotion of exports, especially of nontraditional products.

#### *A New Context for Technological Innovation*

Advances in biotechnology, information technology and communications are producing a new scientific and technical landscape with potentially significant implications for forms of social organization and agriculture production processes. They are also changing the way scientists work, and consequently the institutional and organizational context in which technology is created and adopted. This is particularly true in terms of bringing new economic actors into the innovation process and strengthening intellectual property rights. In the light of the new opportunities brought about by trade liberalization, it is essential to accelerate the technological development process so that production can grow in conditions that are competitive and sustainable in the long run. Success here will require a major plan for investment in human resources, reengineering of technological development organizations, establishment of systems of intellectual property rights and the technical assistance needed to adapt technological innovations (both productive and institutional) being developed in the rest of the world. These investments will gradually enable agricultural development to be based more on science than on natural resources, and make possible the institutional innovations and reforms needed to enable agricultural producers to respond to new technical opportunities as they arise (Hayami and Ruttan 1985).

Public sector participation in the region's technological development has been considerable, especially through the National Agricultural Research Institutes (INIAs) created in nearly all Latin American countries since the 1950s. Despite this valuable State intervention, public investment in agricultural research in Latin America is considerably less than in other countries with large agriculture

sectors (IDB 1993). Furthermore, together with the globalization of markets, institutional systems of knowledge generation and transfer are becoming internationalized. This is partly due to progress in information technology and communications, which facilitates the interchange of knowledge and brings down costs, and partly because in certain areas (biotechnology, certain areas of basic research) economies of scale make it inefficient for individual countries to develop their own capacities without support from the economic and commercial integration processes in which they are already involved.

As well as changes originating in the scientific sector, the demands for new technologies arising from trade liberalization are significantly affecting the roles of the private and public sectors in financing and carrying out technological development activities. Consequently, the incipient national systems of agriculture innovation are undergoing considerable institutional changes. While research agendas have broadened and become more complex,<sup>21</sup> public funds for national and regional research have generally been cut back. This, added to the need to train new scientific staff and update basic research infrastructure, poses significant challenges, where underinvestment in technological development will have to be corrected at a time of economic liberalization and regional integration based on competitiveness (Echeverría et al. 1996). An important goal is targeting scarce public resources on generating knowledge with public goods characteristics with priority given to products with expanding markets that involve clear comparative advantages for the country (or the chance of achieving them in a more open

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<sup>21</sup> Especially in recognition of the fact that, apart from impacts on economic growth generated by productivity increases, the funding of research has the potential for positive effects on poverty reduction and environmental protection (Winkelmann 1998). This has meant a greater demand for research in biotechnology and natural resource management, for example (see Jaffé and Infante 1996 and Kaimowitz 1996, respectively).

economic framework), and generate new knowledge to improve the use of natural resources. In this sense, as a consequence of the technological and economic changes experienced in recent decades, INIAs are coming under close scrutiny, on the organizational level and in terms of the approaches and operational nature of their programs.

Greater market orientation will require increased participation by agricultural producers and other social actors, especially agroindustrial firms, both in mechanisms of institutional government and in the financing of research. One possible way of achieving this is to set up national councils responsible for defining priorities and allocating public resources, in accordance with the relative merits of projects presented and executed by research and technology development institutions that are smaller, more autonomous and have greater regional presence. From the financing point of view, it should be noted that in open and generally small economies, the distribution of benefits from adopting new technologies tends to favor producers. In principle, this means that the producer sector could cofinance investment in research and development and the costs of technology transfer.

A new organizational framework for technological innovation should involve greater decentralization and integration with other relevant actors, such as universities and research foundations, and participation by producers and agroindustry in setting priorities, joint execution and co-financing of research projects and technology transfer. Research on agroindustrial and agriculture processes should also be built into national systems for technology generation; and national intellectual property systems should be strengthened, with the necessary reforms in rules and procedures for patenting in accordance with current international agreements, promotion of low-cost patent administration systems, removal of impediments to the enforcement of

intellectual property rights and the training of scientists and administrators in their use.

In the framework of these actions, the Bank could focus its efforts on achieving the following: (i) *at the national level*: the organizational changes and modifications of mechanisms for financing national innovation systems, in keeping with the new role of the public sector and new priorities for technological development, and the strengthening of human resources and basic research infrastructure; (ii) *at the subregional level*: strengthening of cooperative technological development programs, in view of the high investment costs involved in research of new areas and the nature of current integration processes; (iii) *at the hemispheric level*: the consolidation of the Regional Fund for Agricultural Technology which constitutes an effective and sustainable mechanism of the countries of the region for financing cooperative regional and subregional research projects.

#### *Plant Protection, Animal Health and Food Safety*

Plant protection and animal health is a priority area owing to its social and economic implications and its strategic importance for export promotion. Commercial requirements as regards hygiene and food residues make it necessary to negotiate and adapt sanitary and quarantine standards and supervise their correct application. These areas should be characterized by scientific objectivity and effective technical implementation. This requires an institutional system to coordinate public and private sector actions in accordance with the following general principles: (i) definition of a clear commercial sanitary policy and development of precise standards; (ii) a decentralized organizational structure with collegiate authority to give transparency to administrative actions; (iii) updating of the career structure for public officials in this area (including standards for hiring, training, job stability, promotion and sanctions), and (iv) technical auditing mechanisms for strict supervision of the

existence, adaptation and fulfillment of the rules.

The Bank could focus its plant and animal health and food safety investments in the following areas: (i) *quarantine control* aimed at preventing the introduction of exotic diseases; (ii) *sanitary or commercial quality*: strengthening sanitary inspection in product processing and distribution and, in particular, systematizing and coordinating these activities between the federal, provincial and municipal levels, in order to improve service provision and avoid overlapping functions; (iii) *eradication of diseases and pests* through public sector intervention to coordinate and facilitate actions by the private sector; and (iv) *institutional reorganization*: unifying services for animal and plant health into a single agency with greater operational decentralization and coordination with users.

In addition, the Bank can promote the adoption of *food safety* practices to complement animal and plant health services, ensure competitiveness in markets and protect public health. For example, the Agreement on the Application of Sanitary and Phytosanitary Measures, administered by the World Trade Organization, reaffirms the right of member countries to apply the necessary measures for protecting human, animal and plant health, and it requires countries to establish national measures based on international standards and the rules and recommendations of the Codex Alimentarius.<sup>22</sup> The State has an important role to play in establishing systems of food safety, with participation from farmers, agroindustrialists, traders, and consumers. These systems could include: the concept of an integrated food safety chain running from the farmer to the consumer; an internationally standardized regulatory framework of laws, rules, standards, guidelines, procedures for

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<sup>22</sup> In addition to global requirements, countries that export fresh fruit and vegetables to the United States have to comply with the recent Presidential Initiative on fresh food safety, which includes the use of good practices in agricultural production and food processing.

monitoring and inspection, and methods of supervision and sanction; appropriate technical infrastructure, including techniques of production, processing and monitoring, as well as education and information activities aimed at consumers, producers and regulators.

### 3.3 *Development of Land Markets*

Most of the region's countries have made improvements in the structure of land ownership and tenure through natural processes of subdivision and territorial consolidation, and in some cases as an outcome of rural development and agrarian reform programs. However, a significant number of countries still have serious problems of agrarian structure that are impeding modernization of the sector. The reasons for these problems are extremely varied. In some cases, in several Caribbean countries for example, some of the most fertile land areas are in State hands and subject to systems of tenure that do not promote efficient use. In other cases, such as Nicaragua, political changes and war have played a major part. Solving such problems requires amendments to agrarian legislation to improve flexibility in land transactions, together with investments relating to the registration and titling of rural properties (including modernization of institutions involved in cadastre, registration and titling processes), and to promote, both from the institutional and financial points of view, the development of an active land market (for example, through the financing of land purchase or long-term leasing).

Areas of investment in which the Bank could have a substantial impact are outlined below. This analysis is based on a recent work on the prospects for making the region's rural land markets more effective (IDB 1998c).

*Legal framework and administrative and institutional reforms.* The need for a legal framework that provides guarantees and security of land ownership is a necessary condition for land markets to work properly. Support could continue to be given to changes

in land policies, regulations and institutions, aimed at strengthening property rights on rural land and enhancing the functioning of land markets by reducing transaction costs. Administrative and institutional reforms include strengthening those organizations which provide a basis for property rights, especially registration and cadastre, and the institutional development of governmental agencies responsible for the processes of regularization and disencumbrment of land ownership and administration.

*Regularization of tenure, land titling, registration and cadastres.* Programs of land titling, registration of owners and the development of land cadastres should continue, and the collection, processing and permanent updating of data on land tenure should be strengthened. The costs of titling will be partly compensated by promoting investment in perennial crops and adopting sustainable natural resources management practices, together with a gradual increase in access to credit sources.

*Strengthening information and training systems.* An essential component in land projects is the development of public information systems on the technical characteristics of the land (land-use maps) and the conditions of rural markets for sale and leasing, including technical assistance for the development of land information systems and technical training for staff in the agencies responsible for such activities. At the regional level, the Bank could sponsor the sharing of experiences between countries.

*Exploring the possibility of land taxation.* Land taxes discourage the holding of unproductive assets for speculative purposes, or using them at less than their full capacity; it also lowers their market price and thereby favors greater access for small producers. In practice, land taxation has shortcomings stemming from valuation difficulties, the inflation that prevailed in the region for many years and prevented the adjustment of land values in line with changes in other prices, the lack of up-to-date registries, and political

resistance to its implementation. If land taxes are administered by local government bodies, there is less scope for evasion, and tax collection has greater political legitimacy if the revenue is to be used for the development of the local community. The Bank could therefore support efforts to apply rural land taxes in the context of programs for decentralizing government activities.

*Promoting access to land through leasing.* Leasing in its various forms is an important means of facilitating access to land for non-landowning farmers or smallholders (*minifundistas*), and it enables land to be used more in accordance with its productive capacity. In practice, the leasing of private plots is limited by landowners' fear of confiscation or illegal occupation and the lack of a legal and institutional framework to protect the interests of both parties. On the other hand, in several of the countries of the region, efforts to prevent concentration of ownership have led governments to grant defective titles that cannot be transferred or mortgaged. These lands essentially remain under the domain and control of the State. A similar situation often occurs in lands that form part of the heritage of indigenous populations, where the fear of losing their heritage thwarts government efforts to concede individual property titles in such areas. In all these cases leasing occurs, but contracts are mostly of short duration and of an informal nature, which not only limits the potential for full productive use of the land but also restricts access for poor producers. The removal of legal barriers that limit long-term leasing through fully negotiable contracts (transferable and mortgageable) which protect both parties (owner and tenant), the creation of institutions that minimize the likelihood of conflict together with mechanisms for arbitrating possible disputes, and the promotion of schemes, which demonstrate the viability of long-term leasing, have much potential to stimulate greater use of unproductive lands and invigorate the land market. The Bank can help to promote leasing alternatives by sponsoring the necessary

institutional development and financing complementary productive investments.

*Promoting access to land through purchase.* In several countries of the region, price stability, the policy of nondiscriminatory treatment of the agricultural sector and the abolition of subsidized agricultural credit have caused land prices to fall to levels that are more in line with productive capacity and less a function of financial speculation. This has given rise to renewed interest in financing land purchases in countries where land-use disputes are particularly acute. In practice, however, promoting large-scale access to land through a major injection of capital could distort relative prices, quite apart from the difficulty of making the necessary resources available and avoiding collusion of interests in subsidized purchases, with or without State intermediation. In this regard, the establishment of land funds deserves further study, especially as regards the origin and scale of the funds required, the number of potential beneficiaries, and the capitalization of the financial institutions involved. The Bank can support these new attempts to improve land distribution and increase the productivity of the resource by financing: (i) economic stabilization and sector reform programs to reduce the incentive to accumulate land with low productive intensity as a hedge against inflation or for speculative purposes; (ii) experimental small-scale land fund projects, enabling the development of practical mechanisms to facilitate land purchase by small owners without introducing distortions or encouraging corruption; (iii) projects to promote the emancipation of traditional agrarian reform programs and the modernization of old settlements (tightening links with the market); and (iv) pilot projects to sponsor the purchase of small plots in peri-urban areas, enabling small producers to combine agricultural with nonagricultural employment.

### ***3.4 The Development of Rural Financial Markets: A Pending Challenge***

The development of financial markets is essential for modernization of the sector and most especially to enable the restructuring of small-scale agriculture on the basis of the new market conditions.<sup>23</sup> On the premise that competition between private financial intermediaries subject to market discipline would encourage efforts to reduce costs, put new products on the market and expand services, it was hoped that structural reforms and economic stabilization would lead to an expansion of financial services, especially for small-scale producers and in remote areas. Although in the last 15 years a series of institutions has sprung up, both in the region and at the global level (NGOs, saving and loans cooperatives, and selected commercial banks), which to some degree have succeeded in extending financial services to poor sectors of the population, their rural coverage has been very limited. The absence of long-term financing has negative consequences for productive activities linked to the conservation of natural agricultural resources and production with long lead-times such as forestry investment, fruit-growing, wine production and, to a lesser extent, livestock breeding.

Financing for microenterprises, either urban or rural, has to overcome several obstacles: (i) the size of each loan is small, so the income potential per client or per loan is reduced; (ii) the assets that the client can offer as security are usually minimal or unsuitable (difficult to repossess); and (iii) the cost of acquiring information on the creditworthiness of a small client is at least as high as for a large one. Successful new microfinancing institutions have managed to overcome these obstacles by compensating for the low per-client yield with a numerous client base, developing specialized low-cost lending techniques, and charging higher rates of interest. However, the rural domain has characteristics that make it

particularly difficult to apply these modern practices for serving small businesses: low population density, the length of the agricultural productive cycle, the effects of the weather and rapid changes in market prices. To overcome these obstacles, rural financing institutions do not devote themselves exclusively to agriculture and, as far as possible, need to be of a minimum size with broad geographical coverage or be part of a federation of similar institutions (cooperatives, affiliated community banks, commercial banks) that operate in other areas and can help in times of emergency. In principle, one of the most promising ways of reducing the capital costs of financial institutions is through direct deposit-taking. The most successful saving and loan cooperatives have in fact been those that have captured deposits by offering competitive returns on their members' savings. However, the costs of providing this service tend to be high, especially in marginal rural areas where the amount saved per client is small.

A new view is currently forming of the possibilities and the obstacles to be overcome to achieve sustainable expansion of agricultural and rural financing, and the most appropriate instruments to promote its development. The State would have an active but indirect role in supporting rural financial development through: (i) the maintenance of a stable economic environment, free from inflation that erodes and discourages saving; (ii) the establishment of a suitable legal, regulatory, and institutional framework for the development of institutions to provide social services in rural communities and increase the security of transactions in this area; (iii) the development of rural infrastructure in energy, telecommunications and transport, which could potentially have a very significant impact on the expansion of the financial sector in rural areas; and (iv) the promotion of emerging microfinancing institutions and the development of operating techniques that are particularly suitable to the rural environment. The most promising institutions currently existing in the region seem to be those which

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<sup>23</sup> Because of the significance of this topic, a specific strategy for the development of rural financial markets has been developed (IDB 1999), which expands on the analysis and proposals summarized in this document.

provide full financial services including saving.

The Bank has an important indirect role to play in promoting financial markets by fostering rural development, facilitating the development of infrastructure in the fields of telecommunications, energy, transport, irrigation and drainage, and supporting measures that facilitate opportunities for decentralized private investment in both agriculture and in nonagricultural rural enterprises. It can also have a direct role in promoting these markets, mainly by supporting national efforts to improve the legal, institutional and regulatory framework as part of a “second generation” of reform projects, and sponsoring the emergence of microfinancing institutions, mainly through small projects, MIF projects and technical assistance, and by encouraging the sharing of experiences. These new programs could: (i) help to adapt systems of financial supervision and regulation that currently act as a brake on small-scale lending;<sup>24</sup> (ii) modify the current regulatory and institutional framework that prevents the use of non real estate assets such as inventories, machinery and equipment and accounts receivable as collateral for bank loans, by reducing legal restrictions on repossessing this type of asset in case of default or the absence of records on tax payments or other levies; (iii) develop capital

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<sup>24</sup> Current practices have usually been designed with large loans in mind, but their application to microfinancing entities introduces inefficiencies and increases operating costs. Such is the case of operational requirements, common in Latin America, which for example specify a minimum service timetable, causing problems for institutions wishing to provide appropriate services in rural areas (for example, two days a week). Similarly, banking supervisory authorities in Latin America require documentation which meets standards which are appropriate for large lands (profit and loss accounts and balance sheets for the last three to five years) but which are excessive for loans to microenterprises. Standard requirements for risk capital are generally too stringent, being related to the high administrative costs of small loans but not necessarily to the risk involved (Westley 1998).

markets through funds for risk capital investment in rural enterprises or small producers’ associations; (iv) expand land titling and promote the creation of legal instruments to facilitate the long-term leasing and purchase of land, and the sale and transfer of rights to exploit and benefit from rented properties; and (v) support the development of agricultural financing through commercial credit provided by product purchasers or input vendors and intermediaries, eliminating existing obstacles to greater competition and supporting economically viable initiatives for peasant farmer organizations.

In some cases global microfinancing projects could be an appropriate vehicle for promoting the development of the financial sector in rural areas. However, in most of the countries of the region, the number of financial institutions serving the rural sector is very small and fragile. A substantial injection of capital in such circumstances would tend to create heavy dependency on public resources and undermine the viability of those institutions. Much remains to be done in terms of promoting greater development of private institutions (saving and loan cooperatives, rural bank networks or community banks, NGOs, and the expansion of the commercial banking system into rural areas), to develop an efficient mode of operating in the rural domain. To achieve this, the ideal instruments seem to be small-scale projects (including MIF projects) and pilot schemes in which technical assistance, the sharing of experiences and “learning by doing” are potentially the most worthwhile in the long run.

### ***3.5 Sustainable Use of Natural Resources***

The sustainable use of natural resources is one of the biggest challenges facing the rural sector in Latin America and the Caribbean. Success in this area will depend on factors both within the agricultural sector (institutions, policies, technology, etc.) and outside it (economic and political stability, education, transport, communications, etc.)

and will have far-reaching implications for the region's future. The central problem in natural resource use is the inability of markets to value the external benefits or costs associated with their use. This is due both to market failures and public sector failings. The challenge is to design and develop natural resource management institutions and instruments which, one way or another, will take account of the external benefits and costs involved in using natural resources. Moreover, in the institutional sphere there is a lot of ground to be made up in terms of designing institutions for environmental management in the agricultural sector (Bejarano 1998).

The pattern of agricultural development pursued by most countries since World War II has had serious negative effects on the environment, owing to the polluting effects of intensive agricultural production, the intensive use of agrochemicals, salinization and water and wind erosion caused by bad agricultural practices, and the devastating effects on biodiversity and tropical forests caused by slash-and-burn agriculture and other farming activities. The use of production techniques which plunder renewable natural resources, together with inappropriate policies toward natural resource use and access, and scant incentives to conservation are major regional challenges whose importance is likely to vary from one subregion to another.<sup>25</sup>

Concern for the sustainability of natural resources takes on growing political importance as social awareness of the problem increases. Consequently, regulatory frameworks for food production need to be drawn up so as to promote sustainable resource use. Also, the increasing likelihood of environmental issues being included in

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<sup>25</sup> For example, in a recent survey (ICA 1997) the use of predatory techniques was mentioned as a priority issue in the Andean and Southern regions, and inappropriate use and access policies in the Caribbean and Northern regions. For the Central region, the persistence of rural poverty is the priority issue in terms of the sustainable use of natural resources.

international trade negotiations gives the issue new economic importance, especially for countries with significant agricultural exports. Putting together a productive strategy that is respectful of the environment, and therefore sustainable in the long run, has significant requirements in terms of institutional structures in the public sector, the development of an appropriate regulatory framework and the implementation of public investment programs, especially in technology development. Currently, however, there are no technological systems capable of ensuring the sustainability of a growth rate in agricultural output that would be sufficient to meet demand, especially in less developed countries (Ruttan 1992).

Although the concept of sustainability in agriculture has progressed in recent years, there is still disagreement over the most appropriate definitions and the priorities and emphases to be placed on different policies for sustainability. For the purposes of this document, sustainable development is defined as the steady improvement of standards of living among the rural population, which does not require continuous infusions of financial aid and does not degrade the natural resource base (IDB 1998a).

To achieve the sustainable use of natural resources, the Bank could promote the six issues described below. First is the creation, modernization and equipping of regulatory and administrative bodies responsible for national resources. Second, the integrated management of micro-watersheds at the community level, since appropriate practices usually offer limited benefits to the small individual producer, which are insufficient to motivate their adoption. For that reason, there is a need for participatory and decentralized planning by the community, involving training programs, the development of cottage industry and nonagricultural activities, the use of wild flora and fauna, aquaculture and fisheries, and ways of promoting activities aimed at the sustainable management of natural resources (for example, the management of natural forests, reforestation

and promotion of soil conservation practices). Third, the Bank can promote water pricing based on economic value, making sure the use of water responds to a careful evaluation of opportunity costs, to ensure that the best possible use is made of the resource within a policy to conserve water and protect land resources from the erosion and salinization associated with bad irrigation practices. This means developing institutional mechanisms for water pricing (consistent with opportunity cost) and to enable users to be charged for the service.<sup>26</sup> Fourth, the Bank can foster the establishment and dissemination of agricultural practices favorable to soil conservation (such as the zero tillage system and waste recycling) and the sustainable management of natural resources, either in areas with potential for intensive use or in marginal zones. Fifth, it can promote the design (where socially justified), of instruments to compensate farmers for the external benefits their practices generate, since the private benefits of such practices are often very limited (for example the conservation of forests to regulate water cycle). Finally, the IDB can support the introduction of regulations and improved cultivation practices to reduce soil and water pollution caused by pesticides and chemical products and to safeguard food safety (for example, promoting biological pest control through natural control agents, taking advantage of local knowledge of the latter's behavior).

### ***3.6 Strengthening Human Resources and Rural Infrastructure***

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<sup>26</sup> Based on experience of unsuccessful major irrigation programs administered by the public sector, current irrigation projects financed by the Bank target small and medium producers, greater participation by users in all stages of the program and the recuperation of a considerable part of the costs. See the strategy for integrated water resource management (IDB 1998b) for a complete treatment of the principles and instruments for a rational management of water resources.

The changes that have already occurred in agricultural production in much of Latin America and the Caribbean are only the beginning of a far-reaching process of productive restructuring which is necessary to increase competitiveness on international markets. A central element in this process is entrepreneurial capacity to push ahead with the incorporation of technology and deal with the growing complexity of managerial activities. The development of training programs, both at the management level and in specific technologies, is crucial at all job levels. Deficiencies in most of the countries of the region, in terms of suitable training organizations with the necessary technical and financial capacity to implement the innovative programs mentioned above, offer ample opportunities for Bank cooperation and financing.

The development approach pursued by most of the region's countries has tended to favor productive and social investment in the cities. As a result, the nonurban population, including those living in small- and medium-sized rural communities, are at a disadvantage in terms of communications, social services, education and health care. This has generated a vicious circle in which the hardships of rural life have caused migration to the cities, not only by those who have difficulty finding work in the rural sector, but also by those who, despite having significant resources, choose to live in the cities. This weakens the tax base and political resources in rural areas. Reversing this trend is vitally important for the sector and for the long-term sustainability of the region's economies. Investment programs to develop rural infrastructure for production and improvements in the quality of life, including social services and urban design in small rural communities, will be tremendously important in the long term, owing to their effects on population structure and their economic and political consequences.

#### IV. ACTION PLAN

There are excellent opportunities for implementing the strategic elements discussed above, using a variety of Bank instruments. Taking action on the advocated investment criteria and priority areas will require a systematic effort, subject to periodic review, in formulating and reviewing operational instruments and financing facilities. The work would be done at the countries' request and proceed on the basis of dialogue with governments and proposals from national technical units and the Bank's Regional Departments. Owing to the agro-ecological, economic, political and sociocultural diversity of the region's countries, the Bank's actions must of necessity focus specifically on each country and identify alternatives at the regional, departmental and municipal levels within each one. It is estimated that implementation of some of the strategic actions proposed could lead to moderate growth (5% - 10% per year) in the portfolio of agricultural programs over the next five years.<sup>27</sup>

The following paragraphs describe three activities to increase the effectiveness and efficiency of the Bank's work in the sector in addition to what is already under way. Also presented below are suggestion for the necessary actions to provide initial support for their implementation and the costs of implementation and possible indicators to measure its progress.

##### ***4.1 Program Design in the Framework of Sector Strategies at the Country Level***

The economic and technological changes of the past decade highlight the growing

interdependence of different areas of economic activity; consequently, investment projects must be based on an integrated view of agricultural issues in relation to the rest of the economy. This requires sector studies of sufficient breadth and depth to serve as a basis for designing strategies for action. These strategies, by identifying bottlenecks, proposing priority courses of action and making explicit their interrelations with the other tools of economic policy, serve not only to structure and systematize the actions taken, but also to inform, build consensus and generate the necessary political support for selective investment actions. The priority investment areas analyzed in this document could be useful in the dialogue between the Bank and the countries themselves in formulating rural and agricultural strategies at the national level.

The construction of a robust portfolio of investment projects in each country should involve initiatives that at least meet the following criteria: (i) projects should aim at solving high priority problems in the framework of a sector development strategy designed by the government and should be consistent with national macroeconomic policy; (ii) projects should have solid technical, socioeconomic and environmental viability; (iii) the government and/or executing agencies should have the institutional structure needed to implement the project and also be able to provide counterpart resources; and (iv) the direct beneficiaries of each project should have participated in its identification and design. These criteria will ensure the priority treatment of each project compared to other investment alternatives, as well as the social consensus and political support needed to guarantee its continuity. Given the absence in many cases of sector development strategies and the corresponding institutional structures needed to implement them, the Bank's project portfolio could include actions to enable governments to obtain resources for this purpose, especially from technical cooperation sources or from the MIF.

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<sup>27</sup> An annual 5% increase during 2000-2004 would mean that total financing in that period (approximately US\$1,409 million) would be somewhat less than in 1990-1995; a 10% annual increase would surpass the 1990-1995 figure by 13%.

#### **4.2 Project Preparation, Monitoring and Evaluation**

Given that the lead-times for Bank-financed projects in the sector have been consistently longer than originally planned, it is suggested that the Bank should maintain and strengthen the practice of designing medium-term programs (10-15 years) divided into five- or six-year stages, based on the particular characteristics of each project. The first stage would concentrate on establishing the minimum political and institutional conditions needed for the implementation of other activities at the later stages.

Although the Bank has a wide-ranging and successful experience in drawing up projects that meet socioeconomic return criteria, there are two additional promising areas of work. The first stems from the fact that the importance attributed to market mechanisms and the emphasis placed on financing structural adjustment programs have meant less attention has been paid to developing and applying methodologies to take account of the social costs and benefits arising from each project, which cannot be measured on the basis of market prices alone. This was a major concern in the 1970s, and it has once again taken on considerable importance owing to the need to explicitly include environmental impact assessments in project evaluations. These considerations, together with the need to measure the effects of public investment on income distribution, make it advisable to place increased emphasis on designing user-friendly social and environmental impact indicators.

The second area of work relates to project monitoring and *ex-post* evaluation, an area in which international financial agencies have been relatively unsuccessful. There is no consistency in the methods used by different institutions, or even within each one. Many agricultural projects have weaknesses in terms of defining clear aims and objectives to use as a basis for monitoring and evaluation and, at the implementation stage, not enough effort is made to collect field data so that program

impacts can be effectively evaluated on the basis of indicators. Setting up an information and operational system for monitoring and evaluation entails institutional and budgetary decisions to guarantee the continuity and independent judgment of those having this responsibility. This requires resources for underpinning national executing agencies and the participation of local professionals and institutions, independent of both the Bank and the public executing agencies. There should also be mechanisms within the Bank's own institutional structure to facilitate and promote utilization of the results and experiences of past projects. This capacity is essential to an institutional process of learning from experience in order to improve the effectiveness and impact of future investments.

#### **4.3 Mobilization of Resources for Regional Integration**

The Bank has played a pioneering role in regional integration processes through its program of regional technical cooperation and has promoted joint actions of great significance in the agriculture area; a recent example of this is the Regional Agricultural Technology Fund. This institutional tradition and experience could form the basis for more integrated action that would make the Bank a leader in the development of regional loan programs.

Integration processes have been particularly important in the region and have had a significant impact on trade and transnational investment. They are now starting to have important consequences in the rural and agriculture sphere. The Bank should continue collaborating in the consolidation of these processes, exploring the possibility of financing programs which are common to several countries, in areas such as rural transport and energy infrastructure, collaborative activities in agricultural technology development, and joint use of natural resources (such as the management of shared watersheds and inland waterways). Promoting such investments through external

financing operations would mean developing new mechanisms to permit joint loans (regional and subregional) or else individual projects drawn up and negotiated in the framework of a common program by the countries involved.

#### **4.4 Initial Support for Implementing the Strategy**

Although many of the areas and instruments discussed in this document are already present in some of the programs financed by the Bank, their overall implementation is a medium-term activity involving several of its departments and country offices and a variety of committees and internal working groups. Internal technical capacity and the growth of the countries' real demand for innovative programs will determine the pace at which this proposed strategy is implemented over the next ten years. As a complement to these activities, the four concrete actions described below are envisaged for the next four years (1999-2003) to support the initial implementation of the strategy.

##### *Adaptation of Proposed Initiatives at the Subregional Level*

In order to move ahead with the identification of new lending instruments, and in view of the great diversity of situations between (and within) the countries of the region, it is proposed that four workshops be held at the subregional level (Central America, the Caribbean, Andean Zone and Southern Zone) during the next four years. These workshops would stress the importance of investing in sectoral modernization and of adapting the advocated priority investment areas to regional and national realities (including strategic elements for reducing rural poverty and other closely related strategies). The working meetings would be held under the leadership of the Natural Resources Management Divisions of the Regional Departments, with support from the Sustainable Development Department and specialized technical agencies (including FAO, IICA and ECLAC). There would also

be participation by public sector authorities and representatives of producers' associations and private firms. Given the need to formulate sector strategies at the national level, as mentioned above, participation by ministries of agriculture, rural development and environment will be of particular interest in these sector discussions.

##### *Development of Best Practices*

A substantial activity in the implementation of this strategy involves designing practical studies to define the Bank's procedures and financing instruments in the priority investment areas and to support decision-making by the governments of the region. For that purpose it is proposed that studies be carried out on the following subjects: (i) modernization of the *institutional framework* of the agricultural public sector, including reform of the mandates and functions of agriculture and rural development ministries; (ii) *agriculture biotechnology and rural development*, including biological safety, food safety, intellectual property rights and possible future relationships between the public and private sectors in the financing and application of technological development (with special emphasis on the situation of small- and medium- sized countries where current capacity in biotechnology research and its regulatory framework is weak); (iii) *agriculture trade*, including the impact of trade liberalization (in land use, in poverty indicators, in productivity) on the sector at the regional and subregional levels, analyzing the effects of barriers to trade in inputs and products, along with hygiene, quality and safety of foodstuffs; and (iv) the definition of agricultural *sustainability indicators* for monitoring the environmental impact of agriculture development programs financed by the Bank. These tasks will be carried out jointly by the Bank's natural resources management, environment, integration and trade units, with the necessary external support.

*Annual Report on the Bank's Activities in the Rural and Agriculture Sector*

Beginning in 2000, it is proposed that an annual report be produced on the Bank's activities in the rural and agriculture sector, including an analysis of trends and critical issues, and stressing innovative practices and instruments financed by the Bank and by other development agencies. The aim of the report will be to publicize the results of concrete initiatives at the national and regional levels; these would also be published on a *website* specifically created for this purpose, which will include the results of technical studies relating to the strategy. This publication will be produced in collaboration with several units of the Bank and will complement its other reports. The first report (in 2000), in the form of a newsletter, will include an evaluation of the portfolio of rural and agriculture sector projects which were at the execution stage during 1996-1999. Beginning with the second report (2001), a review will be included of activities carried out during the preceding year. In-house discussions of the report will analyze the progress achieved each year in implementing the actions proposed in this document with a view to adapting them over time.

*Strengthening Internal Technical Capacity and Strategic Alliances*

In addition to enhancing working alliances with specialized technical agencies and providing concrete opportunities for some of them to expand their role in preparing Bank-financed projects, there is a need to strengthen the minimum professional critical mass inside the Bank for the follow-up and implementation of the proposed actions. It is suggested that Regional Departments and the Sustainable Development Department assign a larger number of staff (in-house or contracted from outside) to the design, execution and evaluation of agriculture development projects. Rather than create new posts, this may involve reassignment of existing resources according to demand in each department and the reallocation of posts

that may fall vacant in other sectors and/or functions. The technical training of staff (in the country offices and at headquarters) and the Bank's internal agricultural sector network (AGNET) need to be strengthened, with support from the Bank's Office of Learning.

In recent years, working contacts have been initiated with a variety of specialized technical agencies, which have been very worthwhile both for the Bank and for the organizations concerned. Specifically, concrete working alliances have been forged with IICA, FAO, GTZ, ISNAR, USDA, the World Bank, IFPRI, IFAD and ECLAC. It is proposed to evaluate and improve these ties and extend them to other agencies (universities, foundations, and others) in order to increase the impact of the Bank's scarce technical resources, improve the quality of projects financed by the Bank and formulate a larger number of joint initiatives.

***4.5 Costs of Implementing the Strategy and Indicators for Measuring its Execution***

In applying the strategy, the Bank will utilize the options presented above for financing operations in the agriculture sector, in an integrated manner and in accordance with the demands and conditions of each situation. This implies that actions will need to be strengthened at several levels, ranging from programming missions, country studies and strategies and subregional/sector strategies at the level of each of the Bank's Regional Departments, to the concrete identification of financing instruments for each project (from the Bank, the Inter-American Investment Corporation and various Funds, especially the MIF).

Assuming that, in response to an increase in the demand for financing of food and agricultural programs, the projects portfolio grows moderately (between 5% and 10% per year) over the next five years, the implementation of the actions proposed will mean an increase in costs due to greater demand for preparation of operations and to carry out the initial support activities

described above. This investment can be estimated as equivalent to the annual cost of three to five additional staff per year, depending on the growth of the project portfolio of each Regional Department. This is certainly a minor cost compared to the expected benefits of gradual but sustainable development of the sector. It is also anticipated that part of the additional technical work arising from increased demand for resources by the countries can be carried out through working agreements with specialized technical agencies.

Success in implementing this strategy, and the monitoring mechanism to measure that success, will be based on the following indicators: (i) annual growth of the project portfolio (number of projects and amounts of financing); (ii) quality of the programs measured by the actions prepared in section 4.1 and 4.2, and (iii) progress reports and adjustments proposed in the Annual Report of the Rural and Agriculture Sector. The priority investment areas and the action plan for this strategy will be updated in 2005 and the strategy as a whole in 2010.

The agriculture sector in Latin America and the Caribbean has a promising future, but there are important challenges to be met. As the main financing agency in the region, the Bank can play an essential role in supporting countries in the modernization and development of their agriculture sectors. A proactive role in mobilizing funds for strategic investments, systematic policy review through dialogue and dissemination of ideas and best practices, and the development of programs combining economic reforms, institutional strengthening and investment projects in priority areas would have a fundamental impact on the region's economic and social development. This is the institutional challenge for the coming decade.

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