ANNEXES

ANNEX 1
PROFILE OF CHILE

1. Setting

Chile has a population of 15 million (2002), of which nearly 13 percent live in rural areas. Agriculture contributes approximately 6 percent of the gross domestic product (2004-2007). If agriculture-linked industries are included, it may account for nearly 15 percent. Agriculture also accounts for 29 percent of the merchandise exports (2002-2003). Due to the high rate of growth of the economy there has been remarkable decline in poverty – 13 percent of the population now lives below the poverty line, compared to 40 percent in 1989.

Due to its length (4 300 km) and diverse topography, Chile has wide variety of micro-climatic regions. The prime agriculture area lies between 200 km north and 500 km south of the capital, Santiago. Most of the agricultural export (fruits, vegetables and high-quality wine) are produced in this area. In the northern arid regions, extensive livestock production is dominant. In the irrigated parts of this region, early varieties of grapes and fruits are produced. In the Andean piedmont and coastal hilly range, extensive livestock production is practiced, and annual crops, mainly wheat and legumes, are cultivated. In recent years forest plantations have also been gaining importance. In the south, the terrain is hilly and provides suitable conditions for natural forests, pasture-based dairy production as well as cultivation of cereals and forest plantation. In the far south, the population is sparse. Sheep and cattle for beef are the main activities carried out, with some areas devoted to vegetable cultivation.

The nearly 40 years covered by the study have witnessed a democratically elected government (1960-1964 and 1964-1970), a socialist regime (1970-1973) followed by military dictatorship (1973-1982) and an orthodox free-market approach (1983-1989), which was somewhat softened in the later period. Since then democratic center–to-left coalition governments (1990-2005) have ruled the country. Economic policies, including agricultural policies, can be distinguished according to the political and economic orientation of the government of the period.

2. Macro Policies and their Impact

As a legacy of the Great Depression of the 1930s, which brought down foreign exchange earnings to one third of their pre-crisis value, a policy of import substitution emphasizing industrialization and 'cheap food policy' was pursued. This resulted in the neglect of agriculture and high inflation, the latter reaching a level of 100 percent in the mid 1950s. Agricultural growth was creeping at the rate of 1.8 percent per year (annual population growth was 2.5 percent). The policy reforms in agriculture were constrained because of the skewed distribution of land.

The right-of-center coalition, which took power in 1958, sought to reduce the presence of the state in economic affairs and oriented its exchange rate, price and credit policies accordingly. However, the liberal measures taken in these areas were defeated by a serious balance of payment crisis and resultant currency speculation, and a heavy rate of inflation.

The 1964-1970 Christian Democratic government took a middle path. A new exchange rate policy was announced, aiming to systematically and gradually adjust the exchange rate, guided by the difference between the internal and external interest rates. Monetary policy was designed to increase real interest rate. The policy led to an increase in the real exchange rate, and contributed to a surplus in the balance of payment. The government opened markets for exports by joining regional trading groups. It discontinued the import substitution policy and liberalized internal markets. With a decrease in the level of protection provided to industry, prices of industrial products declined and those of agricultural produce increased.

The socialist regime, which took power in 1970, tried to replace the existing economic order by bringing to an end the monopolies in industry and trade, and *latifundia* in the agriculture sector. It discouraged the entry of foreign capital. The money supply was increased to raise the wages of the workers. But this led to galloping inflation.

The military government, which reigned from 1973-1990, followed the textbook liberal market policies in its initial phase. Price controls were removed, a large number of public enterprises were privatized, and the domestic currency was devalued. The plethora of exchange rates were brought down to one, and used to signal resource allocation.

However, with the balance of payment crisis, there was some rethinking on the policy. A more pragmatic macro-economic policy framework was introduced in 1983. The most important measures undertaken during this period included: reintroduction of managed foreign exchange markets; payment of accumulated external debts of the banks; and more stringent regulation of the financial sector. While the policy helped the economy to take off, it left a huge debt burden on the country, and constrained the government in its dealings in the international finance and foreign exchange markets.

With the end of military rule in 1989, three successive governments have followed a pragmatic approach to economic management. The first post-military government (1990-1994) continued those policies, which demonstrated efficiency, and complemented them with new measures that would improve the equitable distribution of the fruits of development. Tax reforms were instituted with this objective in mind, and investment in improving infrastructure was given high priority. The second democratic government (1994-2000) continued the same policies. In addition, it reintroduced the band system for the exchange rate. However, in the wake of the Asian crisis of 1987, it had to take drastic measures in the areas of interest and foreign exchange rates, which impacted negatively on the growth process. The succeeding government (2000-2005) maintained the same policy stance, but targeted inflation (at 2-4 percent) and public expenditure surplus (at 1 percent). Thus, Chilean economic policies were shaped according to the ideological predilections of the government of the day and went through the phases of pragmatism, textbook market orientation, and doctrinaire socialist policies.

3. Agricultural Policies

Agricultural policies basically mirrored the stance taken by the government of the day on macro policies. In the post-depression years (1930s), the government pursued a policy of encouraging industry aimed at ‘low food prices’. This led to the neglect of the agricultural sector, and annual agricultural growth dropped to 1.8 percent. Skewed distribution of land holdings prevented a reversal of the price policy, as the high prices would have benefited the large farmers disproportionally. Therefore, breaking the large farms came on the policy agenda. The succeeding government did not make any major change in agricultural policies. It continued, for example, with fertilizer subsidies. However, at the result of the Alliance for Progress, initiated by US President Kennedy, land reform legislation was passed to appropriate large farm after paying compensation to the landlords in long-term bonds.

Overall agricultural policies during this phase (1964-1970), also called the *Revolution with Freedom Phase*, sought to remove the backwardness, social and economic, of the agricultural sector. To achieve this objective more expedient expropriation of large holdings and unionization of farm workers were encouraged. Nearly 12 percent of the country's agricultural land was expropriated and approximately 50 percent of the farm labour force was organized in farm unions. Along with land reforms, an increase in administered prices for basic foodstuff at the farm level was instituted. Systematic programmes were launched to improve comparative advantages of Chilean agriculture. Long-term credit at positive interest rates was introduced, public investment in infrastructure was enhanced, and cooperatives were encouraged. Agriculture responded with a high annual rate of production, at 5 percent compared to 1.8-2 percent during the earlier period.

The socialist government (1970-1973) deepened the land reforms process and encouraged collectivization. However, even for the reformed agricultural sector very little technical advice was provided and credit supply was choked. The result was a substantial fall in agricultural production.

The military government, which followed the socialist regime, mirrored its predecessor's liberal macro policies in the agricultural sector. The main objectives of agricultural policies were to: liberalize agricultural markets; reduce state interventions; and grant full guarantees to private properties in the countryside. Expropriated land was given back to previous owners, and those that could not be divided were auctioned. However, these measures were not accompanied by adequate credit at reasonable interest rates. Therefore, new owners could not benefit. Extension services were privatized, which, however, did not expand in coverage or improve in quality. Domestic demand and production of livestock products were depressed. The main beneficiaries were non-natural forest plantations, which received huge subsidies. Annual growth of agricultural production returned to 2 percent.

This prompted the government to take a more pragmatic stand. Accordingly, several measures were introduced. Important among these were: (i) introduction of the price band; which prevented daily price swings; (ii) arrangement for special credit facility for agriculture with innovative lending arrangements; (iii) strengthening of the research and extension system; and (iv) re-launching of the state-owned sugar beet industry, with contract farming arrangements with the growers. The result of this policy package was an increased rate of growth in agricultural production leading to self-sufficiency in staple foods. The increase in production was mainly due to increase in yields. Employment in the sector rose by 30 percent. Thus, prosperity of agriculture was more equitably shared.

The government paid special attention to poverty reduction and development of the backward regions. Social services, education and health were extended to poorer areas. Important initiatives were taken to bring women, and to an extent youth, into the mainstream of development. All of these measures resulted in a decline in poverty from 52 percent in 1987 to 34 percent in 1992.

The democratic governments following the military regime (1989-1994) continued many policies of their predecessors. For equitable and sustainable agricultural growth, the government made a three-pronged effort: (i) to maintain and improve the dynamism of agricultural growth; (ii) to protect natural resources; and (iii) to assist small farmers to join the mainstream of agricultural development.

Overall agricultural production growth at 3 percent per year during this period was slower than the previous period (5 percent), yet it was not only quite satisfactory, but benefits were shared more widely. The growth of the wine, forestry and dairy sectors was much higher than that of the cereal sector. The latter was also affected by depreciation of the local currency, high wages and downturn in international commodity prices.

The second democratic government (1994-2000) also continued the policies of the previous government. The major objectives were revitalization and diversification of agricultural production, and modernization of the small farm sector. Resources were made available to organize joint ventures with the private sector to promote exports. Various trade negotiations were conducted to open up markets for agricultural commodities.

The third democratic government (2000-2005) continued the same policies but introduced several innovations. A more participatory mechanism was developed to consult with commercial farmers as well as small farmers. Market development for agricultural exports was pursued more vigorously. A fund to encourage small farm development was established. Banks were subsidized for the transaction costs incurred. Research institutions directly relevant to agriculture were handed over to the agricultural department.

4. Organizational and Programmatic Interventions

A low level of public intervention characterized 1958-1964 agricultural policies. However, a fertilizer subsidy was introduced and was kept on until 1973. As part of the land reform initiative, a land reform agency,"*Corporación de Reforma Agraria*", (CORA) was created. The National Institute for Agricultural Development (or *Instituto de Desarollo Agropecurio* (INDAP) in Spanish) was established to provide technical assistance and credit to small farmers. In the later years, it played an important part in mainstreaming small farmers into Chile's agriculture.

In the so-called 'Revolution with Freedom' phase (1964-1970), the beneficiaries of land reforms were organized into cooperative production units. CORA nominated administrators for these cooperatives for the first three years. The Chilean Development Finance Corporation and the Planning Office within the Ministry of Agriculture conducted studies on the basis of which programmes for various sub sectors were formulated: credit, technical assistance and agro-processing infrastructure.

During this period several autonomous public institutions were created. These included (apart from INDAP) the Agricultural Planning Office, Agricultural and Livestock Services, the National Institute of Agricultural Research and National Forestry Corporation.

During the socialist phase (1970-1973), the process of land reform and unionization of agricultural workers was greatly accelerated. However, little attention was paid to their impact on production. The government created large state farms on government lands, as well as by incorporating the estates of erstwhile large and medium landowners. However, a large majority of these units did not receive state assistance. The initiative resulted in the reduction of agricultural production.

The military regime (1973-1982) returned the expropriated lands to their previous owners or auctioned them to the highest bidder. The new owners of the land did not receive adequate credit or production support, although a huge subsidy was given to the plantation sector. In line with the liberal macroeconomic policies, national extension services were privatized, but neither was the coverage extended nor quality of service improved. These steps were soon retraced. The National Agricultural Research Institute and National Institute of Agricultural Development were once again entrusted with extension services, and groups of farmers were involved in farm-to-farm extension. State-owned sugar beet factories were re-launched, and they in turn entered into the farming contract with the growers. A special fund was created to subsidize small-scale private irrigation.

One of the major contributions of the democratic government was strengthening the marketing infrastructure by revitalizing the parastatal marketing organization COTRISA, which operated mostly in the cereal markets and mainly in wheat. (It is now a highly successful enterprise.) The government also placed high emphasis on extending and renovating irrigation sources, and encouraging and subsidizing advanced irrigation practices, i.e. drip irrigation. It strengthened the sanitary control agency, streamlined data collection machinery, emphasized adaptive research, and established norms for the maximum pollution level for air and water. In addition, natural forests were protected from widespread exploitation.

A series of programmes was initiated to improve the role of small farmers, the most successful being the inclusion of small farmers in the subsidy scheme for small-scale irrigation. As a result of the state's support, a number of small farmers' cooperatives were organized and upgraded.

To strengthen the natural resource base, the programme "Recuperation of Degraded Soils" was launched. To encourage technological innovations, activities of the Instituto Nacional de Investigación Agropecuaria (INIA) were supported with greater funds, and the Foundation for Agricultural Innovation was revitalized. For forestry development, National Forestry Corporation was strengthened. The main rural development agency, INDAP, was decentralized.

In the third phase of democratic government, a participatory approach through Round Tables with farmers was initiated, and agricultural insurance was introduced. An innovative programme of securitized bonds for the forests to be raised by small farmers was set up. After appropriate sanitary measures were taken, bovine meat exports were encouraged. A new programme to assist the dynamic agriculture by constructing greenhouses, on-farm processing facilities etc., was introduced. Major research centres were transferred to the Ministry of Agriculture.

The impact of these policies was visible. Gross Agricultural Produce followed an upward trend. Public expenditure on promotion of productive activities grew significantly in this period. Emphasis was also placed on rural infrastructure and social services. Irrigation development, particularly drip irrigation, was extended significantly. Agricultural exports also increased. Finally, a measurable drop in poverty, from 38.8 percent in 1990 to 12.3 percent in 2000, was achieved.

5. Lessons Learned

Certain lessons clearly emerge from Chile's experience. The government's role in agriculture goes beyond rule setting and ensuring their execution. It is important to provide strategic guidance and control. With successive governments taking these functions seriously during last two decades, they have strengthened Chile's agriculture, especially its three pillars: fruits, forestry and dairy. This does not mean that macro policies can be ignored. The exchange rate, interest rate, minimum wages and monetary policy affect agriculture as much as, if not more than, the other sectors.

Even in the 'least distorted' agricultural sector, as in Chile's, some interventions, such as price bands, are necessary and useful for market stabilization. Similarly, parastatals in the sector could contribute to agricultural productivity, especially on the small farm. Agriculture has a strong capacity to respond to market signals. A stable market environment adds to this capability.

In a dualistic agrarian structure, the state will have to have different policies; some attuned especially to support and develop the small farm sector and backward areas. The state's role in identifying and supporting the 'winners', i.e. those where the country has comparative advantages, through explicit support by the public sector is in the long-term interest of the country. As Chile has shown even within the World Trade Organization regime, there are policies that can support agriculture without causing major market distortions.

ANNEX 2
PROFILE OF ETHIOPIA

Since 1930 Ethiopia has witnessed three different regimes, with three distinctly different approaches to agricultural development. The government of Emperor Haile Selassie (1930-1974) ruled a centralized state and inward-looking economy. It set the goals of modernization of the society and industrialization of the economy. The government protected communal agriculture in some parts of the country, but encouraged feudal institutions in the agricultural sector. Its successor military government (1974-1991) professed Marxist-Leninist ideology, which was resented by the peasantry and, like its predecessor, could not solve the problems of food security and rural poverty. The present government (from 1991) experimented with the policies guided by the Washington Consensus on liberalization and globalization, but again without much success.

1. Key Features of the Country

Ethiopia is located in the tropics, with different regions varying in altitude and rainfall. Agriculture is the key sector, employing 85 percent of the labour force and accounting for 90 percent of export earnings, mainly by coffee. Small-farm agriculture has low productivity. Almost the whole of agriculture is rain-fed, with wide annual fluctuations in output resulting from variations in rainfall. The country faces frequent droughts, culminating occasionally in serious famines. Infrastructure is poor and credit and marketing institutions are very weak, which act as serious constrains to agricultural growth.

2. Policies and Strategies under the Imperial Regime (1930-1974)

The Imperial Government pursued economic policies with the overall objective of industrialization and modernization. Starting in 1959, five-year development plans were formulated to give direction to the economy to meet above objectives. Due to the small domestic market, foreign investment could not be attracted, and the policies remained inward-looking. Several incentives in the form of tax rebates and subsidies were provided to the domestic industries.

While communal agriculture was protected in the northern areas, in the central and southern areas private land ownership was introduced. The nobility, the Orthodox Church and government officials took advantage of the new system and preempted large chunks of land. A class of absentee landlords owning large commercial holdings emerged. The small peasants lost their land in the process.

As a part of the agricultural development strategy, comprehensive agricultural projects were introduced, emphasizing a package of modern inputs and practices. However, as the grain markets were not developed, agricultural prices remained depressed and acted as a disincentive for increasing production. Efforts were also made to encourage commercial dairying and agro-processing by providing tax incentives and preferential access to credit. Overall, priority was given to commercial farms, which registered steady growth, while the bulk of the peasantry remained disadvantaged and poor. Agriculture received meager support from the national budget.

During this period the country showed a relatively high growth in gross domestic product (GDP), reaching 4.1 percent per year. Industrial growth also picked up, reaching 10 to 12 percent growth per year. However, annual agriculture growth remained at 2.1 percent, i.e., less than the population growth of 2.5 percent. Furthermore, the vulnerability of rain-fed agriculture to rainfall fluctuations could not be corrected, resulting in widespread famines brought on by a series of droughts. The worst was that of 1973-1974, which led to the downfall of the Imperial regime.

3. Policies and Strategies under the Military Government (1974-1991)

The military government that seized power in 1974 declared socialism and pursued those policies that they considered essential for ushering in an anti-capitalist, pro-poor and egalitarian society. As a part of the economic policies dictated by these considerations, banks, insurance companies and large and medium industrial enterprises were nationalized. In foreign trade, protectionist policies were adopted with fixed foreign exchange rates. Prices of all major commodities were fixed and essential commodities were rationed. Resources of the state were to be allocated by a National Commission for Central Planning.

In the agriculture sector the policies were equally draconic. All land was declared as public property. Tenancy and hired labour in agriculture were abolished. Large commercial farms were converted into state farms, and they were given high priority in the allocation of inputs and agricultural machinery. The self-cultivating small farmers were brought under the authority of the Peasant Associations (PA), each covering 800-hectares or 250 households. The PAs had the authority to redistribute land among their members, depending on the size of the household, and they were encouraged to promote cooperative farming. A range of incentives was provided to these farms. Despite all inducements, however, producers' cooperatives did not gain the acceptability of farmers. As there were hardly any non-farm activities in the rural areas, and with population pressure on land, the holdings of self-cultivating farmers progressively declined, from 1.65 hectares in 1974/75 to 1.31 hectares in 1983/84. Productivity on these farms was low, work was arduous and incomes were declining.

With falling production, food grain prices soared within a few years of the establishment of the 'socialist' regime. The government resorted to compulsory delivery quotas for the peasants. Even private traders were asked to surrender half of the procured grains to the state-owned Agricultural Marketing Corporation. The procurement prices were set at three levels – the lowest for peasant cultivators, slightly better prices for producers cooperatives, and the highest for collective farms.

A policy of villagization was pursued with disastrous results. Under this policy thousands of farmers were uprooted from their ancestral habitat and herded into overcrowded villages. It had a serious impact not only on agricultural productivity but also on the health and cultural life of the settlers. By 1988 most families were living in these crowded villages, with limited land for cultivation or grazing for their livestock.

With all of these state interventions, the budget allocated for agriculture was paltry (varying between 6 and 15 percent of the state budget). A disproportionately large share was earmarked for state farms. There was no investment in improvement of degraded land either by the state or by the impoverished peasantry.

The net outcome of these policies was that agricultural growth was stalled and poverty and food insecurity became widespread. The overall GDP grew at the rate of 2 percent per year and agricultural production 0.6 percent, while the population was growing at the rate of 2.9 percent. The country had to depend on food aid to provide a modicum of food security to the people, as the crisis in the agriculture and rural livelihoods deepened. The serious famine of 1983/84 resulted in the total loss of credibility of the government.

4. Policies and Strategies in the Post-reform Period (1991 to present)

The regime, which took power in 1991, started pursuing the policies that were radically different from those instituted by previous governments. Overall these policies followed what is known as the 'Washington Consensus', which includes all the features of Structural Adjustment Programmes: devalued the exchange rate, gave licenses to domestic banks and insurance companies, liberalized product markets, deregulated prices, reduced subsidies and brought down duties and taxes.

The policy reforms in agriculture were proclaimed in the context of the Agriculture Development Led Industrialization Policy. The focus is on improving productivity of smallholder agriculture. The land continues to be under state ownership, although the regional governments are giving guarantee that the land registered under an individual will not be redistributed. It remains to be seen if the registration could provide enough incentive to farmers to invest on the land they are using.

The government also launched a special poverty reduction programme comprising infrastructure development, rural development, food security and capacity building. There are moves towards decentralization and the devolvement of power to lower administrative units. Many of these initiatives are being frustrated because of lack of independent grassroots organizations.

According to the current policy, agricultural growth is to be centred on the improvement of productivity in the smallholder sector. To achieve this objective, a 'participatory agricultural demonstration and training system' was introduced on a massive scale, among other measures. The emphasis was on increasing fertilizer use and improved seeds. A large number of functionaries were trained. Due to these efforts, the use of chemical fertilizers has improved significantly, but the spread of improved quality seeds is not satisfactory, mainly because of weaknesses in the research system and in the research-extension-farmer linkages. There were hardly any private or farmers organization-based extension efforts in the country. Now, this gap is being filled in and a pluralistic approach is being encouraged.

The state-owned Commercial Bank of Ethiopia is entrusted with providing credit, mainly for inputs (e.g. fertilizer). The cooperatives, local government officers and microfinance institutions extend credit to the farmers for this purpose. However, in this arrangement the role of private input dealers has been relegated and a lot of burden is put on extension agents. Similarly, fertilizer distribution is progressively coming under the control of the Agricultural Input Supply Enterprise, a parastatal. Private-sector participation in the distribution of fertilizer and improved seed varieties has almost disappeared. The absence of competition in production and distribution of inputs has resulted in high costs and poor service delivery. This is in contrast to many countries in Africa where the private sector is quite active in the delivery of inputs.

Output markets have remained thin and underdeveloped. Small grain traders, who have limited resources, lack warehousing facilities and have limited access to market information, dominate the markets. The major actor in this area is the parastatal Ethiopian Grain Trade Organization. However, this organization has not been able to make an impact on the grain market mainly due to under-funding. In recent years cooperatives have been promoted to handle grain trade. An Ethiopian Commodity Exchange has also been launched to bring order and transparency into grain marketing.

The biggest marketing challenge has been the high price volatility. The situation has worsened after the reforms. Significantly, the price of maize (preferred by the rural poor) is more volatile than wheat (consumed by the better-off segment of the population), and producer prices are much more volatile than consumer prices. A good harvest leads to price collapse, and supply shortfall leads to soaring prices. Price stabilization measures have not been given needed attention. While commodities such as flour, cotton and sugarcane are given generous incentives, food grains have not received this type of support.

The budget allocation to agriculture has improved significantly, with its share in the total budget climbing from 8 percent in 1951 to 17 percent in 2005. But a large part of it goes to salaries and wages. Some of the key sectors, such as irrigation, and programmes such as land improvement, are totally neglected. Some of the enterprising farmers have benefited from the numerous government programmes and schemes, but the bulk of the peasantry continues to be struggling with poverty. The situation has worsened because, in the absence of employment opportunities in the non-farm sector, pressure on land is increasing and holding size is continually declining.

5. Major Impacts

During recent years there has been significant increase in GDP growth, especially compared with the period under military rule. Performance of agriculture, at 2.4 percent per annum, also suggests significant improvement. But agricultural growth is driven almost exclusively by area expansion rather than by productivity improvements. Food grain production has improved but the sharp year-to-year fluctuations in production have not been subdued. Overall, the country is able to produce only two thirds of its grain requirements and depends mainly on food aid for the rest. Nearly 8 million beneficiaries were brought under the Productive Safety Net Programme in 2008. Most of them had been receiving food aid or participating in food-for-work programmes for decades. Apparently, the beneficial effect of the economic reforms has not yet touched their lives.

Added to the worries of the poor is the unprecedented increase in prices: inflation in the country is one of the highest in sub-Saharan Africa. The increase in food prices (on a monthly basis) reached 35 percent by June 2008. The inflationary pressure, which is caused by the failure of domestic supply to match demand, has affected not only the poor but also macro economic stability, with negative impact on investment and growth.

6. Lessons Learned

The case study of Ethiopia provides objective lessons on the role of public sector institutions in agricultural development. It is clear that the semi-feudalistic agrarian structure, with large estates owned by absentee landlords, could not result in a viable agriculture. The same is true for the ‘socialistic’ form of agrarian organization with an autarkic system in international trade. Forced collectivization and resettlement have proved to be counterproductive. The total negation of markets in prices and trade resulted in further impoverishment of an already poor peasantry.

More to the point, the doctrinaire application of a liberal regime with full faith in privatization and globalization had its own pitfalls. In an economy where markets are thin, credit and marketing institutions underdeveloped, infrastructure is in woeful conditions and trained manpower is scarce, dismissing or undermining the role of the public sector would deprive the small peasantry of whatever limited assistance it could have received.

On the policy front several lessons are clear. If small farm agriculture is to prosper, investment in infrastructure is a must. Equally important are the measures for reducing risks – the natural risks by extending irrigation and effectively managing water; and market risks by crop and livestock insurance and/or minimum support price and accumulation of a buffer stock capable of enabling policy makers to engage in ‘open market operations’ to counter periodic scarcity and gluts. Finally, as the experiences of successful Asian countries have shown, small farm agriculture needs institutional support, mainly from the public sector, in the areas of research, extension, credit and marketing. Hasty privatization and neglect of public-sector institutions in these areas will do more harm than good, especially to the marginalized and vulnerable populations.

ANNEX 3
PROFILE OF HUNGARY

Before World War II, Hungary was an agrarian economy, with agriculture contributing significantly to the country's gross domestic product (GDP) and exports, and employing a large proportion of the work force. The agrarian structure was 'bipolar', with a few large estates dominating the sector, and numerous small farmers producing for their own needs.

Subsequent developments in agriculture can be discussed in four phases: (i) 1945-1967, a period of Soviet-type agricultural policy; (ii) 1968-1989, the 'Hungarian Agricultural Development Model' of development; (iii) 1989-2004, a transition from socialism to a market economy; and (iv) 2004-2005 EU membership experiences.

1. Soviet-style Agricultural Policies (1945-1967)

During this period, Hungarian agriculture followed the Soviet pattern. After World War II, Hungary's economy became a command economy characterized by state ownership of means of production, central planning and emphasis on the development of heavy industry. There was a determined push to collectivize agricultural holdings, and once enrolled, farmers were not allowed to leave the collective farms. There were compulsory production quotas determined by the central authorities, and procurement prices were deliberately kept low. Paltry investment was made by the state in agriculture.

Certain reform measures were adopted after the death of Stalin in 1953, but they proved short-lived because the basic tenets of the economic system remained unchanged. As a result of these coercive and collective measures, agricultural production stagnated. Despite state controls, imports of agricultural products jumped eight- to nine-fold, while exports hardly increased. The plight of agriculturists worsened, especially the small farmers. Moreover, the economy as a whole regressed, compared to the pre-war period.

The Hungarian Revolution of 1956 triggered some changes in the collectivization process. Instead of coercion, economic incentives were offered to the farmers to join the collectives. Some decentralization was introduced in framing agricultural plans for the collectives, and the cooperatives were granted some degree of autonomy. Higher purchase prices for agricultural output were introduced. The net outcome of these relaxations was a spurt in production. Not only domestic demand for most of the agricultural commodities was satisfied, but sizeable quantities were exported, making Hungary an important agricultural exporting country. The higher rate of agricultural growth also benefited the state's budget. However, the overall economic scene was disappointing.

2. The New Economic Mechanism (1968-1989)

The next phase in Hungarian agriculture, termed the New Economic Mechanism, lasted from 1968 until 1989. It started with the recognition that the country's economy was stagnating. As far as agriculture was concerned, market-oriented reforms were introduced, giving much greater autonomy to cooperatives to plan their activities. The state intervened through what were called 'economic regulators', e.g. prices, taxes, credit. The state also provided large amounts of input and output subsidies, as well as special grants for backward areas. (Subsidies accounted for 10.5 percent of the agricultural budget.) Emphasis was laid on modern breeding and cultivation practices. All of these measures boosted agricultural production, which recorded an annual growth of 4.6 percent during 1971-1975.

During this period significant changes took place in the relationship between the large cooperative farms and small family holdings. The cooperatives provided modern means of production to the small family farms; the latter specialized in intensive and high-value agricultural production. In addition, cooperatives undertook other ancillary activities, in trade, transport, processing, etc. The income from these activities helped in their agricultural production activities. The state's investment was directed through cooperatives, which assisted small farmers with their enhanced resources. The owners of small farms had assured employment and income, and several other benefits from the large cooperative farms, while their own efforts on the small plots yielded additional and substantial income. As a result, not only agricultural production increased, but farm incomes improved significantly, and the acquisition of consumer durables by farmers increased manifold.

Among the three forms of agricultural organization existing in the country viz., collectives (state farms), cooperatives and the small household plots, cooperatives registered the highest rate of growth in production. This was due to several factors: the rate of investment was increasing and most of it was in machineries; the use of fertilizers and chemical increased substantially; and new and highly productive varieties of wheat and maize were introduced. A unique division of labour took place between cooperatives and the small farms, with the latter specializing in the production of labour-intensive products, such as fruits and vegetables, and the former concentrating on grain production.

This happy situation did not last long. At the beginning of the 1970s, more orthodox leftist views started asserting themselves. Proponents of these views were successful in forcing a turnaround in the policies in 1978-1979. A return to centralized control took place, resulting in a stifling of innovation and the spread of inefficiency. At the same time, the government was forced to integrate with the world economy by its creditors, namely the western banks. The situation was further complicated by the rise in oil prices. There was a serious liquidity crisis. The government was forced to join the International Monetary Fund and the World Bank. With this, came the Stabilization Programme with all the elements of the so-called Washington Consensus. With greater austerity in government expenditure, investment fell, and with that production and exports also declined. The policy resulted in a 'drain' of agricultural incomes, which could not be contained by a high level of subsidies. The latter were predominantly to unfavourable agricultural regions and to exports, and not for inputs or investment.

With a decline in investment, cooperative farms also became less profitable. Only the large collective farms showed profit, as they started giving greater importance to non-agricultural activities. The weakness in productive activities was further exacerbated by weak marketing and distribution links. The task of creating a free-market system posited on centralized decision-making authorities brought to fore the disadvantages of both systems. Basic issues of the role of government in the management of economy, the extent of liberalization and privatization, and a clear definition of property rights could not be resolved.

Despite all the handicaps, agricultural growth continued mainly because of the investments made and technological back-up provided during the previous period. The continuing growth of agriculture was reflected in larger exports and thus contributed to domestic resources as well as resources for debt servicing in those difficult times.

3. Transition from a Centrally Planned to a Market Economy (1990-2004)

By the end of the 1980s the Soviet empire had started disintegrating. The effect was felt in Hungary. The legal and organizational frameworks of the one-party system could not be sustained. In 1990 free elections were held, and the new government opted for a market-oriented economy, and full integration with Western Europe. The adjustment programme launched by the new government comprised large-scale privatization, down-scaling of government, and promotion of foreign investment. The export sector was recognized as the leading sector. The World Bank supported these efforts by granting the first Structural Adjustment Loan. The International Monetary Fund supported the stabilization measures. The government agreed to key policy and institutional reforms consistent with the Structural Adjustment and Stabilization norms.

In agriculture the reforms were translated into a shift to private ownership of land, which was thought to provide better incentives. It was also decided to provide compensation to those who had lost their land in previous collectivization and cooperatization drives. Although restructuring took more time than anticipated, by 1996 the large-scale restructuring of collective and cooperative farms and the privatization of agricultural holdings were nearly complete. However, this process also resulted in fragmentation of holdings. Consolidation of ownership holdings and support to farming structure required greater and consistent support from the government, which was not available.

Since 2004, in compliance with the General Agreement on Tariffs and Trade (GATT) on Agriculture, the Structural Adjustment Programme and the conditions for joining the EU, government subsidies to agriculture were drastically reduced. The subsidy level was mainly determined by provisions in the EU budget. Thus, direct subsidy to agriculture was reduced, but the rural development subsidies provided in EU's Common Agricultural Programme (CAP) increased.

The transition from a centrally planned system to a market economy had a serious impact on the agricultural sector, in terms of production as well as on the structure of land holdings. It also had an impact on the product market of agricultural goods. By and large the sector was a loser, mainly because the transitional phase was not managed properly and was guided by ideological considerations. Both agricultural and animal husbandry production declined sharply. Fertilizer use declined significantly, and privatization of agricultural extension services did not benefit the majority of producers. The state's share in agricultural research also declined. Agricultural wages declined and employment decreased. Share of agriculture in GDP decreased from 13.7 percent in 1989 to 4.3 percent in 1999; Employment declined from 17.4 percent to 7.1 percent in the same period; and exports from 12.8 percent to 8 percent. The livestock sector was affected even more seriously.

The most drastic changes took place in the land ownership structure. Collective and cooperative farms were broken up and the land was transferred to private hands, mostly to those whose land had been requisitioned in the previous socialist regime. The transfer was affected by compensation vouchers, which could be used for the purchase of agricultural land. This method led to the purchase of small pieces of land by voucher holders. The result was small and fragmented holdings. However, since leasing of land was permitted, newly acquired land by individuals was leased-in by larger corporations, and in a few instances, to the cooperatives. The net result was a concentration of operational holdings in large farms, and separation of ownership and operation of land holdings.

The sad plight of agriculture was inevitable, as the new policy was characterized by a dominance of outdated ideologies, the inability to learn from the experience of other countries, the uncritical acceptance of the foreign advisors unfamiliar with Hungarian reality, and an almost maniac aversion to collective and cooperative farms.

In line with the agricultural production activities, the state's role became less important in marketing of agricultural output, including distribution of food grains. Large multi-national operating chains of hyper-stores started dominating the scene. However, the small retailers could also continue in the market, supported by central buying and distribution arrangements. Consumers tried to protect their interests through General Purchase and Sales Cooperatives, which played the role of bulk purchasers and distributors. Consumers also benefited due to greater emphasis on quality by large and small distribution agents.

4. EU Membership Period (2004-2005)

Hungary applied for EU membership in 1994, and it was declared eligible in 1998. Thereafter several measures were taken to incorporate the EU's legal stipulations, rules, directives etc., into its system. One of the most important developments on the agricultural side was eligibility for the EU's subsidy amount under the latter's CAP. Until 2005, approximately 210,000 farms received direct CAP subsidies. The number and amount are gradually increasing and may reach the level of subsidies given by the old regime. As it is, government subsidies together with EU subsidies account for 64 percent of the income of the farms. While agricultural producers benefited by larger subsidies, with liberal trade policies they also had to face stiffer competition from foreign competitors not only in the international markets but also in the domestic markets.

The benefits of subsidies and other provisions of the EU were received mostly by the larger farms; the small part-time farmers were adversely affected by market liberalization. Similarly, crop producers benefited by these arrangements, but producers of horticultural crops did not. The association with the EU made farmers more environmentally conscious.

The years immediately following EU membership (2004 and 2005) witnessed a substantial increase in cereal production. However, it was mainly because of favourable weather. Yields of the principal cereal crops (wheat and maize) were lagging behind EU–15 averages. In addition, producers could not take full advantage of bumper crops due to the high transport costs and lack of adequate storage facilities. The structure of the livestock sector was changing, with a decline of number of animals for slaughter. Milk production was not much affected – although the number of cows declined, milk yields improved.

Hungary's position as an important agricultural exporter continued, and its balance of payments on agricultural trade account continued to be positive.

5. Conclusions

Hungarian agriculture underwent three major systematic changes; a socialist phase; a transitional phase to market economy; and an integration phase with membership in the EU. In all of these phases, political consideration outweighed economic considerations.

The socialist phase (1945-1989) in Hungary was not as disastrous as the other centrally planned countries in central and eastern European countries or in the Soviet Union. This was because of the innovative ways in which central planning was carried out. Among several factors responsible for the exceptionally good performance of the agricultural sector during that period, the following are the most significant. In the first phase even for the members of cooperatives (which accounted for the largest share of land under cultivation), households plots were permitted and were encouraged to grow more labour-intensive high-value crops (i.e. fruits and vegetables). Secondly, the government provided sufficient investment in agricultural plants and machinery. Thirdly, produce prices were kept at remunerative levels. Fourthly, agro-processing and other ancillary activities were encouraged. Finally, sufficient attention was paid to provide education and health facilities to rural people.

However, there were serious weaknesses in the system, some arising from defective macro policies and others specific to agriculture. The main handicap at the macro policy level was insensitivity to the external environment, although Hungary had a large foreign trade component. Mismanagement of budgetary resources led to heavy, short-term and high-interest-bearing external loans. As far as agricultural policies were concerned the major weakness was an exclusive attention on quantity, and neglect of the cost of production or quality of product. Institutional support for efficient marketing was also lacking. The planning authorities, in general, were insensitive to trends in domestic and external markets.

In the transitional phase (1990-2004), some of these lacunae in agriculture were sought to be removed. The emphasis shifted to market-oriented policies, but the process of liberalization was gradual – no 'shock therapy' was attempted. Government policies were directed in three areas: (i) changes in institutional and regulatory arrangements to enhance the functioning of the markets; (ii) privatization of major means of production in agriculture and promotion of private enterprise in input supply and agro-processing; and (iii) introduction of supportive programmes for agricultural producers, processors and traders.

This period of transition, especially the first five years, could be considered a major success. Within a short period of time almost complete privatization of land was achieved, a market-consistent incentive framework was introduced and deep reforms in government institutions carried out. However, the process inflicted a heavy cost on some sections of the farming community, especially the small farms, as they could not compete in the changed market environment. The situation was aggravated, as the government did not have enough resources to invest in agricultural infrastructure. The financial system was not attuned to the new agrarian structure. Privatization of land also meant fragmentation of land ownership, separation of land ownership from land use, and a sharp decline in profitability of agriculture production and a consequent drop in farmers' income.

Accession to the EU promised higher income, stable prices and expanding markets. So far (i.e. until 2005), these hopes have not been met. To take advantage of EU membership, the country needs a development strategy for agriculture; timely institution building; careful financial budget planning; and strengthening of potentially competitive sub-sectors. Above all, it will require more responsive devolution of power to local administration, and much greater attention to research, extension, education and training. The government will have to equip itself to establish the ground rules and facilitate smooth operation of markets.

6. Lessons Learned

- Macro policies matter. Because of reckless fiscal policies, Hungary accumulated large short-term foreign debts, which constrained its options for investment in social development, infrastructure development, etc.
- Systems cannot take sharp adjustments without adequate preparation. In this respect Hungary was in a better position because in the later years of the socialist phase the policy framework had started incorporating elements of a market economy.
- Privately owned small farms are quite productive, especially in producing high-value labor-intensive crops. More so if the farmers have assured income from some other sources – in the case of Hungary, from their work in the cooperative farms.
- Despite the unfavourable environment of the market economy, cooperatives could stand on their own in agricultural production, or could enter into other ancillary enterprises, because of heavy public investment in these entities during the previous regime.
- Without proper institutional support in marketing, credit, etc., the country could not benefit, at least in the initial stage, from its integration with the large EU market.

ANNEX 4
PROFILE OF INDIA

1. Main Features of India's Agricultural Sectors

India is a large country with a population of over 1.1 billion. There is a substantial number of poor households, although their proportion in the total population is declining. Currently nearly 26 percent of the population is below poverty line. There is pronounced social stratification, which is also reflected in unequal access to land and other resources. However, the country is a stable multi-party democracy, with village-level institutions recognized as the primary units of governance.

Nearly 60 percent of population lives in villages. In the rural areas agriculture is the dominant occupation. Around 56 percent of the country's work force is engaged in agriculture, which is primarily smallholder agriculture. Around 85 percent of agriculture holdings are small or marginal (of less than 2 hectares), cultivating nearly 50 percent of the area. Nearly 45 percent of cultivable land is irrigated. Cereals are the main crops. In recent years crop diversification has started to a significant extent, and sub-sectors such as dairying, animal husbandry, fishery, and horticulture are gaining importance.

An important feature of Indian policy is that food security is considered a primary responsibility of the state, and the sections that follow discuss the role of the public sector in meeting the objectives of growth and equity in the rural sector.

The discussion covers four periods of recent history: (i) the period preceding the "Green Revolution", from the late 1940s to middle of the 1960s, when the country was plagued with food shortages; (ii) the period of the "Green Revolution" from the mid 1960s to the end of the 1980s, marked by substantial increases in food production; (iii) the period of "economic reforms" from the beginning of the 1990s to the end of the 1990s, with emphasis on liberalization and globalization, also characterized by the neglect of agriculture; and (iv) the current period from the beginning of this decade onwards when important changes have been taking place in agricultural policies and supportive institutions.

2. Period Preceding the Green Revolution

On the partition of the country into India and Pakistan in 1947, India inherited a grossly food-deficit economy. As relations with its neighbour were none-too-happy, the developed countries were not forthcoming to assist, and the country did not have the capacity to import food in large quantities. Increasing food supplies from domestic sources therefore became a primary objective of the country's agricultural policies. With a large number of poor households, avoiding hunger and providing food security became other major objectives. To achieve the latter objective a variety of measures, from price regulation to rationing, were taken.

The main thrust of the macro policies during that period was rapid industrialization supported by protectionist measures. Agriculture was not at the centre of the development strategy. Two major initiatives impinging on the rural social and economic structure were taken during that period. The first was a nationwide programme of community development and national extension. The basic idea of the community development programme was to prepare village communities for comprehensive development with their own efforts, with the state playing a facilitating role by providing a village-level functionary and some financial and technical support. After a promising start the programme faltered and then petered off. The main reasons were: (i) the line departments in the states did not cooperate with the village-level functionaries; (ii) the programme became a victim of ‘targets’ without proper attention to community mobilization; (iii) village societies were not as cohesive as was assumed; and (iv) neither technological back-up nor price incentives were ensured to increase in productivity and income.

India had inherited an iniquitous land-holding structure. The land reform programme was addressed to mitigate hardships to the small cultivators and give them incentives to increase production. Major components of the land reforms were: (i) abolition of functionless intermediaries; (ii) protection of tenants’ rights and regulation of rent; (iii) creation of ceiling on land holdings and distribution of surplus land among marginal farmers and landless labourers; and (iv) legislation to enable tillers of land to acquire ownership rights.

The objectives of the land reforms remained largely unfulfilled, primarily because beneficiaries were not mobilized and the bureaucrats were expected to implement such far-reaching changes on their own. In addition, with almost exclusive emphasis on equity, measures to improve productivity were not taken to any meaningful extent. However, land reforms did help in ‘clearing the decks” in some important respects. Further expansion of holdings by the larger landowners was stopped, the middle peasantry was strengthened, and a more or less uniform land tenure system came into existence throughout the country.

One of the major achievements of this period was the expansion of irrigation. Most of the expansion took place in surface irrigation, built and managed by the federal government. The benefits from surface irrigation could be shared by all holdings irrespective of their size. The federal government also kept in mind the need for expansion of irrigation in backward regions. Despite these advantages, irrigation expansion could not result in a commensurate increase in production. The problems were partially technical in nature – at the system stage, but also at the user level. In addition, complementary activities at the watershed level were not undertaken, but more importantly, sufficient attention was not given to develop appropriate technologies and ensure incentive prices.

3. The Green Revolution and After

The neglect of agriculture in the 1950s, with emphasis on industrialization, started showing its ill effects in the early 1960s. Availability of food grains fell far short of requirements. Periodic draughts and the unhelpful stance of developed countries with a food surplus compounded the difficulties. The government took the bold decision to reach food self-sufficiency with domestic production, and the country succeeded in achieving this objective in a remarkably short period.

The success was all the more noteworthy, as the growth in production was not due to expansion of cultivated areas but to increased productivity of land. The strategy was based on popularizing high-yielding varieties (HYV) of wheat and rice. Critical factors in ensuring success of the new HYV-based technology were: (i) rapid enlargement of area under irrigation; (ii) continuous adaptation of old HYV and release of new varieties; (iii) adequate provision of modern inputs, especially fertilizers; (iv) provision of adequate credit; and (v) assurance of minimum guaranteed prices by the state.

Policy measures played an important role, particularly in the areas of technology generation and agricultural prices. Through deliberate and systematic efforts, quality of research personnel was improved, organizational changes were affected to take advantage of the country’s diverse regions to test and adapt varieties for different areas, incentives were provided to the scientists, and a more focused research agenda was developed for the country as whole. The agricultural research establishment was strengthened to select, cross, adapt and popularize useful varieties, particularly in wheat and rice, for the irrigated areas.

The objective of the price policy was to ensure stable and remunerative prices to producers, where advances in technology promised breakthroughs in yield. At the same time, consumers also received the benefits of increased productivity. A complementary package of minimum support prices, procurement prices, buffer stocks, and a public distribution system was introduced. For each major policy thrust, institutional arrangements were put in place to implement policy measures on the ground.

While achieving remarkable success in food grains production, the country also had to pay some prices. With the emphasis on wheat and rice, other crops were neglected, from the point of view of technology generation and remunerative prices. As the strategy was based on adequate and controlled water supply, it resulted in growing inequality between the irrigated and rain-fed areas. Excessive use of fertilizers and chemicals led to deterioration in the quality of land and water.

4. Economic Reforms Period

By the end of the 1970s agricultural productivity, even in the Green Revolution areas, had reached a plateau. The gap between the availability and requirements of food grains was widening. The overall economic situation worsened with the first oil shock and dwindling foreign exchange reserves, and inflation was soaring. These conditions forced a change in the policy stance. Some measures of liberalization in industrial and foreign trade policy were introduced. However, the basic premises on which the earlier ‘pre-reform’ policies (i.e. ‘commanding heights for the public sector’) were based remained more or less unchanged. Even with the limited reforms, the economy revived. Inflation came down and industrial production improved.

However, this proved to be a brief respite. With the second oil shock and severe droughts of 1983-1984, the economy again started limping. A new set of reforms was introduced in the beginning of the 1990s. Economic reforms introduced in 1991 are qualitatively different. The principles underlying the reforms are greater reliance on the market for allocation of resources, emphasis on privatization and promotion of domestic and global competition. The need to curtail the fiscal deficit is recognized. While these principles are common to several other countries introducing reforms, India’s approach is distinguished by its sequential and cautious approach.

The new phase of reforms was initiated in the foreign trade sector to face the serious foreign exchange crisis. Moves towards a liberal and open trade regime were initiated. This was followed by reforms in the industrial and financial sectors. Subsequent to liberalization of foreign trade, the rules for the entry of foreign capital were also relaxed. With a democratic and multi-party polity, a measure of consensus building is imperative. The capacity of the enterprises in rural as well as urban sectors to absorb shocks also needs to be taken into account. These considerations prompted a gradual and cautious approach to reforms.

The reforms since 1991 have proved to be reasonably successful at the macro level. They ushered in an era of high rate of growth in gross domestic product (GDP), continuously for 15 years, and put the country in the category of one of the fastest growing economies in the world.

5. Reforms in Agriculture

Against the backdrop of the slow pace of reforms in the country, policy changes in agriculture were even slower. The government was keen that nothing be done that would jeopardize food security. There was a powerful lobby of medium to large farmers who did not want to yield any advantages they might be extracting from the system. The state governments, which according to the Indian Constitution have principal responsibility for agriculture, were dragging their feet in implementing the reforms. At the same time distortions in the agricultural sector were not as glaring as in most of the countries opting for reforms.

Agriculture reaped the benefits due to reforms in the non-farm sector – e.g. dismantling protective measures for industry, minimizing the fiscal deficit, and realigning the external value of domestic currency. This was evident from the improvement in the terms of trade between the agricultural and non-agricultural sectors. However, the government did precious little to reduce interventions in commodity prices, or in domestic and foreign trade. There was huge increase in subsidies for food and fertilizers. Public investment in agriculture and rural infrastructure slumped. Public-sector institutions in credit and marketing relegated their development role to the background and aimed at 'profit maximization'. Many small farmers could not obtain support from public institutions to face the competition, even for the products for their own use. In short, sectoral policies addressed to agriculture ignored the on-the-ground realities.

The reduction in the government's share in capital formation, the 'market orientation' of the supportive institutions, and the neglect of rural non-farm sector had adversely affected the agriculture sector and rural development. The net result was deceleration in agricultural production to less than 1.8 percent per annum, compared to 2.4 percent per annum in the previous decade. Additionally, with the declining role of government in surface irrigation and greater reliance on ground water sources, the small farmers who did not have resources to own tube wells found their access to irrigation reduced. Barring a few crops, all other crops recorded lower growth rates in output. The rate of growth in food grain production had fallen short of the rate of growth of the population. Small and marginal farmers were lured by market signals to expand the area under non-food crops, but they did not have capacity to deal with market risks. The then existing system of crop insurance did not cover their risk to any meaningful extent.

6. Current Phase of Economic Reforms

By the turn of the century, the Indian economy was poised for a high rate of growth. The growth, however, was spearheaded by the industry and services sectors. Agriculture was virtually stagnating. As a result, the rate of poverty reduction was disappointing.

Government agencies and research scholars identified the major constraints to agricultural growth, which included: (i) deterioration of the production base of land and water; (ii) stagnation in the yields of field crops, as well as in the output of sub-sectors (e.g. dairying, fishing); (iii) declining efficiency of inputs used in agriculture; (iv) widening income gap between agricultural and non-agricultural workers; (v) greater vulnerability faced by agricultural workers; and (vi) decay in self-help institutions.

One of the major causes identified for stagnation in agriculture was the decline in public investment. The main reason was the growing amount of subsidies which absorbed a progressively larger share of the public resources. During the early to mid 1980s, the level of public investment in agriculture was 3.5 percent and the level of agricultural subsidies was 4 percent of agricultural GDP. In the beginning of this century (2001-2003) public investment declined to 1.8 percent of agricultural GDP and the share of subsidies rose to 7.4 percent. Attempts are being made to correct this situation.

Another area which needed urgent attention was agricultural research and extension. India has high-caliber scientific manpower and a network of research institutions. Nevertheless they were not able to contribute to agricultural growth because the content of research was not related to the demands of the sector. The organization was bureaucratic and top-heavy, and not enough resources were allocated to the public research system. Private-sector research made some headway in bringing out improved quality of seeds, as well as application of biotechnology, for commercial crops. A review of the research system by a high-powered committee has recommended that agriculture research should remain primarily in the public domain, with open access to all users. A decentralized and participatory approach is suggested for extension of agriculture research to the producers.

Another weakness identified was the working of the delivery mechanisms, particularly for credit and marketing. In small-farm agriculture, support provided by the institutions in these areas is very important. The strategy of the government until the 1960s and 1970s was to strengthen the cooperative sector. As cooperatives became more susceptible to political pressure and bureaucratic interference, the public sector institutions were given prominence. With the advent of economic reforms, greater emphasis was placed on market orientation of the supporting institutions. However, such orientation was interpreted by the public institutions as 'profit maximization' relegating their supportive role *vis a vis* the small-farm sector to the background. This approach is being corrected, and various measures are being taken to make these institutions, particularly financial institutions, more inclusive.

One area where no significant progress has been made is the management of the food economy. The food policy was based on four interrelated measures: (i) a minimum support price to protect agricultural producers from sharp declines in prices; (ii) a procurement price to procure food grains at near-market rates; (iii) a buffer stock to meet sharp fluctuations in domestic supplies; and (iv) a public distribution system to enable vulnerable farmers to obtain food grains at an affordable price. These measures were compromised once the distinction between Minimum Support Prices (MSP) and Procurement Prices was erased, and the concept of MSP was expanded to include all types of actual and imputed costs. This led to progressively rising MSP, and made it difficult for the public distribution system to make food grains available to poorer farmers at affordable prices. This in turn resulted in a progressive rise in food subsidies. These distortions are aggravated by inefficiencies in the procuring agencies as well as in the public distribution system.

7. Lessons Learned

India's experience in agricultural growth and rural development provides some important lessons. Following are of particular relevance to developing countries:

- It is important to take into account the initial conditions before embarking on major policy changes.
- In large poor countries with democratic government, the state cannot abandon its responsibility of ensuring food security.
- For agricultural development, public investment is the prime mover; private investment can supplement but cannot substitute public investment in rural infrastructure.
- In an agrarian structure dominated by small farms, public sector institutions in research, extension, credit and marketing are crucial.
- Without proper technical support, even the pro-poor institutional reforms (e.g. land reforms) will not yield the desired results.
- Policy makers need to be flexible, taking into account changes in circumstances and adapting accordingly. Policies which are useful in a period of food scarcity may become counter-productive in a period of food surplus and *vice versa*.
- In labour-surplus agriculture, investment in the development of the non-farm rural sector is as important as in the development of agriculture.
- In societies with pronounced social and economic inequalities, organization of the poor at the grassroots level is necessary to reduce transaction costs and safeguard their interests.

ANNEX 5
PROFILE OF MEXICO

1. Setting

Before the Revolution of 1910, large farms, or *haciendas*, characterized the agricultural structure in Mexico. The indigenous population was pushed back and could own only miniscule holdings. The large farms dominating agriculture were basically primary-products, export-oriented agriculture, depending on the labour released from expropriated holdings of the indigenous farmers. Larger farms, like all monopolies, were producing grains inefficiently and at higher relative prices. This constrained the domestic market and was an obstacle to industrialization.

The Mexican Revolution of 1910 encouraged communal land settlements, or *ejido,* but did not affect the large *haciendas,* which continued to account for 94 percent of the agricultural land. The Great Depression of the 1930s ended the hegemony of the large landowners, as the profits from the export of primary products shrank. It was only during the administration of Cardenas (1934-1940) that a fundamental change in agrarian structure took place. The *latifundias* were broken, and the land owned by *ejidos* expanded significantly. The latter also owned a larger share in irrigation. Public institutions provided technical and financial support to the small farms. The state made substantial investments in rural infrastructure, particularly in irrigation. As a result, value added by agricultural sector during the period 1940-1958 rose by an annual rate of 5.8 percent. This was possible because the political system rested on the national organizations of workers and peasants.

However, the import substitution strategy, along with high rate of public investment, brought inefficiencies in the system, and also led to a large fiscal deficit. A high rate of inflation was witnessed, along with price instability and foreign exchange shortages. The currency had to be devalued, and price stabilization became the major objective of the macro policies.

2. The Stabilization Phase (1958-1973)

In the stabilization phase, the main policy thrust was on industrialization, with greater emphasis on private sector. However, the protectionist policies continued and import substitution was further extended. Agricultural price policy was guided by the objective of lower cost of raw materials and wage goods.

The protectionist policies increased profitability of basic grains, leading to a surplus production. Part of the surplus was to be exported with subsidies to the exporters in view of low grain prices in the international markets. Over-valued exchange rates further exacerbated the problems. With higher protection to industry, prices of agricultural products were at a relative disadvantage. Between 1958 and 1982 the agricultural price index, in real terms, dropped from 107 to 73.

The policy was based on the assumption that greater industrial growth would generate a ‘pull’ effect and stimulate the economy as a whole, including agriculture. The lower prices of agricultural outputs were compensated by subsidizing inputs. A number of public institutions were created to support agriculture, and public investment in irrigation was stepped up. Subsidies for agricultural inputs kept the cost of production low. Credit was not only subsidized, it was ‘supervised’ by agronomists from the bank. But it entailed high transaction costs.

The agriculture sector was subjected to large public interventions. Due to a serious lack of productive technology, high transaction costs, deficiencies in communication and lack of extension services, policies could not yield desired results. More importantly, the subsidization of inputs helped only those who could obtain those inputs, i.e. the larger, more entrepreneurial farmers. It amounted to a bias against small farmers and resulted in further concentration of production. Distortions introduced by the subsidies on inputs such as fertilizers, chemicals and irrigation water resulted in over-use of these inputs without contributing to additional production. It also contributed to environmental pollution. The subsidy regime also led to a 'black market' and corruption. Production on small farms was further reduced as the farmers found wage labour more remunerative than growing grains (for example maize).

The government emphasized land distribution measures. But with palpably small land holdings and restrictions on selling and leasing out land, these measures did not help the average *ejidutario*. They further encouraged concealed and illegal tenancy. At the same time subsidy-linked policies impacted adversely the finances of the government.

3. Period of Rapid Foreign Indebtedness (1973-1982)

Limitations of the import substitution model of industrialization soon became apparent. The situation was aggravated with the oil crisis of 1973 and the international recession of 1974-1975. The government responded with accelerated foreign indebtedness. A rise in the interest rates since 1977 further increased the difficulties. The interest on foreign debts grew at an annual rate of 43 percent from 1972 to 1983. By 1982 the debt burden had become excessive and resulted in the foreign debt crisis.

Meanwhile, agricultural prices dropped between 1976 and 1982. The government responded by increasing subsidies to the agricultural sector, thus further straining public finance.

4. Foreign Exchange Crisis (1982-1994)

From 1982 onward there was a sharp turn in economic policies. Public expenditure on agriculture and rural development was drastically reduced. Several public enterprises created in support of agriculture were closed down, as they proved to be a drain on public resources. After being a highly subsidized sector, agriculture faced the challenge of improving productivity and becoming competitive. However, the rural infrastructure was far from adequate.

The transformation of the role of the state in agriculture was not a well thought out process. Institutions were dismantled and policies were changed mainly on the consideration of dwindling, public resources. The share of public expenditure dropped sharply from 12 percent in 1980 to less than 6 percent in 1998. Processes of adjustment were particularly difficult in agriculture after the important role public investment had played in areas such as irrigation, rural electrification, rural roads as well as civic services in the rural areas.

Towards the end of this period, the regulatory framework for communal land was changed. The *ejidatarios* were given property rights to their land, with permission to sell or lease their land or enter into contract. However, development of the markets of *ejidal* land was slow to develop.

Other important changes were in the direction of privatization and sale of some of the state enterprises, e.g. in sugar and tobacco. The old system of guaranteed prices was replaced by a new scheme of cash payments.

5. Agriculture and Rural Development in Recent Years (1974-2006)

The cumulative effect of the earlier policy measures was a drop in the growth of agriculture. The average annual rate of growth during the 15 years ending 2005 was a mediocre 2.1 percent. There was no corresponding decrease in the percentage of people depending on agriculture. Nearly 44 percent of the workforce was dependent on agriculture in the same year. With near-stagnant agriculture and a large workforce, agricultural labour productivity was hardly 20 percent of the national average. With low per capita income, agriculture could not provide stimulus to growth in non-agricultural sectors. At the same time, within agriculture unemployment and under employment were widespread.

Agriculture's share in gross domestic product (GDP) came down from 7.9 percent in 1990 to 3.7 percent in 2006. Even if agro-processing industries were to be added, it was not more than 9 percent. Part of the decline could be explained by low relative prices of agriculture. In constant prices, the decline in agricultural GDP in the period under reference is not so striking. In constant prices agricultural GDP was 7.9 percent in 1990 and 6.4 percent in 2006. However, terms of trade for agriculture had grossly deteriorated.

The disadvantage in terms of adverse relative prices was compounded by the policies pursued in international trade. International trade in agriculture was rapidly deregulated without giving enough attention to boost competitiveness of domestic agriculture. As a result, imports burgeoned. Mexico had become one of the world's main importing countries for agricultural products. A large part of domestic consumption of agricultural produce had to be met by imports. The food and agricultural trade balance was becoming increasingly negative. In contrast to other Latin American countries, whose export destinations are fairly diversified, Mexico's agricultural exports (to the tune of 88 percent) have a single destination: North America.

The impact of these policies was not restricted to the external trade balance only, but also on the living conditions of a large part of the population, and on natural resources and the environment, which were adversely affected.

To revive agriculture, Mexico has undertaken several programmes, some of which date back to the mid 1990s. On the eve of joining the North American Free Trade Agreement (NAFTA), the country initiated a programme of direct support to agriculture in 1994. The programme, known as PROCAMP, was conceived as a 15-year programme that would provide transitional income support to Mexican agriculture as it underwent structural changes in response to market conditions and phasing out of trade barriers under NAFTA. Payment was made on per-hectare basis. The second important programme was Target Income Programme. For a period of five years the government guaranteed a target income per ton of marketable surplus. The focus on a marketable surplus excluded the country's subsistence farmers, who account for approximately three fourths of Mexico's agricultural producers.

In 1995 another programme, The Alliance for Country, was sponsored as a substitute for the diverse programmes promoted by several institutions for raising agricultural productivity and capital investment. The Social Development Secretariat implemented another direct transfer programme. It required the participation of the beneficiaries in activities for their own development in the areas of education health and nutrition.

These four important programmes aimed to: adapt agriculture to a market-oriented system; assist producers without distorting domestic prices; and minimize the difference between domestic and border prices. They also aimed to overcome the narrow view of agricultural policies, and looked more at rural development in general. Besides these programmes, several other initiatives touching on different aspects of agriculture were taking place simultaneously. Yet there were several important areas which did not receive adequate attention, e.g. natural resource development, rural credit and alternative energy.

The major lacunae, which continued until the end of the reference period, were the complete lack of a long-term agriculture and rural development strategy. In the framework of the structural adjustment programme, it was assumed that a balanced and stable macro economic framework would encourage private investment and, correspondingly, agricultural growth, as would be the case in different sectors of the economy. The role of the state was considered subsidiary, i.e. in tackling problems which the market could not solve. This vision of a subsidiary state role led to the identification of specific activities and programmes without taking into account the whole policy framework for evolving a long-term development strategy.

This approach also left unattended several key areas, including institutional development, definition of property rights and sustainable use of natural resources, intellectual property rights, specificity of rural labour market, and regulation of different forms of organizations. Mexico's agricultural and rural development policies are no more than the sum of different public expenditure programmes. Therefore, public expenditure policy deserves particular attention.

Public expenditure in relation to GDP is growing briskly. From 1995 to 2006 public sector expenditure increased by an annual rate of 5.7 percent (in constant pesos), above the rate of growth in the economy. In 2006, rural public expenditure represented 10.2 percent of total public expenditure. Starting in 2000 rural public expenditure was growing steadily, recording an annual average rate of growth of 11.4 percent between 2001 and 2005.

Significantly, per capita expenditure level in rural areas increased by 73 percent in constant value. Per capita expenditure in the rural areas in Mexico was the highest among the Latin American countries, with the exception of Uruguay, and it was the highest in relation to agricultural GDP.

However, there was lack of correlation between public expenditure and outcome in terms of increasing production or protecting natural resources, or in poverty reduction. The main explanation lies in the nature of the allocation of public expenditure. The most important item was direct transfer to individual producers, which accounted for 41 percent of total expenditure. Another 16 percent of the expenditure was on productive activities on private farms. Against these, rural infrastructure claimed 17 percent of the expenditure and organizational and institutional developments accounted for 9 percent of the rural expenditure (2002-2007).

The high share of expenditure (nearly 60 percent) on private accounts and the relative neglect of public investment created a vicious circle. Poor incomes of the agricultural producers prompted them to ask for higher public expenditure for their immediate benefits, while the share of expenditure to tackle more difficult structural problems which could have benefited the individual producers, especially the poor farmers, was largely neglected. Without finding solution to the structural problems responsible for rural marginalization, giving more subsidies and support for private income proved to be ineffective and inefficient.

6. Conclusions and Lessons Learned

There has been a marked change in government policy in recent years. In the past, various programmes were directed to achieve efficiency and profitability in the context of inefficient agriculture. Now the emphasis is on direct transfer, with scant attention to developing productive capacity. The policy of income transfer has been supported by the argument of giving compensation to the producers who face competition from the products of the countries that heavily subsidize their agriculture, especially after the country joined NAFTA with North American countries.

The income transfer to individuals or organizations has the danger of deteriorating to a 'spoils' system, especially in an unequal society. Lobbying from the pressure groups can direct the expenditure to privileged individuals. As against private transfers, expenditure on public goods can contribute to the development of production potential and can benefit the individual producers, albeit in the long term.

The serious deficiencies in Mexico's agriculture and rural development policy are not of a technical nature. They represent the political economy that determines the relationship between the government and the private agents and reflects allocation of public resources. To be effective, a strategy has to go beyond expenditure programmes and to the design of a rural development policy reflecting a consensus on the ways of solving the structural problems.

ANNEX 6
PROFILE OF UKRAINE

Ukraine remained a part of Soviet Union for seven decades and was an important contributor to the Soviet economy, particularly agriculture. Ukraine accounted for one fourth of agricultural production in Soviet Union. In the 1980s the Soviet Union started to disintegrate and various constituent units started asserting their autonomy. Ukraine broke away from the Soviet Union in 1991 and declared its independence. The development of agriculture since the 1980s can be studied in three phases: (i) the Soviet Period (1980-1990); (ii) first phase of reforms (1991-1999); and (iii) second phase of reforms (2000-2005).

1. Soviet Period

In the Soviet era, the agricultural sector was divided into three segments: collective farms (*kolkhoz*), state farms (*sovkhozes*) and private plots. The first two types accounted for the bulk of cultivated land. Agricultural policy was decided by Moscow and followed by all constituent units. By the 1980s it was clear that Soviet agriculture was lagging behind in relation to the requirements of the population. In order to boost agricultural production, farm units were linked with related supportive industries and services, and agro-industrial complexes were created. However, these were too unwieldy and soon became dysfunctional.

Throughout the Soviet Union, control over agriculture was exercised by planned targets, government purchase of outputs, and centralized resource allocation. Price policy was dictated by the ‘cheap food’ objective. With the rising cost of production and low consumer prices, the gap had to be filled by subsidies, which continued to increase. Food subsidies accounted for 15 percent of the Soviet Union’s budget (in 1989). According to the Organization for Economic Co-operation and Development (OECD), the average Producer Subsidy Equivalent in 1989-1990 was 72 percent in the Soviet Union. By the middle of the 1980s, with the widening gap between demand and supply, the government’s command over agriculture production and prices was undermined and the ‘black market’ spread rapidly. By the end of the 1980s, procurement of agricultural produce by the government declined substantially and recourse had to be taken to purchase grains from abroad in large quantities.

In some sense Ukraine was the granary of the Soviet Union. Having 7.5 percent of agricultural land of the Soviet Union, Ukraine contributed a quarter of agricultural production. Its agriculture was oriented to crop production. It produced 50-60 percent of the corn, 55 percent of the sugar beet, 45 percent of the sunflower and 25 percent of the wheat in the USSR. Its livestock production was less important than in other republics of the Union.

Although Ukraine accounted for a large production of crops in quantitative terms, productivity per hectare and per worker was low. This was mainly due to low investment in agriculture, as reflected in the very low provision of tractors and harvesters per 100 hectares of arable land.

As with investment, in trade the state also had a monopoly. The entire exportable surplus was delivered to the Union Fund, which also supplied the imported goods. The prices received by the Ukrainian agricultural producers (in local currency) were low. Furthermore, the salary levels in agricultural enterprises were determined by the state and they were low compared to Russia and some other republics. Provision of other facilities, (e.g. housing) was equally unfavourable.

The saving grace during the period was the household plots. The owners of these small plots exerted maximum labour and care and reaped much high production per hectare of land. The share of purchased inputs on these plots was low, hence income from these plots was comparably higher.

2. First Phase of Agricultural Reforms (1991-1999)

During this period significant changes were introduced in land ownership patterns. There were three types of ownership categories: (i) household plots, i.e. parcels of land not exceeding 2 hectares owned by private individuals; (ii) independent private farms and holdings larger than 2 hectares owned by private individuals; and (iii) agricultural enterprises owned by corporate entities. The last category lost its hegemony as the source of investment dried up, and production on these farms declined. As a substantial part of land was in the ‘agricultural enterprises’, the slowdown in the production on these farms led to a decline in overall production, leading to lower wages for agricultural labour. This resulted in a growing disparity between rural and urban incomes.

During this period the state continued to maintain the ‘cheap food’ policy but was finding it difficult to maintain stability in the general price level. As a result, inflation remained uncontrolled and the ‘black market’ thrived.

In the middle of the 1990s, further liberalization measures were adopted. Most of the export quotas and licenses were removed. Attempts were made to unify prices of domestically produced goods with imported ones through appropriate excise duties. Exchange rates of the domestic currency were stabilized. All three measures led to a boost in exports, with a subsequent decline in domestic availability. In response, the policy of export liberalization was halted and protectionist measures were once again introduced. The new import duties for basic food products ensured a high level of protection for domestic production during the period 1997-2000.

3. Second Phase of Agricultural Reforms (2000-2007)

During this period several measures aiming to liberalize the economy were undertaken and the role of state in agricultural sector was weakened. It had both positive and negative implications. The process of land privatization was further accelerated. Individual shareholders in agricultural enterprises were entitled to claim their share of land for private cultivation. On the other hand, large non-agricultural companies were permitted to operate large farms as their subsidiaries. This led to a concentration of land in fewer hands.

The state’s role in the purchase of agricultural inputs and sale of agricultural products also weakened. Further measures were initiated in the direction of export and import liberalization, especially for basic foodstuffs, leading to a larger share of imported commodities in the consumers’ budget. However, because of the earlier high protection of agricultural commodities, despite measures toward export and import liberalization, the level of protection for agricultural commodities continued to be fairly high.

Along with the liberalization in international trade in agricultural commodities, the state also withdrew from domestic trade in these commodities. The net result was an improvement in terms of trade in favour of agriculture and a positive effect on rural incomes.

In the beginning of this period, a ‘mortgage purchases’ scheme (a variant of the forward market) was announced, but it was never executed. In 2004 more important measures to influence prices were declared. These included: (i) minimum and maximum prices, with corresponding responsibility of the state to protect and enforce these parameters; and (ii) creation and operation of a buffer fund. A special fund, the Agrarian Fund, was created to implement these schemes. However, due to inefficiencies in management it could not play its role effectively.

Several laws, acts and decrees were passed in this period to give boost to agricultural production and enhance rural development. However, they remained on paper, mainly because of inefficiencies in implementation and paucity of budgetary support. In fact, many of the social institutions were weakened. The worst hit were the arrangements for human resource development through training/retraining of agricultural professionals.

4. Agricultural Performance during the Two Reform Phases

A substantial drop in the volume of production, a change in commodity structure, a shift in the production of animal products, and structural changes in agriculture characterized this period.

In the first phase of reforms agricultural production dropped significantly; gross agricultural output fell almost by half. As the input prices rose much faster than output prices, this further deteriorated the economic conditions of agricultural producers. Nearly 92 percent of enterprises were unprofitable. It was partially because of the overall decline in Ukraine's economy.

In the second stage of reforms there was some improvement in the overall performance of the country's economy. Also there was some improvement in agricultural production, largely due to the growth of production in household plots. However, the financial condition of agricultural producers did not improve because animal production continued as a loss-incurring activity. In addition, the prices of most crops were highly unstable.

During the first phase of reforms there was a change in the structure of foreign trade in agricultural commodities. Exports increased significantly, while imports were restrained. However, export was mainly in terms of grains. Most of the exports were directed to former Soviet Union countries, primarily Russia.

The second phase of reforms marked not only a significant rise in exports of agricultural products, but the ratio between the exports of raw materials and processed agricultural products became approximately equal. As the transition to a market economy progressed, the destination of agricultural exports also diversified, with an increasing share going to non-CIS countries. The experience of foreign trade led Ukraine to specialize in agricultural exports.

With growth in agricultural production in the second phase of reforms, the country could meet 90 percent of its domestic food demand. However, the content of food intake deteriorated, with less calories being consumed. The consumption of animal products declined and that of cereals increased. There was significant increase in the relative prices of foodstuffs compared to household income. As a result, income spent on food increased from 37 percent in 1990 to nearly 55 percent in 2005. The food security situation deteriorated.

From 1991 onwards, the reorganization of agricultural holdings took place. By 2005, 51 percent of total land had been transferred to private ownership. This reorganization had several important implications: (i) since the owner of the redistributed land (mostly small farmers) did not receive support for productive activities, there was a decline in land productivity; (ii) redistribution resulted in a large number of small farms; (iii) small plots of land could not be used as a collateral for obtaining credit; (iv) as leasing arrangements were permitted, large agricultural enterprises leased land from smallholders and expanded their operational holdings (currently 95 percent of land used by agricultural enterprises comes from leasing arrangements); and (v) along with land, large equipment was also privatized. Some of this equipment became redundant as the large farms were broken up into small privately held holdings.

Among the agricultural enterprises, highest productivity per hectare was achieved by the Joint Stock Companies and the subsidiaries of the non-agricultural enterprises, and lowest productivity per hectare was registered by collectives. The level of per-hectare productivity of individual farmer holdings was the same as that of agricultural enterprises, but the former specialized in less capital-intensive crop production rather than in animal husbandry, which required higher investment. The small private holdings needed state support to have access to long- and short-term credit. The state also had to support them in obtaining market access and investing in social facilities.

With the advent of reforms, the centralized system of agricultural marketing was broken and a direct relationship between producers and traders came into existence. However, these arrangements were not regulated, and the bulk of transactions did not take place in designated marketplaces. As a result non-transparent marketing channels came into existence to the disadvantage of the producers. The adverse terms of contracts drawn up for producers were reinforced when the traders were also the source of credit and agricultural inputs.

Similarly, inputs and machinery supply systems were privatized. However, in this case the number of suppliers was large and included domestic as well as foreign entities. There was competition among them, and generally the quality of goods improved. The input machinery suppliers also provided extension services when a foreign donor or the government subsidized them. Once that support was withdrawn, they started operating on commercial terms.

Structural reforms in agriculture gave rise to Vertically Integrated Structures and concentration of land, resulting in large farms. Vertically Integrated Structures are legal entities with large private capital. They carry out agricultural production on leased arable land, process the output and sell them to final consumers. They may have official contracts or informal arrangements. Large production units sprang up, taking advantage of unrestricted leasing arrangements. Between 2001 and 2005 the number of enterprises owning more than 10 000 hectares increased by 44 percent (one of them had an area of 115 000 hectares and had plans to increase it to 350 000 hectares).

Such large-scale commercial farming is detrimental from ecological point of view as monoculture is usually practiced and chemicals are heavily used. It is also socially disruptive as it dispenses with the bulk of agricultural labour and substitutes it with heavy mechanization. Large-scale commercial farming is registered in the big cities, and therefore the taxes paid do not benefit the rural areas. This type of farming also wields significant political influence and preempts large resources from the state.

The economic reforms in agriculture led to a sharp increase in unemployment as well as significant changes in the employment structure. The average annual rate of employment *contraction* in agricultural enterprises was 6 percent in the first phase of reforms and increased to 16 percent in the second phase. As for the structure of employment, 57 percent of the rural population worked as hired labour in 2005, almost 42 percent were self-employed, 0.4 percent were employers, and 1.1 percent were working family members who did not receive any wages. The share of qualified and trained persons in agriculture was the lowest, compared to other sectors of the economy, and the facilities for retraining personnel were sharply dwindling. Newly trained personnel were not entering into agriculture.

The amount of public expenditure and fiscal support to agriculture changed over the two phases of economic reforms. In the first phase, public expenditure in agriculture was mostly indirect, mainly in terms of input and output subsidies. In the second phase, public expenditure in agriculture increased substantially and it was more direct, e.g. financial support to animal and crop production, selective breeding programmes for crops and animals, and subsidies for the purchase of modern machinery. Public support to agriculture in Ukraine was much lower than the average for OECD countries. But the support was tilted in favour of large enterprises. The overall effectiveness of the state’s spending in and for agriculture was low.

Agriculture benefited from two major fiscal reforms. Agriculture was exempted from the Value Added Tax. A Fixed Agricultural Tax was introduced in 1999, which replaced the number of taxes and surcharges levied earlier. The incidence of Fixed Agricultural Tax was very low; it amounted to 0.15 percent of the value of arable land, and 0.09 percent of the value of permanent crops.

Since the beginning of the first stage of reforms until the mid 1990s, there was an increase in the level of impoverishment of the Ukrainian people. A staggeringly large portion of rural population – 98 percent – had cash in hand below the poverty line. The situation seems to have improved in the second phase of the reforms. However, the increase in per capita income during this period was due more to a substantial increase in pensions rather than an increase in agricultural incomes or agricultural wages. The reform period was also accompanied by deterioration in rural housing and infrastructure, and rural social and cultural amenities.

5. Conclusions

The initial agricultural production conditions at the beginning of the transition to a market-oriented economy were reasonably good. However, since all policy decisions had been made by the Soviet Union, the government was not equipped to take appropriate policy decisions when independence was declared. Consequently, during the first phase of transition, the policies of liberalization and privatization had negative outcomes. It was only in the second phase that the economy began to revive.

Agricultural policies as pursued in the country had depressed agriculture because of the continuation of low food prices and the hegemony of traders and processors. In addition, faulty implementation of land reforms resulted in the concentration of land. Trade liberalization also did not benefit the majority of agricultural producers, as the gains from trade, which were earlier preempted by the central authorities, were now retained by the large agricultural businesses.

As a result of reforms, farmers owing household plots became the main group of agricultural producers. They employed more labour, and the cost of production in these farms was low, despite their being denied concessions and subsidies by the state.

Payments and subsidies by the government were distributed to large-scale enterprises, which used these funds inefficiently. At the same time, withdrawal of funds for human development and rural development led to deterioration in living conditions. The main mistake was that institutional and financial support that is conducive to the transition from a centralized and bureaucratic economy to a market-oriented economy was not provided.

6. Lessons Learned

The experience of Ukraine in implementing economic reforms along the lines implied in Washington Consensus has suggested several lessons that need to be underlined.

- In the first phase these reforms, at best, addressed the narrow objective of economic growth in the country, but did not address the question of quality of life or sustainable use of natural resources. On these counts the reforms did more harm than good; they deepened the impoverishment of much of the rural population.
- The creation of strong supportive institutions influences public welfare more positively than rapid liberalization and privatization.
- Simple adoption of practices, institutions or laws from developed countries is not sufficient: it requires developing institutions in accordance with the national socio-political context is of primary importance.

- Governments should pay more attention to creating enabling conditions for the development of small and medium farms, ensuring adherence to quality, ensuring contract enforcement, maintaining essential infrastructure, preventing negative externalities, and taking positive steps to eradicate poverty.
- The issue of sustainability needs to be watched carefully: because of their political clout, large enterprises may introduce cropping patterns or agricultural practices that may be environmentally harmful or adversely affect the interests of the small producers.

ANNEX 7
PROFILE OF ZAMBIA

Since independence, economic policies in Zambia have shifted from administrative control to reliance on the market. The review indicates that both controls and wholesale liberalization have failed to induce agricultural growth. Even with economic reforms, although the rate of growth in the gross domestic product (GDP) has improved, there has only been an insubstantial decline in poverty.

The initial policy thrust towards socialistic economic management was a common policy stance by several newly independent countries in Africa. In the case of Zambia, huge mineral revenues supported this stance. When these revenues declined, it became difficult to manage the economy. The country adopted wholesale liberalization, but that did not produce the desired results, mainly because of a weak regulatory framework, uncertainty induced by reforms, inconsistencies in several policies and weak institutional support in terms of credit and marketing.

1. Agriculture in Zambia

Zambia has great potential to expand agriculture. It has a vast endowment of land, labour and water. However, these endowments are under-utilized. The country can be divided into three agro climatic zones. Zone I is the smallest zone, with harsh climate and low rainfall; Zone II is the second largest zone and has high potential for agricultural development; Zone III covers the largest part of the country and has degraded land, but there is a large untapped land area suitable for agriculture. There are vast opportunities for development of water resources and for expansion of irrigation. If these resources are tapped, the country can be self-sufficient in wheat and rice and can increase production of high-value crops.

Smallholders, who strive to be self-provisioning and have little marketable surplus, dominate the sector. Nearly 20 percent of farmers are medium scale holders who are quite enterprising. At the top are large-scale commercial farmers, accounting for 1 percent of the holdings, but having control over large areas.

The cropping pattern is still dominated by maize. Although the area under maize is declining, part of it is diverted to grow cash crops while a substantial area is devoted to traditional crops. The latter received a boost once the subsidy on maize was withdrawn. These crops do not need many purchased inputs, and their markets have expanded domestically and through cross-border trade. High-value crops did not receive the desired boost because of inadequate skills of the farmers, long distances to key markets and difficulties in obtaining long-term credit.

Farmers' dependence on markets is predicated on a number of factors: favourable climate leading to high production; internal markets for agricultural produce; access to markets; and access to information on output prices.

The sections that follow examine the linkages and mechanism through which changes in the role of the public sector may have influenced agricultural performance. The discussion on changes in policies and institutions is attempted for four distinct periods.

2. Evolution of Development Policies and Institutions

Colonial Period (1920-1964): Several aspects of Zambia's economic performance can be traced to the performance of its copper resources. In the colonial period Zambia emerged as an important mining (copper) economy. Development of the mining industry led to rapid urbanization on the one hand and an organized labour movement on the other. Agriculture was promoted only among a few settler farmers, while small indigenous farmers were lured to work in the mines. Development of the social sectors was also neglected.

Period of High Resources from Minerals (1965-1974): In the years following independence in 1964, the Government of the Republic of Zambia tried to rectify the imbalance in the economy (over-dependence on mining) by emphasizing manufacturing and services. These sectors attracted higher investment and increased their share in GDP and employment. Agriculture continued to be neglected, and rural-urban disparities widened. The country was still largely dependent on the revenue from copper mining, which made it largely susceptible to external shocks. This was compounded by an import substitution strategy for manufacturing, which was more dependent on imported inputs. Agriculture also suffered because of low produce prices to appease organized labour and the urban population. During this period, agriculture's terms of trade worsened**.**

Institutional reforms, such as providing marketing services through the National Agricultural Marketing Board (NAMB), did not benefit producers due to low food prices that limited the profit margins, and politicization of appointment in the civil services and in public-sector enterprises. Government expenditure, mainly financed by the mineral sector, expanded remarkably, and was over-committed.

The Economic Crisis and Policy Response (1975-1990): This period was characterized by a sharp fall in copper prices. The country's terms of trade deteriorated. The current account moved from a positive to negative balance. The GDP growth declined from 6.5 percent in 1974 to 2.3 percent in 1975.

The government and foreign institutions thought that the fall would be a temporary phenomenon, but their optimism proved to be misguided. It was difficult to sustain the high rate of public spending that begun during the more prosperous years. The government's reaction was to cut expenditure on development activities, and resort to deficit financing. This gave rise to high inflationary pressure. The government's response was to broaden the coverage of price controls, which, however, did not prove to be effective. Shortages mounted, and black market flourished. There was a fall in the real exchange rates, and real interest rates rose sharply. With these developments, capital flight took place using significant over-invoicing of exports and under-invoicing of imports. The period 1975-1981 was characterized as a period of increasing administrative controls, but without much success to record.

Given the difficult financial situation, the country had to sign a series of International Monetary Fund (IMF) loans. In the initial years the IMF had stringent and wide-ranging conditionality. The World Bank also took a complementary stand, insisting, among other conditions, on exchange rate realignment and fiscal reforms. But these reforms resulted in deepening social and macro-economic instability. In the face of popular unrest, the government terminated its relationship with the IMF and the World Bank, and introduced the New Economic Reforms Programme (NERP), which was basically a return to administrative controls.

NERP could not tackle the problems. At the behest of the Paris Club, conditional measures similar to those of the IMF had to be reintroduced. Donors were also keen that an IMF-type programme be implemented, and made it a precondition for providing aid. Some softening of the earlier conditionality was allowed – for example, instead of removing the food subsidy altogether it was made more targeted. But it could not stop food riots and increased political uncertainty. Again, the donor community came to the rescue. The World Bank and IMF made accommodation, while the USA provided bridge financing to enable Zambia to pay World Bank arrears.

The IMF designed a programme to re-establish the country's "right" once it started implementing the programme.

The Road to Economic Stability (1992-2005): Radical and more consistently applied repressors characterized this period. Fundamental changes were made in economic policies. Privatization was aggressively pursued; loss-inducing public enterprises were sold or privatized. Strict fiscal discipline was imposed. Exchange rates were freed and capital controls were relaxed.

In the initial years of this phase the country could not gain much either in terms of GDP growth, poverty reduction or price stability. These difficulties were compounded by low prices and low output of copper. The situation started improving in the first five years of this century. This was helped by the country acquiring "Heavily Indebted Poor Country" status and, as a result, reduced debt service. It also coincided with a significant rise in copper prices and a jump in production. The rise in direct foreign investment and increase in non-traditional exports combined to ensure a consistently high rate of growth and, to some extent, subdued inflation.

3. Evolution of Agricultural Policies

In the colonial period, the government paid particular attention to the provinces accessible by railways, and to large estate farmers within these provinces. After independence, attempts were made to redress the imbalance between these provinces and the less accessible ones. A uniform price policy for maize, the principal food grain, applicable to all areas was introduced. At the institutional level the NAMB was established, which took over the responsibility of domestic and international trade. Another initiative was to establish cooperatives at the village level and to form an umbrella organization of the cooperatives at the national level.

These organizational innovations came to naught with the adoption of the 'cheap food' policy for the urban population. With high prices for maize offered to all farmers, irrespective of their location, and cheap food for urban population, it was inevitable to give subsidies to the national marketing agencies. This legacy of maize marketing subsidies continued and became unmanageable. With the economic crisis of the mid 1970s, the system virtually collapsed.

From the beginning of the 1980s, the government embarked on liberal reforms in the agricultural sector. This meant progressive withdrawal of food subsidies, privatization of agricultural marketing and privatization or closure of public-sector agro-processing units. While pursuing these reforms, the government was not keen on liberalizing the marketing and pricing of maize. The mounting subsidies on maize, both at the producer and consumer level, coincided with the economic downturn and declining revenues, which led to deficit financing and a consequent rise in inflation.

In the second phase of liberalization, starting in 1992 the government made a radical shift in favour of liberal and market-led policies for the agricultural sector. The other important development was the emergence of contract farming, especially in cotton; in more accessible areas, contract farming covered other crops.

Despite thorough privatization, government intervention was still required in severe drought years as well as in years of bumper harvest.

4. Causes and Consequences of Low Agricultural Performance

Several factors were responsible for the tardy performance of agriculture. The most important were: i) the collapse of key marketing and rural finance institutions; ii) the decline in farm gate prices in remote areas; iii) the decline in soil fertility due to inappropriate farming practices; iv) inadequate investment; and v) the devastating effects of HIV and AIDS.

Agriculture's lukewarm performance had three serious consequences. Firstly, it led to food insecurity and malnutrition for large populations. Secondly, it led to heavy imports and a serious drain on foreign exchange or heavy dependence on food aid. Thirdly, no serious dent could be made in the existing high levels of poverty.

One of the biggest constraints to agricultural development in Zambia had been the inadequate access to credit. Partly it was due to the fact that rural credit was linked too much to maize production, while other corps and activities were starved for credit. At the beginning of the reform process in the 1990s, three major institutions existed for providing rural credit. All of these institutions had abysmally low recovery rates. From 1994-1997 the government sought to provide credit through private institutions. They too failed to fill the void in any significant way.

The most affected were smallholders and emerging medium-size commercial farmers. The large exporters had no difficulty in procuring credit from commercial banks. In recent years the government, with the help of international donor agencies such as the International Fund for Agricultural Development, has tried to disburse credit through the parties sponsoring contract farming. The paucity of long-term credit still remains an unresolved problem.

5. The Role of the Public and Private Sectors in Agriculture

With macro-economic reforms and privatization of state-owned agro-processing firms, it was expected that the private sector would fill the void created by the collapse of the key agricultural support institution, NAMB. These hopes have only been partially fulfilled. Neither in output marketing nor in input supplies could the private sector meet expectations. The only mechanism which has succeeded to some extent is contract farming. There too, with sharp fluctuations in prices, problems are created by the growers or by the contracting firms.

Privatization is likely to receive a further boost with the government's launching of the Private Sector Development Plan with support from several donor agencies. It is a comprehensive plan encompassing improving the macro-economic environment and regulatory framework; developing infrastructure; removing administrative hurdles; creating opportunities for access to regional and international markets; and encouraging support to local initiatives among small and medium enterprises.

The reasons for the slow development of the private sector are many. The most significant are the high cost of doing business in Zambia, the poor state of rural infrastructure, the country's landlocked status, inefficiently run railways, and costly air freight. In addition, the country's inability to meet sanitary and phytosanitary requirements creates major problems in exports. High interest rates and inadequate access to long-term credit are the other hurdles. Despite these hurdles, the private sector is making progress, especially in international trade.

Despite its great potential, agriculture has under-performed in Zambia in most years. Part of the explanations lies in its neglect from a funding point of view. From the beginning of the reforms in the mid 1970s until the beginning of this decade, the budgetary allocation to agriculture was paltry, averaging only 3 percent of total public expenditure. Furthermore, only 50 percent of what had been allocated was actually released.

The situation seems to have changed, with allocation for agriculture reaching a share of 13.7 percent in 2006, and marked improvement in actual spending. However, a closer look at the expenditure suggests that bulk of funds (59 to 71 percent) was spent on the two subsidy-driven public sector programmes, i.e. Fertilizer Support and Strategic Food Reserve. Meanwhile, agricultural support services, such as extension and research, have continued to be starved for funds.

The government's preoccupation with support to maize prices and marketing gives a conflicting signal to the private sector. Added to this is the enduring suspicion of the private sector not only by some government sectors, but also by the large body of small farmers. The government seems to be overwhelmed by non-core public-sector functions (for example, marketing), which the private sector could take up, while its principal functions of policy formulation and regulatory services remain neglected.

6. The Role of Donors

Given Zambia's high dependence on foreign aid, the donors' approach has mattered a lot for Zambia's agricultural policies. Soon after the introduction of reforms, donors tried to consolidate fragmented agricultural development programmes under the Agricultural Sector Investment Programme (ASIP), which was implemented between 1996 and 2000. Unfortunately, ASIP did not succeed in achieving its objectives. The main reason given was the failure of the macro-economic stabilization programme, which created an unfavourable environment for its implementation.

ASIP was followed by the Agricultural Commercialization Programme, which, like other more recent donor-supported programmes, placed emphasis on reorienting small producers to adopt a business approach to farming and bring them into the mainstream of development. Programme support was focused mainly on agricultural products that had considerable market potential.

Apart from agricultural support programmes, during the latter part of the reform period (from the mid 1990s onwards), donors have been placing emphasis on the development of infrastructure. Priority is given to building trunk roads and rehabilitating the core road network. Emphasis is also being given to developing air transportation, providing support to railway lines, and rehabilitating the inland port of Mpulanger. The main objective is to strengthen the domestic transportation network and integrate it with the regional network.

7. Lessons Learned

A number of lessons have emerged from the Zambia case study. These include that:

- a small land-locked country should put trade in general and agricultural trade in particular at the centre of the development agenda;
- a country should maintain and build upon recent achievements in macro-economic stability;
- with an increase in government revenues from sudden commodity price hikes, as happened recently with copper prices, governments should not revert to policies and programmes pursued during price booms as in pre-1975 Zambia;
- maize subsidies can hinder agricultural diversification, undermining support to traditional food grains and the high-value crops;
- roles between the public and private sectors in service provision need to be clear, in order to prevent policy inconsistency and sending the wrong signals about government intentions;
- achieving food security based on sustainable agricultural growth requires institutional restructuring that emphasizes enhanced service delivery at district and sub-district levels; and
- agricultural budgeting should ensure sufficient resources for extension, research and other rural services.

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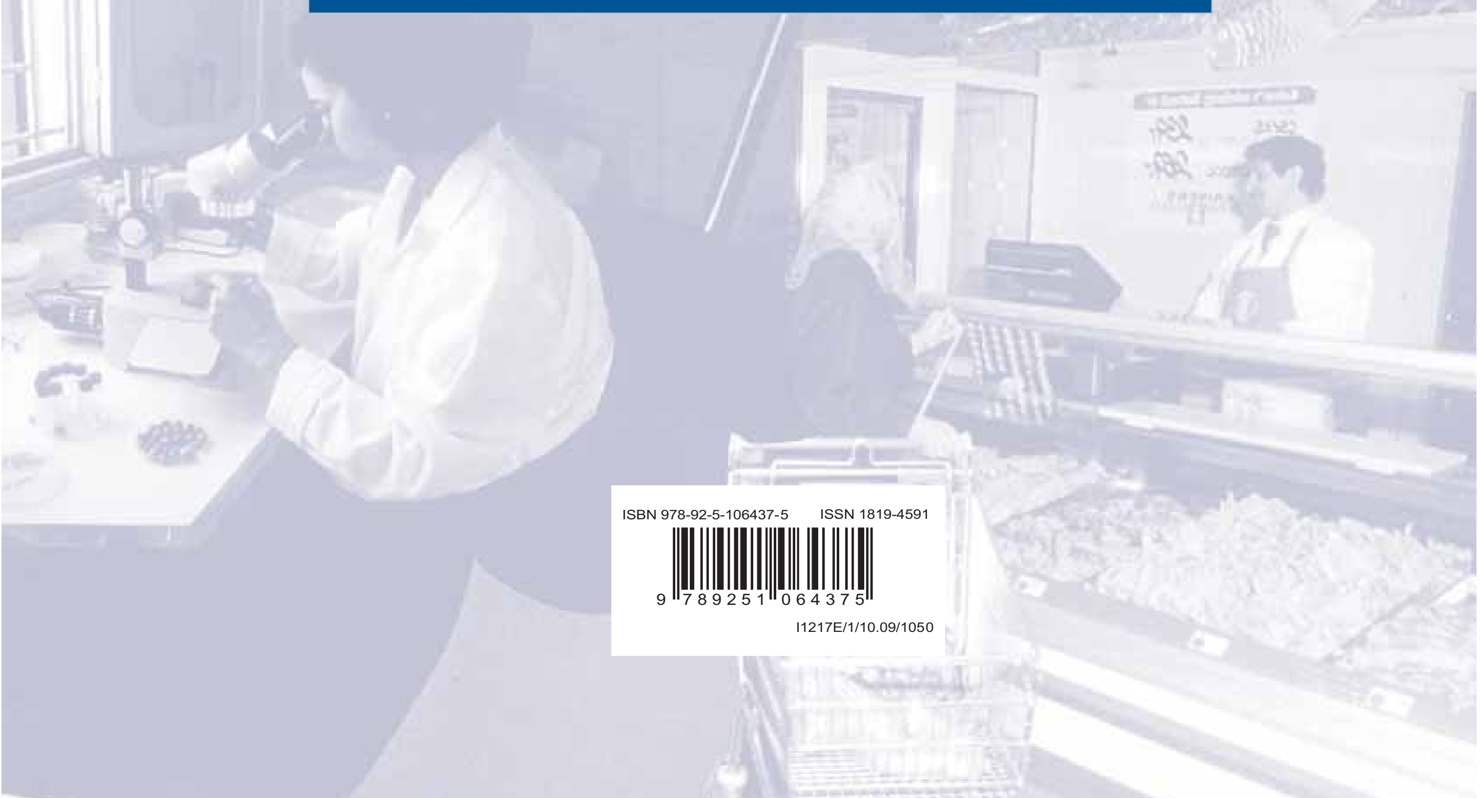
The slow progress towards attaining the Millennium Development Goal of halving the number of the hungry by 2015 especially in low income food deficit countries, and the global food crises of 2007 and 2008 that arose from escalation of food prices in the global markets, pose a great challenge to policy practitioners in defining a stronger role of the public sector in supporting agriculture development vis-à-vis the minimalist role advocated by proponents of the New Conventional Wisdom.

In this report FAO establishes, based on contemporary and historical precedents, the need for developing countries to adopt policies that ensure strong complimentarity between targeted public-sector interventions and private sector roles. The report provides a wide range of examples and highlights three important lessons. First, in all the now developed countries, governments, at the early stages of economic development, supported agriculture through, inter alia, price stabilization and provision of inputs such as seeds and fertilizer. The same strategy was successfully employed recently by countries such as Chile and India.

Second, the wide array and mix of policy options adopted by countries clearly underlines the importance of taking a pragmatic and flexible approach rather than getting locked into pro-state or pro-private-sector ideological viewpoints.

Finally, agriculture thrives best when there is continuity in policy and public-sector support. In food insecure countries, state subventions are often justifiable to ensure price stability, food availability and affordability and, ultimately, political stability which are required for long-term investment and development.



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