EXECUTIVE SUMMARY

Nepal is one of the world's least developed nations, with low per capita income (US$249), and generally low socio-economic indicators. Infant mortality, at 64 per 1 000 live births, is the highest such figure in South Asia. Indicators of life expectancy at birth, adult literacy and nutrition are among the lowest in the world. Its human development index value of 0.499 ranks Nepal 143rd among 175 countries worldwide. Poverty and food insecurity are rife and these, if did not deteriorate in the recent past, have not improved significantly either. The Ninth Plan (1997-2002) adopted the Agriculture Perspective Plan (APP) as a key strategy to alleviate poverty and enhance food security.

This study was conceptualised and undertaken to provide inputs to the national policy makers and their development partners in addressing the poverty and food insecurity issues in Nepal. In this task, the study has reviewed the food security situation and poverty trends and assessed the effects and impacts of ongoing economic and agricultural policy reform programs on food security and poverty. The specific objectives of the present study are to:

- review the poverty and food insecurity issues and concerns at the macro and micro levels and the policy and strategy framework to address these issues;
- examine the reasons for lack of sustained and broad-based agricultural growth and poverty alleviation;
- design appropriate participatory poverty alleviation policies and programme initiatives which are responsive to the needs of the rural poor, including women.

Since 1977 a number of attempts have been made to define and measure poverty in Nepal. The most recent is the *National Living Standard Survey* (NLSS) of 1995/96, which provides detailed information on variables such as income levels, composition and distribution of income, and access to various services. The current official estimated national poverty line is based on a daily energy requirement of 2 124 calorie per capita (which requires an estimated annual expenditure Rs.2 637/capita on food) and an estimated expenditure requirement of Rs.1 767/annum for non-food items (1996 prices).

The present study adopts the 1996 WFS definition that 'Food security exists when all people at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life'. As a consequence, three sequentially linked components of food security – food availability, food access and food utilisation – are the central focus of the analysis. Food availability is determined by net domestic production and net imports. Access to food is assumed to imply that the people in a given location have both physical and economic access to food. Food utilization relates to the capacity to translate food efficiently into energy, which in turn involves factors such as knowledge and practices concerning food and the health situation of individuals.

One of the most important underlying causes of poverty and food insecurity in Nepal is the country's very low level of economic development. Some progress has been made in recent decades in accelerating economic growth – the economy grew at an average annual rate of 4.1 percent between 1990 and 1998 – but the sluggish performance of the dominant agricultural sector both constrains

improvements in food security and reduces overall economic growth. For example, during 1990-98 the growth rate of agricultural GDP was negative in three years and less than population growth in the other five. In fact, growth in the agriculture sector lagged behind population growth in both the 1970s and the 1990s, even though growth of the economy overall exceeded population growth between 1970 and 1999.

Agriculture's poor performance reflects two underlying problems. The first is that there is little arable land that is not presently farmed, so the any expansion of cultivated area is either at the expense of forest (which is inherently unsustainable) or onto marginal lands with inherently low production potential. The result is falling average farm size and increasing fragmentation, leading to growing poverty. The second problem is that agricultural productivity is low. This has a positive aspect in that it implies a potential for rapid improvement using known technologies, but this potential cannot be tapped without investment in areas such as land improvement, equipment and purchased inputs. Poverty constrains farmers' ability to invest from their own resources, while access to institutional credit is severely restricted. In addition, access to both technology and technical knowledge are limited, particularly in the poorest and most food-insecure areas. As a result, land productivity has been growing very slowly by South Asian standards. For example between 1961-63 and 1997-99 paddy yields in Nepal grew at an annual average rate of 0.6 percent, compared with 1.41, 1.43, 1.79 and 1.97 percent respectively in Bangladesh, Sri Lanka, India and Pakistan. Poor agricultural performance has led to a rapid deterioration in the balance of trade in food. In 1975/76 Nepal exported foodgrains worth Rs.5 954 million, but with production failing to keep pace with population growth, exports declined to just Rs.1 million in 1989/90. The country is now a net food importer: the deficit reached 151 000 MT (3.6 percent of requirements) in 1997. Falling per capita production and increasing net imports clearly impinges negatively on food availability, with significantly negative trends.

Continuing high population growth, slow-growing agricultural output, lack of adequate livelihood opportunities, shortage of nutritious food, high levels of poverty, lack of heath care facilities, lack of education and public awareness, etc have translated into a host of nutritional problems. Source-specific composition of available dietary energy is far from ideal from a nutritional perspective. In 1995 almost 94 percent of available dietary energy was derived from vegetable sources. Even within vegetable sources, most available energy is from cereals and root crops, against a requirement of 45 percent for a nutritionally balanced diet. There is too high a proportion of carbohydrates in most diets, and deficiency of many nutrients, particularly those from animal sources. The most important forms of undernutrition are protein-energy malnutrition, iron-deficiency anaemia, Vitamin A deficiency and iodine deficiency. Malnutrition among children is around 53 percent and almost three-quarters of pregnant women, and half of women aged 15-59 years, are anaemic. Food access is therefore clearly inadequate for most households, and can be traced directly to pervasive poverty.

Most of the nutritional problems arise from lack of adequate entitlements, including those arising from intra-household bias in food distribution, which favours men over women and boys over girls. Added to this, the health and sanitation situation – particularly in the rural areas – is not conducive to good health. Despite higher morbidity and malnutrition, females receive less health care than males, and boys are more likely to be vaccinated than girls. Thus the food utilization aspect of food security is also highly unsatisfactory.

The incidence of poverty and food insecurity is quite variable across the country. The incidence is lowest in the Central Region, where 34 percent of population live below the poverty line, and rather higher in the Eastern Region (43 percent). Going westwards from the Central Region, the incidence of poverty rises steadily, from 45 percent in the Western Region to 59 percent in the Midwest to 65 in the Far West. The three ecological belts cut across the Regional dimension and have their own poverty patterns. The proportion of population below the poverty line is broadly similar in the mountains and the Tarai, but significantly lower in the Hills (29.3, 28.7 and 21.3 percent respectively). This contrasts with the situation with regard to food availability. The mountains have lowest food availability (all districts are food-deficit), while the Tarai is the only food-surplus belt. But the Tarai has much greater income inequality than the mountains, so the food access is no better. The reason the Hills have the lowest proportion below the poverty line is that it is the most urbanised of the three ecological belts (because it includes the Kathmandu Valley), and the proportion of people living below the poverty line in urban areas is only half that of the rural areas (13.2 and 26.4 percent respectively). The proportion of ultra-poor is also much higher in rural areas (17.6 and 9.8 percent respectively).

The government has made increasing efforts, especially in the past decade, to adopt policies appropriate to addressing the poverty and food insecurity problems, particularly through two agriculture- and poverty-focussed programmes, the Agricultural Perspective Plan (APP) (1997-2017) and the Ninth Five Year Plan (1997-2002). These have been supported by a general programme of macroeconomic reforms aimed at achieving sustained economic growth through a transition to a more market-oriented and increasingly private sector-based economy. The APP stresses priority inputs (irrigation, agricultural roads, fertilizer and agricultural technology) to achieve priority outputs (increased production of fruits, vegetables, livestock, forestry and promotion of agri-business), in the process increasing both the level of resource availability and the efficiency of resource use. The aim is to boost agricultural production growth to 5 percent per annum and in the process lower food prices, generate livelihood opportunities in agriculture and the rural non-farm economy, reduce poverty and improve food security.

The 9th Plan takes poverty alleviation as its main objective, identifying the APP as its principal policy instrument for achieving this goal in the food and agriculture sector. Major policy prescriptions include emphasis on the production of nutritious foods to increase food availability at the household level and reduce malnutrition. In compliance with international commitments, the Plan outlines a programme of distributing micro-nutrients in problem areas, introducing nutrition programmes in primary schools, and launching nutrition awareness programmes in conjunction with the private sector and NGOs. The drinking water and sanitation sector feature for the first time in the 9th Plan, which sets the objective of providing safe drinking water for all, and basic sanitation facilities to 40 percent of the population, during the plan period. It also recognizes the vital, but widely unacknowledged, role that women play in economic life, and aims at integrating them into the development mainstream through women's empowerment to promote the goal of gender equity.

Policies are only as good as their implementation. Implementation of macroeconomic policy has largely been positive, and some major reforms of recent years are beginning to bear at least some fruit, and could in future free up the resources needed to make important contributions to enhanced food

security and reduced poverty. The analysis found no significant negative factors in policy on social and development infrastructure, at least in terms of the direction of change, although of course what can actually be done in this area is severely restricted by pervasive resource constraints.

On the food and agriculture side the picture is very mixed. Various policy reforms have had some positive effect. The major policy change has been the adoption of the APP, but its implementation has fallen far short of requirements, co-ordination has been poor (a situation that has recently worsened), investment has been far short of targets, and many of the important institutional reforms demanded by the Plan are still – at best – in the pipeline. In fact, in terms of impact on food production, the most significant policy development since APP adoption was fertilizer deregulation and liberalisation, and this was not even envisaged in the Plan. Progress has indeed been made since APP adoption in terms of increasing per capita food production, but this perhaps owes at least as much to broadly favourable weather conditions as to the APP itself, so that caution is needed in interpreting the apparently favourable trends reported in this document. Some recent developments have been discouraging, particularly the fact that the poorest and least food-secure part of the country, the mountain ecological belt, is the one in which least progress has been made in terms of increasing – or even reducing the decline in – per capita agricultural production and productivity. Moreover, the remoteness of this area, its rugged terrain and its correspondingly poorly-developed transportation and marketing infrastructure means that any gains made in agricultural production and productivity in the Tarai are likely to have only marginal impact on the local food security situation. Meanwhile the poverty and food security situation across the country as a whole remains very unsatisfactory in terms of a broad range of indicators.

The PRA exercise conducted as part of the present study aimed to identify linkages and gaps between, on the one hand, the formulation of policies and strategies on poverty alleviation and food security at the macro level and, on the other, their ultimate impact at the micro (household) level in the rural areas. Since only four villages could be included in the study, the findings must be regarded as insights, rather than statistically representative results. Nevertheless, the findings are broadly consistent with those of much larger studies, and some important insights did emerge. Among these, four seem particularly important. The first concerns the relationship between food security and credit. The majority of population in all four villages was not food self-sufficient, not even in the Tarai. Many poorer households sell their food crops shortly after harvest in order to clear their debts and raise cash, and later purchase at much high prices through the income earned from the sale of their labour or livestock. One way of tackling this problem would be to supply formal sector credit facilities, with loans secured against the stored crop. This would permit farmers to retain their produce until prices rose instead of selling during the annual post-harvest low, but there is no such provision in Nepal. Women were found to be increasingly involved in various saving and credits programmes but coverage is limited and co-ordination poor.

The second issue is seasonal labour migration. The economy of nearly all of the Midwestern and Far Western Hills seems to depend on the seasonal migration of nearly all the menfolk from poor households, particularly those in inaccessible areas, who go to India to find work as unskilled labourers. These men are not only poorly paid but are reportedly often cheated out of what little they have been able to earn. Some report that the only benefit from migration is the fact that it reduces pressure on domestic food supplies. With increasing poverty migrants are now tending to stay longer in India in order to pay their debts back at home, or to earn a little to support the families for a few months. Migration emerges as a fairly desperate coping strategy, and it slows significantly whenever local livelihood opportunities become available.

The third issue is the declining livestock economy in the hills and mountains, which is contributing to the fall in living standards. The PRA findings confirm those from other sources that Nepal's otherwise highly successful community forestry programme has contributed to this decline, because traditional transhumance systems relied heavily on the forest for livestock feed during movements between summer and winter pastures. These forests have now been closed to them. The decline in the livestock economy has had a doubly negative effect on poverty and food insecurity in food-deficit hill and mountain districts. First, as noted above, sales of livestock produce are used to finance consumption of staples during the hungry season. Second, livestock are used as pack animals to bring food into high altitude areas during the spring/summer phase of transhumance, and this source of food has now been greatly reduced in many areas. Clearly some re-thinking of the community forestry programme is needed in order to accommodate these concerns.

The final issue is that farmers, particularly women farmers, complain about their lack of access to modern agricultural technology (improved seeds, fertilizers, veterinary medicines, equipment), particularly in the hills and mountains. In the Tarai farmers have better access to modern technology, but – at least in the case of seeds – it is Indian technology. The impact of agricultural extension is very low in all the study VDCs. Farmers have hardly any contact with the local ASCs and LSCs and women's access to extension was almost non-existent. The minority of farmers who do have contact with the extension service do not rate its skill basis at all highly.

In the course of the PRA evidence of APP impact was looked for in the areas of fertilizer, irrigation, technology, credit, livestock production, cropping patterns, productivity and the flow of policy information. In the Hill villages no evidence of change was found. In the Tarai there is indeed evidence of change, but it is unclear how much of this can be attributed to the APP. The biggest change is due to fertilizer deregulation and the removal of shallow tubewell subsidies, but these are post-APP policies. Credit flow to APP priority commodities in the post-APP period was positive for horticultural commodities in Mugu and Sunsari districts. Part of the ongoing pattern of change in the cropping pattern in the Tarai villages can perhaps be linked to APP implementation, particularly commercial cultivation of vegetables in the Kailali and Sunsari villages, which is a direct effect of rural road improvements carried out after APP adoption. However all that can really be said here is that the APP proposes certain changes and some of them have occurred in the two Tarai districts that were in the study. Whether these changes would have occurred in the absence of an APP is very difficult to say.

The PRA exercise in each district was to have been succeeded by a workshop at the district capital to validate and triangulate findings, hear the reactions of the district authorities and gain an understanding of linkages between macro (central), meso (district) and micro (household) levels. Participants included district level officials and district-based members of civil society organizations.

In none of the workshops did participants have major comments on the presentations or the findings of the PRA. In general, they confirmed the results, even though so many of them were negative – although in some cases doubts were expressed about the representativeness of the sample. A number of important issues emerged from the discussion. One concerns the level of understanding of the APP that exists at district level. Although district agricultural officials displayed a fair knowledge about the priority inputs of the APP, they found it hard to describe how to integrate these priority inputs in a way that achieved the outputs envisaged in the Plan. Most of the district authorities felt that there is a wide gap between the policy and implementation. Many DADOs reported poor co-ordination and little support from other district line agencies in translating the 'pocket package programme' (PPP) approach to extension of the Ministry of Agriculture and Cooperatives (MOAC) into action. There was particular concern about over-concentration in that MOAC policy requires 60 percent of all district extension resources to be used within the PPP areas, when these often did not cover more than a few hundred hectares in an entire district. The issue of the lack of an effective monitoring and evaluation system was raised repeatedly.

The issue of dependency on Indian technologies in some districts was controversial, with extensionists blaming research for not developing appropriate varieties, and researchers stating that they had produced such varieties, but that extension had failed to deliver them to the farmers. There was similar lack of mutual appreciation between the government and NGO representatives. Government staff claimed they could do as good a job as the NGOs if they had access to the same level of resources. The response of the NGO representatives was that government line agencies mismanaged whatever resources they were given, and lacked flexibility, transparency and commitment. Farmers' remarks during the PRA indicate that very few of them had any contact with the extension service, and those who did had little respect for the technical expertise of its staff. Some remarks by extension staff at the workshops indicate that they in turn have little appreciation of the farmers. The APP is built on the need for research-extension partnerships and farmer participation, while the Ninth Plan centres on the need for public-private partnerships. Clearly for these things to happen a much better job has to be done in forging partnerships between all stakeholders.

The proposed policy and investment framework emerging from this report focuses sharply on the need for both pro-poor, shared, accelerated economic growth, and enhancement of entitlements of the rural population. Nepal's Interim Poverty Reduction Strategy Paper (I-PRSP) takes full cognizance of the multi-dimensional self-reinforcing nature of poverty in Nepal and proposes some innovative initiatives. The strategy and approach of the Tenth Plan strategy needs a big push to create both overall economic growth and agricultural growth that is pro-poor, while ensuring that benefits are equitably shared. Top-down and bottom-up approaches need to be linked, while both recently introduced institutional reforms and the decentralized decision-making processes must be nurtured, tested and strengthened during the finalization of the Tenth Five Year Plan document.

Seven elements are essential in any sustained attack on Nepal's pervasive poverty and food insecurity problems. These are the need to: (a) strengthen the agricultural production base; (b) reinforce participatory institutional arrangements; (c) foster gender-sensitive rural and agricultural development strategies; (d) promote child development, education and school feeding programmes; (e) develop infrastructure and employment guarantee schemes; (f) provide social safety nets and welfare support; and (g) promote an investment framework based on market-State synergies.

Strengthening the agricultural production base. The I-PRSP indicates awareness that the targets of APP have not been achieved. In the shorter term specific remedial actions should pivot on: (a) improving fertilizer availability and quality, ensuring prices are affordable and facilitating access to credit for fertilizer purchase; (b) reducing the gap between irrigation potential and irrigation coverage; (c) decentralizing agriculture-related service delivery systems including devolution of authority; (d) adopting a productivity-enhancing and employment-creating strategy in the rural sectors; (e) targeting micro credit schemes more effectively; and (f) emphasizing a system of continuous monitoring and evaluation. Medium term goals are those of the APP, which require measures that: (a) ensure substantial investments in productivity-raising inputs; (b) re-emphasize land reform; (c) increase investment in the livestock sector; (d) reorient agricultural research and development towards APP priorities; (e) discourage child labour in agriculture; and (f) enhance employment opportunities in the agriculture sector.

Reinforcing participatory institutional arrangements. The community-based participatory approach to creating micro-meso-macro linkages is a recent innovation in Nepal and a degree of duplication, overlap and tension remains. Some progress has been made on the decentralisation front, but the following areas need strengthening: (a) empowering the disadvantaged by involving them directly and formally in the management of open-access resources; (b) creating opportunities for participation by the poor in the development process; (c) involving the poor in decisions affecting them directly; (d) improving linkages between agencies at the district level, and between such agencies and rural households at the village level; and (e) creating better synthesis between the 'top-down' and the 'bottom-up' approaches to national planning.

Making rural and agricultural development strategies gender sensitive. Women in rural Nepal work longer hours than men, work predominantly in agriculture, have limited geographical mobility and are discriminated against in access to education, health facilities and other public goods. There is therefore an urgent need for affirmative action which should include the following elements: (a) introducing women's representation at all levels of decision-making that affect public and quasi-public resource management; (b) sensitizing extension personnel to the need to focus on the flow of information to women in ways that take account of local gender relations and class and caste divisions; (c) exploring the possibilities of empowering poor rural women to exercise their claims to intellectual property right in areas such as medicinal plants and exotic plant products; (d) linking improvements to the quantity and quality of livestock to potential expansion of livelihood opportunities for rural women; (e) developing and delivering technologies that reduce rural women's drudgery; (f) incorporating gender-sensitivity into the design of employment guarantee schemes; (g) extending the facilities presently enjoyed by urban women to their rural counterparts; (h) tackling the issue of gender bias in access to schools, health facilities and

other quasi-public goods though positive discrimination; and (i) granting rural women legally secured entitlement to assets such as land, water, information, education, technology and skills.

Promoting child development, education and school feeding programmes. Investment in child education and health promotes economic growth and enhances productivity, so that child development is not only equitable but also a potent weapon in the fight against poverty. This needs to be fostered by actions that promote: (a) increased enrolment and reduced dropout rates, particularly among girls; (b) increased investment in affirmative action on the school feeding front; and (c) baseline studies of child health standards in the selected districts and regions, followed by rigorous monitoring and evaluation.

Introducing infrastructure development and employment guarantee schemes. The rural poor, particularly those living in Mountain and Hill areas, face very high transaction costs in marketing their produce. Improvements in market infrastructure (including agricultural roads) are needed, and appropriate interventions include: (a) development of the rural non-farm economy; (b) employment creation through flexible public works that fully involve poorer households and remoter regions; (c) provision of adequate resources for improvement and maintenance of existing public infrastructure; (d) development of employment guarantee schemes in food-insecure districts, with access linked to poverty criteria; (e) affirmative action to give women preferential access to such opportunities; (f) provisions to grant each qualifying family a minimum annual work entitlement on such projects; and (g) ensuring the pay rates are remunerative, and that women have the same rates as men for the same work.

Creating social safety nets and welfare supports. Given the high cost of supplying food to remote mountain and hill regions, areas where the proportion of the poor is very high should be targeted. Public foodgrain distribution should be supervised by local level institutions, but with robust and effective measures to prevent local elites from taking control. In situations where community and family support is unavailable or inadequate for particular classes of individual, the State should play a direct or facilitating role.

Promoting an investment framework for market-State synergies. The synergy between market, civil society and the State that is essential in a well functioning market economy has not yet evolved in Nepal. Specifically, the sub-sectors in need of substantially increased and synergistic public and private investment to meet APP targets are: (a) irrigation based on conjunctive use of groundwater and other water sources; (b) import and marketing of fertilizers; (c) transport and storage facilities for agricultural inputs and produce; (d) major highways, feeder roads and trails; (e) development of livestock breeding and animal health care; (f) commercialization of activities under community forestry; (g) better links to the CGIAR centres as sources of agricultural technology; (h) gender sensitivity in resource allocation and implementation of all initiatives; (i) child-centred foci in education, health, nutrition and child development programmes; and (j) safety nets and welfare schemes with close State-NGO collaboration.