フィリピン共和国

国営灌漑公社建設機械運営改善事業計画
プロジェクトファインディング調査報告書

平成１２年３月

社団法人　海外農業開発コンサルタンツ協会

well for its development. Firstly, the current R&D system is very fragmented due to duplication in functions by various research institutions[7]. Each of these institutions have their respective research agenda normally driven by fund availability or the ability of the researcher to generate funds rather than adherence to a national research agenda. The weak link between R&D and extension became more apparent when agricultural extension personnel were devolved to local government units (LGUs). There also has hardly been any private nor social sector participation in setting the research agenda resulting in a disparity between research priorities and actual needs of both farmers and the private sector.

Secondly, rural-based organizations are not generally prepared to assume higher levels of participation in the development of the sector. While cooperatives have significantly increased from the 1993 level of 27,379 to 47,676 in 1998 with an estimated 10.4 million beneficiaries,

these institutions still require strengthening in order to fully assist their members in all stages of production up to the processing and marketing stages of the produce. However, mature and viable cooperatives can be tapped as conduits for the efficient and timely delivery of support services to farmer-beneficiaries.

C. Challenges

Overview

The future performance of the sector will depend on how the current government addresses the concerns affecting the five key result areas previously discussed. The recent enactment of RA 8435 , or the Agriculture and Fisheries Modernization Act (AFMA) and the President's resolve to prioritize agriculture augur well for the development of the sector. Poverty alleviation, food security and sustainability are also among the overarching thrusts of the new administration in support of the sector. Adequate and timely budgetary support for the sector will become critical over the next six years. It has already been proven that the effective and sustained implementation of sector programs was, to an extent, hampered by inadequate resource flows.

Another challenge is for the government to turn constraints like the currency crisis into opportunities. For instance, the recent adjustments in the exchange rate make industries with large local content more competitive in the domestic and export markets. This provides an opportunity for the agriculture and agribusiness sectors to expand in both domestic and export markets.

Key result areas

1. Increasing agricultural productivity

In terms of productivity and agricultural growth, the Philippines lags behind other ASEAN countries **(Table 3.7)**. On a per commodity basis, it has the lowest yields for corn, banana, and abaca, and has one of the lowest for rice, coconut and tobacco **(Table 3.8)**. On the other hand, Philippines has one of the highest yields for pineapple, coffee, and mango.

The country also has the lowest level of tractor use and one of the smallest hectarage of irrigated agricultural land. In terms of per capita output, the FAO's indices of agricultural production similarly rank the Philippines as the lowest in Southeast Asia. It should be noted that the long history of low productivity in agriculture, fishery and forestry particularly for major crops is a manifestation of the deficiencies in the delivery of support services such as credit, research and development, extension, irrigation, postharvest facilities, transport, storage. It is also a manifestation of the failure to account for the carrying capacity of the resources upon which agricultural production is based, as evidenced by the limited adoption of sustainable farming practices. A highly distorted price incentive system is also partly to blame for the poor performance of the sector. The uneven protection accorded to certain commodities has hindered the growth of others (e.g., hogs and chickens). Even the agroprocessing sector had difficulties due to high cost and scarcity of raw materials. The slow implementation of

もくじ

まえがき

本報告書は財団法人海外農業開発コンサルタンツ協会（ADCA）から派遣された太陽コンサルタンツ株式会社坂元雄次によって 2000 年２月に実施した「国営灌漑公社建設機械運営改善事業計画」にかかる調査結果を取りまとめたものである。

フィリピンはラモス前政権下でようやく順調な経済発展を遂げてきたが、政権末期には通貨危機およびエルニーニョ等の自然災害の影響から、経済発展は一時停滞を余儀なくされた。とりわけ農業分野は大きな影響を受けたとされている。このような状況のもと、１９９８年７月に貧困撲滅と農業振興を政策課題として掲げたエストラーダ政権が登場した。新政権は国内の食料自給率が低下傾向にあること、大半の貧困層が農村部に居住することから１９９７年に成立した農漁業近代化法を根拠に食料自給率改善と貧困撲滅を図るとしている。

一方、農業インフラ整備の中枢を占める灌漑施設整備を担う国営灌漑公社(NIA)は新規開発と既存システムの維持管理に努めているが、財政難と事業執行体制合理化の遅れから灌漑面積の拡大は停滞気味であり、事業運営管理の刷新と強化が急務となっている。特に既存灌漑システムの維持管理不足は灌漑面積減少に繋がり、このため新規開発による灌漑面積増が既存地区の灌漑面積減により相殺されている実態が顕著となっている。灌漑事業において新規開発は外注化が一般的であるものの、地方の建設業者の機械化が遅れていること、および維持管理業務においても短期施工のための機械化が必須となっていることから NIA の果たす役割は依然として大きい。しかしながら現在の NIA は、建設機械部門への投資不足と維持管理システムの合理化の遅れから、灌漑事業全般に渉り多大な支障を来たしている。

このような状況を改善するため、本計画では NIA の建設機械維持管理システムを全面的に見直して合理化を図ることを目的として事業化の方策を検討した。

本調査の実施にあたり、大使館担当書記官･JBIC 現地事務所担当者等から貴重な示唆を頂き、調査を円滑に進めることが出来たことに対し、これらの方々への謝意を表するとともに、調査結果が早期に実現されることを期待する。

平成１２年３月

太陽コンサルタンツ株式会社

4. 社会経済開発計画

中期フィリピン開発計画(1999-2004)が策定されており,現政権下における期間中5カ年間の経済・社会開発の基本政策を示している。内容は以下のとおり7章より構成されている。

1) 基本方針
2) 社会改革と開発
3) 農業・農地改革・天然資源
4) 工業とサービス
5) インフラ開発
6) 統治と制度開発
7) マクロ経済と開発金融

中期計画の中心ビジョンとして持続可能な開発と社会的公平を伴う成長を掲げており,農村部に多い貧困層の減少にも力点をおいている。

第3章に示されている農林水産分野への記述にはかなりのページ数を割いているが,基本理念を持続可能な農村開発と食料安全保障におき,本分野の近代化と多様化の必要性を強調している。但し,全般に数値目標が高く設定されている傾向は従前の中期計画と類似している。

中期開発計画についてはIV.添付資料を参照されたい。

I. 計画の背景

1. 自然条件

1.1 国土

フィリピンは７０００を越える島よりなる国で、その国土面積は３０万平方キロメートルである。火山が多く地形的には傾斜地の多い国土を有し、１８％以上の傾斜地が国土面積の５４％を占めている。農地面積は１千万ヘクタールを超えているが、農地の整備水準は地形要因とインフラの遅れから不十分である。以前は国土面積の半分を占めていた森林が乱伐のため今や国土の１８％を下回るまでに低下しており、このことが災害を多発させる要因となっている。

1.2 気候

モンスーン気候帯に属するが、国内は４種類の気候区分に分かれていて乾季と雨季の特徴に相違はあるが、おしなべて年間を通じて気温が高く(摂氏２７度程度)湿潤で、雨量も１，８００mm以上のところが多い。フィリピン周辺は台風の発生が多く、ミンダナオ島を除く多くの地域が毎年台風被害を受けている。

（マニラ首都圏の気象）

	1	2	3	4	5	6	7	8	9	10	11	12	年
平均気温（C）	25.5	26.0	27.5	29.0	29.4	28.4	27.7	27.3	27.7	27.2	26.9	25.9	27.4
平均雨量（mm）	15	4	5	10	113	257	306	377	301	223	109	48	1769
平均湿度（%）	75	70	67	65	70	80	84	84	86	82	82	80	77

2. 社会条件

歴史的には国民のほとんどはマレー系であり、１６世紀にスペインの植民地となり、後にアメリカの統治下にも置かれたが、１９４６年共和国として独立した。

政体は主権共和制を採用しており、上下２院制となっていて大統領任期は６年である。公用語としてはタガログ語と英語が使用されている。

人口約７千万人の内、ローマンカソリック教徒が８５％を占めている。人

口増加率は２．３％程度で推移している。人口の３分の２は農村部に居住しており、潜在失業率が高い。

3. 経済条件

マルコス政権末期よりアキノ政権にかけての経済･社会的混乱期を経て、ラモス政権下では順調に経済成長を遂げてきたが、１９９７年の通貨危機とその後の異常気象により経済の停滞を余儀なくされた。しかしながら、近隣の国と比べて通貨危機の影響は少なかったといわれている。以下に計画の主題である農業を中心とした経済指標を示す。

(経済指標)

	単　位	1992	1994	1996
人口	百万人	65.3	68.6	71.9
全就業人口	百万人	23.7	25.0	27.2
農業就業人口	百万人	10.7	11.2	11.5
農業就業人口の割合	%	45.3	45.1	42.4
国民総生産(GNP)	百万 P	737,139	786,136	882,399
経済成長率	%	1.7	5.3	6.8
国内総生産(GDP)	百万 P	718,941	766,368	848,451
農業総付加価値	百万 P	159,385	168,419	177,243
農業総生産の割合	%	22.2	22.0	20.9
総輸出額	百万 $	9,824	13,483	20,543
農業総輸出	百万 $	1,866	2,072	2,307
農業総輸出の割合	%	19.0	15.4	11.2
総輸入額	百万 $	14,519	21,333	32,426
農業総輸入	百万 $	1,560	2,114	3,096
農業総輸入の割合	%	10.7	9.9	9.6
国家総支出	百万 P	286,603	327,768	445,735
国家農業支出	百万 P	9,366	10,075	19,100
農業支出の割合	%	3.3	3.1	4.3

資料：Philippines Statistic Yearbook 1997

農業のGDPに対する貢献度(２割強)の割には国家総支出に締める国家農業支出の割合(４％台)が著しく抑制されているため,農業分野への投資が遅れていることがうかがえる。

調査日程及び調査員の経歴

日程表						調査員並びに経歴	
日数	年 月 日	出発地	到着地	宿泊地	備考	調査員名	経歴
1	H.12. 2.20 日	成田	マニラ	マニラ	移動日	坂本 雄次	Yuji SAKAMOTO
2	2.21 月			〃	日本大使館打ち合わせ、NIA打ち合わせ		S.17.4.23 生(57歳)
3	2.22 火			〃	NIA打ち合わせ		S.41.3 東京教育大学農学部卒
4	2.23 水			〃	JBIC打ち合わせ、NIA打ち合わせ		S44. 6. 農林水産省入省
5	2.24 木			〃	JICA専門家打ち合わせ		H.8. 6 JICA専門家(NIA)
6	2.25 金	マニラ	成田		移動日		H.11. 7～ 太陽コンサルタンツ㈱

II. NIA 建設機械運営改善計画(構想)

今回の調査活動を通じて NIA は 11,000 台以上の機材を有するが、その多くは耐用年数を超えたものであること、膨大なスペアパーツを有するもののその管理体制が不備なため有効利用されていないこと、データベースや帳票・定期報告等が不十分なため抜本的な管理システムの見直しを要すること、更に機材の修理体制も不十分なこと等建設機械の運営管理体制を再構築した上で機材の更新を図ることが必要と認識された。NIA 関係者と協議した結果、建設機械の運営管理システムの再構築を図ることでNIAの灌漑施設の維持管理を改善していく必要性を確認し、以下に示すような構成および構想のもとで事業計画を纏めていくこととなった。

1. はじめに

フィリピンの農業政策全般を紹介する。対象として、フィリピン中期開発計画・中期農業開発計画を紹介し、併せて灌漑開発の基本政策を示して本構想の政策的背景を明らかとする。

2. 事業の背景と必要性

まずNIAの与えられている責務とこれを実行して行く上での課題を明らかとする。更に既存灌漑システムの維持管理上の問題を明らかとしていく。

ついで NIA の建設機械部門の現状と課題を明らかとする。ここで重要なことは全国的な建設機械の維持管理上の問題をソフトとハードの両面より明らかとする。

以上の議論を踏まえて本事業の必要性を明らかとしていく。

3. 事業構成

ここでははじめに事業のスコープを明らかとし、事業目的を明確に説明する。事業の構成要素として建設機械運営管理システムの構築とこれをサポートする建設機械サービスセンター(ESC)とグループ・プール(GP)の構築を説明する。

ついで建設機械の更新と編成の再構築案を示していく。建設機械の使用目的を O&M に絞り込むこと、機種の標準化を図ることを打ち出していく。

最後に以上のソフト・ハード面の改善を支えるための人材育成を目的に研修システムを提案していく。

4. 事業費と財務評価

事業費を調達項目別に積算し、内貨と外貨に分けて示す。また事業実施期間中の年度ごとの事業費必要額を算定する。本件の資金源としては JBIC の特別円借款の適用を前提としている。

また、本件にかかる投資が財政的に妥当性を有するか検討する。

5. 施計画

本事業を建設機械運営システム、建設工事、調達、研修の４分野に分けてそれぞれの実施体制、実施工程等を明らかとする。

6. 建設・調達計画

JBIC の調達ガイドラインに従って建設・調達計画を策定する。

7. 実施体制

NIA の建設機械管理部内にプロジェクト・オフィスを設置し、本事業の運営管理を行うこととする。

8. 維持管理計画

NIA の機構改革計画を踏まえて維持管理組織及び体制整備を計画する。

9. エンジニアリング・サービス(E／S)

コンサルタンツによる技術支援を織り込んで、事業の円滑な実施を図る。この場合、以下の４項目が業務となる。

＊ 建設機械管理システムの実施設計と実施支援
＊ 建設計画の実施設計。調達・工事監理
＊ 機器類の調達支援と納品検査
＊ 研修の実施

10. 環境評価

本事業が環境保全に影響あるか検証する。

III. 調査所見

NIA は農業省傘下で唯一インフラ整備を本務とする公社であるが、新規の灌漑開発と並んで主要業務となっている既存灌漑システムの適確な維持管理が様々な要因から必ずしも旨くいっていないという問題を永年抱えてきた。システムの維持管理費は水利費の徴収によって賄われる制度となっているが、水利費の徴収率が悪いために施設の維持管理費が不十分となり、施設の機能が低下して灌漑面積が減少し、このことが更なる水利費の徴収率低下に繋がるという悪循環に陥っている。このため世銀・ADB 等の援助で NIA の施設管理負担を軽減すべく水利組合の育成強化に努めるなど組織強化面の努力がなされているが、一方で今後とも NIA の主要業務である基幹施設の維持管理が円滑に行いうる体制整備がなされないと悪循環は断ち切れない。

本件はNIAのシステム管理を担う重要な手段として施設管理用の建設機械の維持管理体制の改善を図ろうとするものである。従来建設機械部門は新規開発の使い古しの機械を使ってきたが、適切な投資がほとんど行われなかったために管理システムの陳腐化と建設機械の陳腐化とが相まって極めて非効率な運営体制に合った。今回、建設機械の更新に留まらず、管理システムや研修体制の強化等本分野を本格的に刷新することを目指すことはNIAの担当者の永年の念願がかなうだけでなく、今後益々重要度の増加する既存システムの維持管理改善に寄与する意義は大きいと思われる。

本調査の過程で NIA 側からは全面的な支援を受けて調査は円滑に進み、上述のとおり開発構想の取りまとめ方向が明確に出来た。今後は NIA 関係者と連絡を密にとりつつ、本件の具体化を図ることとなっている。NIA 側担当者によれば出来うる限り早い機会に本件を正式要請したいとのことであり、本調査を実施した意義はまもなく具体化される見込みである。

1. 継続調査(想定)

今後本件を促進していくためには以下に示すフォローアップが必要と思われる。継続調査の具体化は今後 NIA との調整を待って決定する。

＜計画書作成支援>

２章に示した計画構想に従ってNIAが今後実施計画書(I/P)を作成していく過程で連絡を密にして必要な支援を行う。

面会者リスト

(日本側)

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＊ Assistant Administrator　Mr. Isidro R. Digal
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＊ Director, Project Development Dept. Mr. Edilberto B. Punzal

IV. 添付資料

1. フィリピン中期開発計画(1999-2004)第3章農業・農地改革・天然資源
2. Angat Pinoy 2004 Articles
3. Irrigation Sector Development Program
4. NIA Irrigation Program, 1999-2004
5. Present Equipment Fleet of NIA
6. Inventory of Equipment showing depreciated cost
7. Performance of The Last 5 Years-Equipment Rental vs. Repair
8. Number of Available Equipment

フィリピン中期開発計画

CHAPTER 3

AGRICULTURE, AGRARIAN REFORM AND NATURAL RESOURCES

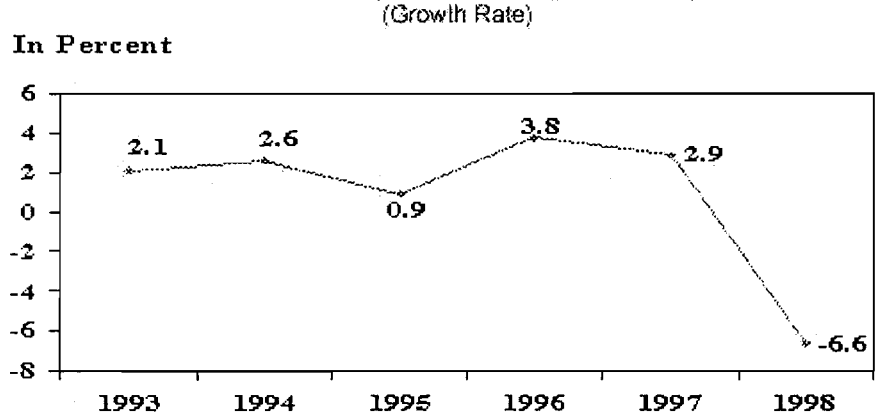
I. Assessment of Performance

A. Overview

Over the past six years, policy reforms in the sector sought to increase productivity, efficiency, competitiveness, market adaptability, and sustainability of the country's agribased industries. At the same time, policies were adopted to promote sound natural resources management and environmental protection. The government also ensured a more vigorous implementation of the Comprehensive Agrarian Reform Program (CARP). These reforms were, however, hampered by limited resources, exacerbated by cases of fund mismanagement. The limited capacities of national and local implementing institutions and weak coordination among them also posed constraints. Moreover, external factors such as the Asian financial crisis and the El Niño drought, both of which struck in 1997, compounded the problems. The two factors resulted in a 6.6 percent contraction in real output in 1998.

With the dismal performance in 1998, the agriculture, fisheries and forestry hardly grew on the average in 1993-98 (Figure 3.1). Among the major contributors to total agriculture gross value added (GVA) during the period were Regions IV, XI, VI, III and X (Table 3.1a). In terms of growth rates, the fastest-growing were Regions IX, I, the Cordillera Administrative Region (CAR), II, the Autonomous Region of Muslim Mindanao (ARMM) and VII (Table 3.1b).

Figure 3.1
Gross Value Added in Agriculture, Fisheryand Forestry, 1993-98
(Growth Rate)



Source: National Accounts of the Philippines, NSCB

However, despite severe weather conditions, the sector managed to grow at an annual average of 2.6 percent in 1993-97. This is within the average annual growth targeted for the period (2.6 to 3.2 %) and higher than the 2.0 percent growth attained in 1987-92. This suggests that policy reforms instituted during the period had begun to yield positive results.

By subsector, the poor showing of the crops and fishery subsectors, which accounted for nearly three-fourths of total sectoral output **(Figure 3.2)**, pulled down overall performance . On the other hand, the livestock and poultry industries provided the bright spots, performing well within the target **(Tables 3.2)**. The forestry sector's output, however, considerably declined over the past six years as output fell annually by nearly 20 percent.

Notwithstanding the growth in output, the sector's performance was not strong enough to significantly reduce the incidence of rural poverty. An estimated 43 percent of the population and 63 percent of the poor traditionally depend on the sector for their livelihood. Although poverty incidence of rural families went down from 47 percent in 1994 to only 44.4 percent in 1997, the total number of poor families actually increased by about 297,927.

As in the past, low productivity remains as the key challenge confronting the sector. This is traced to: (a) the slow diversification of the production base and processes; (b) inability of producers to compete in the international markets; (c) limited access of farmers to land and other productive assets; (d) continuous degradation of the environment; and (e) a bureaucratic structure largely unresponsive to the sector's requirements for development. These are also the key result areas where development interventions need to be focused in order to significantly improve sectoral performance and reduce poverty over the medium-term.

B. Key Result Areas

1. Productivity and competitiveness

Relatively low levels of productivity (except for livestock) and uncompetitiveness in the international markets generally characterized the performance of the sector in the past. The limited and inefficient provision of support services was one of the significant factors which contributed to this condition.

Crops

Crops constituted the bulk (54%) of total agricultural output during the period **(Figure 3.3)**. It is in this subsector where low productivity has been very evident **(Table 3.3)**.

Average annual growth rates in yield for rice and corn from 1993-98 were -0.9 percent and 2.7 percent, respectively. In 1997 alone, the target yields of 3.5-5.0 metric tons (MT) per hectare for rice and 3.5-4.5 MT/hectare for corn were not achieved. Consequently, the domestic rice market was not able to meet local demand during the period. Sugarcane and coconut production also declined. Among the reasons cited include crop shifting, reduction in hectarage, poor growing conditions and reports of land conversion to agroforestry in the case of sugarcane. Meanwhile, decline in coconut is attributed to reports of widespread coconut logging, adverse effects of typhoons and the El Niño phenomenon in 1997.

Notable increases in yield, however, were observed for pineapple, mango, tobacco and banana due to improvements in production technology and expanding export markets

Marine Science Institute (MSI) conducted oceanographic assessments in the area in coordination with the Departments of Foreign Affairs, National Defense, and Science and Technology. These studies sought to strengthen the country's claim over the Spratly area and contribute to confidence-building measures in the region. It may be noted that the west Palawan waters are now a leading source of fish production, specifically the Kalayaan Islands where some 20 percent of the country's marine fish production come from.

Efforts to conserve the rich biodiversity of the Sulu and Celebes Seas are being undertaken through the creation of the Sulu-Celebes Seas Commission chaired by the DENR. This activity seeks to implement sustainable development activities, particularly in the fisheries and tourism sectors, and ensure the economic well being of coastal communities in these areas.

Even as several oceanographic studies have been initiated in internal waters and in the South China Sea, the Pacific seaboard remains largely neglected. Serious efforts to assess the eastern waters of the country (both nearshore and offshore) should be started to properly determine the economic potentials in the Exclusive Economic Zone (EEZ).

4. Environmental sustainability

The administration has began the implementation of broad-based policies and program-related initiatives to arrest the continuing degradation of our country's resources. These initiatives involve communities affected by degradation of the resources, and who have better understanding of the complex relationship between economic development and environmental protection. However, the impact of these initiatives may only be felt in the long-term. Moreover, conservation and rehabilitation activities have been hampered by institutional bottlenecks and the lack of understanding of the complex interrelationships between resource-dependent economic activities and the management of the resource base. It should be pointed out that some of these efforts are beginning to bear fruit. For instance, some river rehabilitation programs have resulted in decreased levels of pollution.

Forest resources

Actual forest cover has been reduced to 18 percent (5.4 million hectares) of the total land area from more than 50 percent in 1948. Varied causes have been cited, such as fires, logging, kaingin, pests, diseases, mining activities, and encroachment of settlements in critical watersheds.

To arrest continuing deforestation, the Socialized Industrial Forest Management Agreement (SIFMA) was adopted to enable people to participate actively in forest plantation development. The shift in reforestation strategy from contract reforestation to community-based forest management, as provided under EO 263, enabled upland dwellers and migrants to be involved in the management and utilization of upland resources. A ban on logs and lumber exports as well as logging in old growth forests were imposed under RA 7586 or the National Integrated Protected Areas System (NIPAS) Act of 1992. Moreover, the Indigenous Peoples Rights Act (IPRA) of 1997 provides the IPs with a freer reign in the management of their ancestral domains and promotes partnerships between the government and the IPs in protecting the forests. These initiatives were complemented in the urban areas through the implementation of the DENR's urban forestry and the Clean and Green programs. Both initiatives involved the establishment of miniforest parks and the planting of trees in main thoroughfares, schools and churches in all major cities with the active participation of the LGUs.

Land resources

Land degradation is a serious problem covering an estimated 10.3 million hectares of land utilized for agriculture. This is abetted by the increasing deforestation of the uplands. Other causes include soil erosion, intensive fertilizer and pesticide use, heavy metals contamination and land conversion. Improper logging practices and

for some of these crops. A positive trend was similarly noted for high-value commercial crops which account for almost 50 percent of total crops output and were key contributors to agricultural exports. The leading commodities were mango, pineapple, onion, and eggplant whose share to total agricultural output has been steadily increasing as a result of diversification.

Livestock and poultry

These industries have been the most robust among the production subsectors with their annual average growths of 5.0 and 5.5 percent, respectively **(Table 3.4)**. On the whole, this is partially a result of more liberalized trade policies.

In the livestock industry, cattle registered the highest growth of 7.7 percent. This was largely due to the issuance of Executive Order (EO) No. 470 in August 1991 which reduced tariff rates on feeder and breeder cattle from 10 to 3 percent. This policy helped upgrade local cattle stocks through cross-breeding with genetically superior animals. For the hog industry, its strong performance may be attributed to its successful recovery from the effects of the foot and mouth disease (FMD) epidemic of l994 and l995. The "Oplan Sagip Hayop" adopted by the Department of Agriculture (DA) with support from the private sector arrested the spread of the disease and restored confidence among producers in pursuing expansion programs. In 1996, DA also designed a national plan to control and eventually eradicate the disease by 2003.

The decline in carabao production from 1993-96 was similarly arrested through more liberal import policies which increased the supply of carabeef, thereby relieving slaughtering pressure on the carabao population. The industry managed to grow by a modest 0.8 percent over 1993-98.

Chicken production, 80 percent of which was accounted for by integrators, was the biggest gainer in the poultry industry, growing at an average rate of 6 percent in 1993 - 98. The subsector could have performed better were it not for the typhoons during the last quarter of 1998.

Despite their robust performance relative to other production subsectors, the livestock and poultry industries have yet to penetrate and become competitive in the export market. The major obstacles that need to be hurdled include: (a) reducing cost of production, 70 percent of which is accounted for by feeds (i.e., corn); and (b) eradication of major livestock diseases such as FMD which will facilitate the country's inclusion in the list of nations accredited by the International Office des Epizootics (IOE) and International Animal Health Commission (IAHC) as animal disease-free.

Fishery

Fishery production was hampered by environmental problems in the aquatic environment, hence it grew by only 1.3 percent over 1993-98 **(Table 3.5)**.

Municipal fishery production declined due to overfishing in the past, encroachment of commercial fishing vessels in the municipal fishing grounds and massive degradation of nearshore resources. As a result, very low production levels were recorded in the Sibuyan Sea, Tayabas Bay and Manila Bay. Despite efforts to conserve and rehabilitate the municipal fishery resources, a marked decline in production levels persisted. In general, the overall fishing efforts in the coastal areas has increased due to: (a) greater number of fisherfolk; (b) use of illegal gears and fishing methods; and (c) general absence of a system which defines access to and type of use of fishery resources that are open-access in nature. While the government adopted coastal resources management (CRM), under the auspices of the Fisheries Sector Program (1990-95) to reverse this trend, the benefits are long-gestating and have yet to be fully realized.

Commercial fishery grew by 2.7 percent in 1993-98. The acquisition of modern tuna purse seiners expanded the reach of these vessels to the South Pacific waters and led to increased tuna exports.

Aquaculture continued to be a consistent source of strong growth as it paced the rest of the subsector. Nonetheless, production in Region VI, the traditional hub of the country's aquaculture industry, declined due to reduced shrimp harvests from fishponds. Poor management as well as the proliferation of shrimp diseases which dampened world demand both contributed to the decline.

Minerals

Mineral production contracted by an annual average of 2.7 percent in 1993-97. The passage of the Mining Act of 1995 which encourages exploration and exploitation of mineral reserves slightly improved the sector's performance in 1996 and 1997. However, this was not enough to offset the negative performance in 1994 and 1995 which may be attributed to the weak demand, and closure of mining firms due to non-compliance with environmental regulations. The participation of small-scale miners in the exploitation of mineral reserves (i.e., chromite, nickel, and rare earth elements) was limited. Moreover, assistance under the People's Mining Program was not extended due to financial constraints.

In addition, mining operations were hampered by conflicts between mining concessions and claims over ancestral domains, and between small-scale mining (i.e., with a 1-5 hectare coverage) and commercial mining (above 5 hectares coverage). Mineral exploration activities and geologic surveys were the only initiatives extensively carried out during the period such that geologic surveys have already covered an estimated 87 percent of the past plan period's target of 495,000 hectares.

External trade performance

The sector generally remained protected during the previous plan period. Consequently, it did not achieve a level of competitiveness that would enable it to take advantage of new opportunities under a liberalized trade regime.

High protection in agriculture[1] is seen in the high effective protection rate (EPR) index relative to the manufacturing sector and in the higher WTO bound tariffs relative to tariff rates under EO 470. Moreover, protection rates were uneven among agricultural commodities.[2] This may have led to further inefficiency in resource allocation and also unduly delayed the eventual adjustment of the sector to become globally competitive.

In terms of actual trade performance, agriculture exports rose from US$1.9 billion in 1993 to US $2.3 billion in 1997, contributing an average of 13.4 percent share to total export earnings. As of 1996, the US, Japanese and European markets accounted for about 30 percent, 20 percent and 17 percent, respectively, of the country's total agricultural exports. An emerging market for agricultural exports is the ASEAN region which more than doubled its share of total exports from less than 5 percent in 1991 to about 11.2 percent in 1996.

Despite this trend, the share of agriculture to total export earnings consistently declined from 16.9 percent in 1993 to 9.3 percent in 1997. At the same time, agricultural imports in 1997 increased, especially in grains (e.g. rice, corn, and wheat). The country became a net agricultural importer starting in 1994. Both trends may be attributed to the accession to the WTO in 1994. [3]

Support services

Despite its crucial role in increasing productivity, provision of support services lagged behind the demands of the sector.

Irrigated land slightly increased from 1.2 million hectares in 1993 to 1.4 million hectares as of May 1998, or only 45.2 percent of the potential irrigable area. This is due mainly to the high investment and operations and maintenance requirements of national irrigation systems, compounded by the poor collection rate for irrigation service fees. However, postharvest facilities remain inadequate, causing postharvest losses ranging

from 10 to 37 percent for rice, 30 percent in corn and 40 percent in vegetables, fruits, other crops and commercial fishery landings.

The sector has also been beset by financing problems. While total agricultural loans increased by 11.9 percent from 1993 to 1997, the ratio of agricultural loans to total loans has been declining. For instance, the agricultural loans of the Land Bank of the Philippines (LBP), the primary commercial bank involved in agrarian lending, accounted for only about 15.1 percent of its total loan portfolio in 1997. Aversion to agricultural lending is due to poor repayment performance, high transaction cost, as well as the perceived riskiness of the sector. The nonbankability of farmers and fisherfolk can be partly attributed to the types of loans available to them (i.e., mostly productions loans) and their repayment which are highly dependent on production performance. Other stakeholders, particularly upland dwellers and indigenous peoples (IPs), also have limited access to formal credit. Lack of access to financing for long-gestating crops led to minimal replanting of trees (coconut and rubber) and of promising crops (coffee, oil palm and fruit trees).

The ineffective marketing information system has impeded the flow of agricultural commodities from producers to the consumers. High marketing costs also arose due to poor infrastructure and the multiple layers in the marketing system. The Philippines' road network may be one of the most extensive in the ASEAN region, but it has the lowest pavement ratio indicating poor quality of the road system. Areas with bad roads are normally not serviced by public transportation and only those with access to financing such as traders could afford to buy vehicles thus enabling them to virtually monopolize trading in the area. High transport costs may also be attributed to the high tariff imposed on motor vehicles and their spare parts which reaches up to 40 percent. Moreover, ships and cargo handlers do not give priority to agricultural commodities. This makes shipment of corn from Thailand to the Philippines cheaper than from Mindanao to Luzon.

Public investments in agricultural research are still below one percent of agricultural GVA, the level recommended by the World Bank, and have in fact been decreasing. From 1989 to 1997, research investments as a percentage of GVA in agriculture steadily declined from 0.34 percent to 0.27 percent.

With respect to the provision of support services[4] to farmer beneficiaries (FBs) under the CARP, much remains to be done to pull the beneficiary households above the poverty line. It was noted that support services reached less than 20 percent of the 1.3 million FBs. A study conducted by the Institute of Agrarian Studies (IAST) of UP in Los Baños in 1996 found that a third of all FBs belongs to the poorest income decile. The same study also revealed that the productivity of crops, specifically rice, corn and coconut, in FB farms did not significantly differ from the national average productivity. Moreover, about 60 percent of all FB farms are still rainfed and about two-thirds of FBs still rely on the informal lending market for their credit needs.

2. Access to land and other productive resources

The CARP continued to be the centerpiece program of government for social reform. Program implementation generally lagged behind targets particularly with respect to its three major components: land tenure improvement (LTI); program beneficiaries development (PBD); and agrarian justice. Accordingly, the program hardly had a visible impact on its intended beneficiaries in terms of increased farm productivity and incomes.

Under the LTI, a total of 3.4 million hectares of lands were targeted for distribution during the previous planning period **(Table 3.6)**. At the end of the plan period, however, only 2.6 million hectares were distributed, bringing the overall accomplishment for land acquisition and distribution (LAD) for the past 10 years to 4.7 million hectares out of the total CARP scope of 7.8 million hectares[5]. Consequently, at the end of June 1998, a total of 3.3 million hectares remain unreformed, the bulk of which are public alienable and disposable (A&D) lands (43%) and private agricultural lands (PALs) subject to compulsory acquisition (37%), almost half of which are in the 5-24 hectare size category.

The program beneficiaries development (PBD) component of the CARP takes off from the completion of LAD and aims to empower FBs through improvements in their farming practices in their newly acquired lands. However, this has been hampered by the uncoordinated delivery of support services. In response to this situation, the DAR adopted the Agrarian Reform Community (ARC)[6] strategy in 1993. A total of 920 ARCs , home to over 350,000 FBs, has already been launched since 1993. In more recent surveys of the IAST, there was a slight improvement in farm productivity and income of FB in more developed ARCs.

The resource constraints in financing CARP implementation have compelled the DAR to actively seek other sources of financing. Over the last 10 years, DAR has tapped the various Offical Development Assistance (ODA) facilities, resulting in the implementation of 11 projects costing P7.5 billion. These projects are, however, quite recent to have an immediate and visible impact on the FBs. Moreover, resources are still inadequate to match the total investment requirements of the existing ARCs currently estimated at P36.8 billion.

In the area of agrarian justice through the adjudication of agrarian cases, including land valuation and compensation conflicts, data for the period January to June 1998 show only 5,795 cases were resolved out of the total of 20,110 cases filed. The delivery of agrarian justice to affected FBs is further delayed when DAR field personnel find it difficult to enforce rulings of the DAR Adjudication Board. In a number of cases, farmers are unable to possess the land awarded to them because of the refusal of landlords to heed any order from the DAR.

Other problems in the implementation of the various components of the program include: (a) delays in the distribution of the Certificate of Land Ownership Awards (CLOAs) to the FBs by DAR field personnel; (b) the lack of parcellary mapping of awarded lands, especially those awarded though collective CLOAs; and (c) inadequate participation of FB organizations in planning and implementation of various CARP activities. Land conversion has also diminished the opportunity of farmers to gain access to farm lands. In a number of cases, access is negated as a result of conversion to nonagricultural uses.

Despite these delays, the gains achieved under the Program in terms of laying the foundations for a concerted effort to reform the agrarian sector should be sustained and enhanced. The major challenge to implementing agencies is to finish the LAD by 2004 and transform FBs into productive farmer-entrepreneurs.

3. Diversification of production and resource use

Since the 1970s to the present, significant diversification in the sector has not taken place, thereby making it unresponsive to opportunities arising from changes in the global market. While there had been a perceptible increase in the share of livestock (20% in the 1970s to 24% in the 1990s) and other crops (20% in the 1970s to 31% in the 1990s), the share of rice (24% in the 1970s and 22% in the 1990s) and corn (8% in the 1970s and 1990s) remained almost the same. The slow and limited diversification may be attributed to existing policies and the traditional dependence on land-based resources as sources of growth.

The relatively high protection accorded to these crops discouraged diversification. For banana, its share has not grown significantly primarily due to the existence of laws (LOIs 58 & 790) that limit the number of hectares planted to this crop. The research agenda has similarly been a disincentive to diversification. Fund allocation for R&D has been generally biased for the crops subsector, particularly rice. This has hampered research on other commodities with good market potentials.

The wealth and diversity of the country's marine resources as source of food and other raw materials for sustainable rural development present significant opportunities to diversify from traditional land-based production programs. Initial activities have thus been undertaken to assess the condition of the marine resources of the South China Sea in the Kalayaan Islands off Palawan following the Mischief Reef incident. The UP-

infrastructure (e.g., roads) development have increased the rate and incidence of soil erosion and siltation in low lying areas. The use of fertilizer and pesticides which increased in the first half of the 1990s caused acidification, affecting soil productivity. Moreover, the improper handling of pesticides eventually resulted in fish kills in lakes, rivers and coastal areas. The proposed National Land Use Act (NaLUA) pending in both houses of Congress is expected to provide the appropriate policy and regulatory framework for the management of land resources for a variety of economic uses, and provide the basis for the adoption of more effective measures to address land degradation.

Freshwater resources

The country began experiencing water shortages in the early 1990s. This problem became very pronounced in Metro Manila during the El Niño episode of 1997. Aside from the acute dry spell, water quality deteriorated. Surface waters were polluted while groundwater was contaminated by saltwater intrusion. By the year 2000, it is projected that some regions, notably Regions 3, 6, and 7 will experience severe water shortage. With this threat, the rational allocation of water among competing uses for agriculture, industry, and domestic consumption becomes even more critical.

To address this crisis, the government passed the Water Crisis Act. A Presidential Task Force on Water Resources Development and Management (PTFWRDM) was also created in October 1996 by virtue of EO 374. A major initiative pushed by the PTFWRDM was the creation of Water Resources Authority of the Philippines (WRAP) that will set the general framework for the planning and regulation of water resources with respect to quality, quantity, and tariff. On the program level, initiatives to address water quality were focused on the rehabilitation of Laguna Lake and three heavily-polluted river systems, i.e., Pasig, Navotas-Malabon-Tullahan-Tenejeros (NMTT) and Pampanga Rivers. Efforts to clean up the three rivers resulted in a reduction in the Biochemical Oxygen Demand (BOD) load in these water bodies. The launching of the Environmental User Fee Program in 1997 in the Laguna Lake also contributed to the reduction in its BOD load.

Reduction in BOD load increases the available oxygen for living organisms in the water body and allows for a more diverse use of the resource. Another candidate for this user fee system is the Pasig River which involves concessions on river use (such as transport) in exchange for the payment of environmental fees for its clean up.

Coastal and marine resources

The Philippines' marine resources are very diverse and are a main source of food and employment primarily through fisheries and tourism. The country is situated within the "Coral Triangle," one of the most diverse marine regions in the world. Despite this wealth, minimal research has been undertaken, particularly for offshore marine resources. Meanwhile, nearshore and coastal marine resources continue to experience widespread degradation from illegal and overfishing, as well as pollution and siltation from land-based activities, including spill-over effects of deforestation in the uplands. To address this problem and ensure proper management and protection of coastal resources, the Coastal Environmental Program (CEP) was implemented nationwide. The CEP aims to promote community-based sustainable use of resources in coastal areas of the country by: (a) encouraging the use of environment- friendly technologies; (b) providing livelihood opportunities to coastal communities; and (c) promoting equitable access to resources, among others. The CEP expanded from 12 to 61 model sites, seven of which have been proclaimed as marine protected areas under the category of marine reserves and protected seascapes.

Biodiversity and protected areas

The Philippines is considered rich in flora and fauna. Much of its biodiversity, however, has already been lost due to human-induced activities such as logging, encroachment into habitats, land conversion, and overexploitation of resources, among others. To halt further degradation, biodiversity-rich sites are now being managed as protected areas pursuant to the NIPAS Act. To date, 18 out of the target 27 priority sites covering 1,599,022 hectares are being managed. The National Biodiversity Strategy and Action

CARP and delivery of support services to farmer-beneficiaries also have their ill-effects on productivity.

Increasing productivity and generating greater value-added are thus essential to integrate the domestic agricultural sector into the global economy. It also needs to be competitive in order to take full advantage of the new opportunities under a liberalized trading system. As provided for in the Magna Carta for Small Farmers, moreover, there is a need to review the consistency of macroeconomic policies with the objective of enabling the sector to compete in a free trade regime. While the government may face strong opposition to liberalization from politically sensitive sectors, it would have to be steadfast in pursuing the reforms as well as addressing other constraints to sector growth such as inadequate infrastructure, lack of support services, and unsustainable production methods.

2. Land access

In terms of land access, several major emerging concerns, including those in the post-CARP era, need to be confronted as the CARP nears completion. One such concern is the perennially slow and protracted pace of program implementation and the associated financing constraints, which dissipates the program's impact on its intended beneficiaries. This is exacerbated by the fact that there are non-CARP beneficiaries (e.g., indigenous peoples in ancestral domains) who are still deprived of access to land and other productive assets. This situation establishes the imperative to explore, evaluate and adopt alternative and more cost-effective approaches to agrarian reform (i.e., LAD) with the aim of pursuing other asset reforms in the future that would benefit non-CARP beneficiaries, among others.

Another concern is that the goals of agrarian reform do not end with the completion of land distribution, or with the completion of CARP. CARP is considered a building block towards rebuilding the rural economy. Upon completion of land distribution, delivery of support services to ARBs and the strengthening of farmers' organizations, the next challenge in agrarian reform is to transform the ARBs into viable civic entrepreneurs. Small farmers should be assisted so they could compete in the market. With the anticipated resurgence of a free agricultural land market after the completion of the CARP, the private sector's strategic interests in area-based rural development should be nurtured. This will facilitate the establishment of strategic alliances between small farmers and business enterprises through joint ventures, partnerships, nucleus estate operations and other arrangements integral in promoting agri-industrialization in CARP areas.

On a broader scale, access to land and other productive assets becomes more effective through a better understanding of its links with other key result areas for attaining sustainable rural development. Since land degradation is, to a certain extent, a result of landlessness or lack of clear ownership claims to land, strengthening the system of land titling will facilitate ownership rights to land which, in turn, will promote responsible land management.

3. Diversification

The existing food security agenda is another formidable challenge for the sector. The government is committed to adequate, accessible and affordable supplies of rice as the main staple food at all times. This may have resulted in policies and programs that inordinately favored rice-growing at the expense of fostering high-value crops and higher farms incomes. Thus, the food security agenda should seek a strategic balance between the need to ensure stable and affordable rice supply to all Filipino households and the need to foster higher and more stable farm incomes through crop diversification. In the context of emerging trends in both the domestic and international markets, diversification involves options related to : (a) expanding the production base to include high-value crops. Implicit in this option is the need to continue assistance to farmers who grow staple food crops, particularly in times of financial crises when it becomes more expensive to import these commodities; and (b) going beyond primary production (i.e., processing) to generate value added from raw products (vertical

Plan (NBSAP) was also formulated to conserve the country's biological resources. In line with this, the ASEAN Regional Center for Biodiversity Conservation (ARCBC) was established in Los Baños, Laguna to ensure the proper implementation of this Action Plan.

The conservation of biological resources is, likewise, threatened by activities such as introduction of exotic species and improper use of biotechnology. According to the 1996 Philippine Biodiversity Country Study Report, exotic species being used for plantation crops, ornamentals and timber species, have the possibility of diluting endemic species and bringing along pests and diseases with them. On the other hand, biotechnology has been found to cause ecological imbalances and contribute to the loss of biodiversity when biotechnology processes lead to excessive uniformity of plant and animal varieties.

Mineral resources

Environmental problems associated with production-oriented and extractive activities have, to a large extent, hampered the sustained growth and contribution of the subsector to industrial GVA. To address these problems, the IRR of the Mining Act was revised. With the new law, mining contractors are required to pursue sustainable operations and adopt strict environmental measures. To further rehabilite mining areas, an environmental guarantee fund mechanism called

the Contingent Liability and Rehabilitation Fund (CLRF) was institutionalized. The strategy "Adopt a Tree, Adopt a Mining Forest" was also intensified to address the issue on environment disturbance due to mining operations.

5. Institutional structure

The current institutional structure reveals a multiplicity of national government agencies presently involved in managing the development of agriculture, agrarian reform and natural resources. With no less than seven departments, i.e., DA, DAR, DENR, DPWH, DOST, DTI and DILG, involved in sectoral development, functional overlaps, gaps, as well as fragmentation of responsibilities have become apparent in the following areas :

1) Upland development and mangrove development and management (including enforcement of appropriate regulations on conversion of mangroves into fishponds provided under RA 8550) where there is a need to clearly delineate the scope of responsibilities between the DA and DENR;

2) Provision of support services to agrarian reform beneficiaries (ARBs) by DAR vis-à-vis DA's programs on increasing agricultural productivity;

3) Research and development, wherein current efforts in agriculture and fisheries are fragmented with the existence of the DA's Bureau of Agricultural Research on the one hand, and the DOST's PCARRD and PCAMRD on the other; and

4) Infrastructure development which involves various agencies such as the DPWH, DILG, DA, DAR, and the LGUs.

Institutional weaknesses also exist within the DA, DAR, and DENR which are primarily responsible for the sector. Operations have become fragmented, thus weakening the impact of development activities on the intended beneficiaries. In the DA, for instance, no less than five specialized livestock agencies exist despite the devolution of most of the technical and regulatory functions to the LGUs. In the implementation of CARP, the slow pace of land acquisition and distribution is attributed to lack of systematic land records, lack of political will and poor understanding of the philosophy of agrarian reform mainly on the part of officials and employees of the key CARP implementing agencies.

The present status of other forms of institutional support for the sector does not augur

integration) and additional employment opportunities from the development of downstream agricultural enterprises.

Diversification in the use of natural resource-based products is equally important to relieve pressures on traditional and overexploited resources and thus facilitate their regeneration. An example is the development of less-known tree species that can relieve stress on already over-exploited commercial tree species.

Success of diversification efforts would require marketing assistance through reliable market and price information. Research on commodities with bright prospects will have to be prioritized. Most importantly, active private sector participation should be promoted, particularly in the generation and commercialization of improved technologies.

The sector's viability and attainment of competitiveness also depends, to a large extent, on its linkages with industry. To complement government's initiatives to increase, diversify and sustain productivity of the sector, a broad-based development strategy focused on improving the forward and backward linkages between and among production sectors, and with agribusiness firms should be pursued. Examples of such linkages include the contract growing of vegetables (i.e., onion, tomato, asparagus, cucumber), fruits (banana, mango, pineapple) broilers, and fattener pigs; and management agreements between upland communities and private firms over industrial tree plantations. Accordingly, growth prospects of the agroprocessing sector as it relates to higher capacity utilization and new investments would heavily depend on expansion in the production of high-value commodities such as fruits, treecrops, aquaculture products (i.e., seaweeds, prawns) and commercial fisheries (i.e., tuna canning).

Sustainable rural development has traditionally and largely been attained through land-based programs. This reveals an apparent indifference to the fact that the country, being an archipelago, has more water than land and that fisheries substantially contribute to total agricultural GVA. The sea contains biological resources that are as diverse as the forests and, hence, has high potential as source of raw materials for agri-industrialization, including the manufacture of promising drugs against tuberculosis, cancer, and other major health problems. Such disparity in development priorities has been recognized with the launching of the National Pole Vaulting Strategy in 1996, which aimed to catapult the Philippines into a Newly-Industrializing Country (NIC) at the start of the 21st century. As one of the nine niche programs of the strategy, the transformation of the country into a maritime power in East Asia at the turn of the century requires, among others, a reorientation of the current approach to planning which is largely land-based, to one that balances and integrates the development concerns and potentials of both land and marine areas. A comprehensive assessment of the country's marine waters, especially in the Exclusive Economic Zone (EEZ), should determine their economic potentials in support of sustainable rural development and to provide the basis for the shift in the approaches to development planning. Such comprehensive assessment, in turn, implies support and upgrading of marine scientific research.

4. Environmental sustainability

Increased productivity, profitability and competitiveness of the sector should be tempered by ensuring sustainability of growth which is crucial in attaining a real development that steadily raises incomes and enhances the quality of human life. The country already faces problems of land degradation due to soil erosion and intensive use of pesticides and fertilizers. With the closing of the land frontier due to increasing population and continued land conversion (at a rate of 5,072 hectares per year, from 1987 to 1997), increasing pressure on land for increased production will worsen the state of land degradation. Thus, strategies to develop the sector should be complemented by measures that enhance the sustainability of the resources. Programs that minimize environmental pollution and degradation, preserve biodiversity and protect human life should be promoted. One such program is the *Kasakalikasan*, which trains farmers to adopt integrated pest management to reduce the need for pesticides. Other sustainable agriculture models and methods (e.g., tree-based farming systems on underutilized lands) should also be pursued.

government in programs and projects on natural resources management (NRM), particularly in areas within their ancestral domains.

Angat Pinoy 2004 Articles

Angat Pinoy 2004 is the Medium-Term Philippine Development Plan (MTPDP) for the period 1999-2004.

The Plan, which distinctly seeks to be pro-poor yet pro-market, is the country's socioeconomic blueprint that will be in effect when the Philippines moves on to the next century and the new millennium. As such, its success or failure will have tremendous economic and social impact on the lives of all Filipinos at this critical point in our history.

The formulation of the Plan, which was coordinated by the National Economic and Development Authority (NEDA), followed a process of collective discussion and democratic consultation. Representatives from the executive and legislative branches of government participated in the formulation alongside representatives from the academe and the private sector, including business, non-government organizations, women and youth, and marginalized sectors.

Afterwards, it was subjected to multi-sectoral and broad-based consultations across all regions of the country. The regional recommendations and inputs were then considered in the final drafting of the Plan before the final version was submitted to and approved by the NEDA Board chaired by President Estrada.

The Medium-Term Plan is a gold mine of information that should be of interest to the general public. The Plan will guide the government and the private sector in actions that will modernize agriculture, deliver basic social development services, accelerate infrastructure development, enhance global competitiveness, ensure macroeconomic stability, and reform governance. **(top)**

The Medium-Term Plan projects an average GNP range of 5.2-5.8 percent for the period 1999-2004, from an almost negative growth rate in 1998.

ANGAT PINOY 2004 ARTICLES
Macroeconomic framework defined to set pace for recovery and growth

By Cleofe Cahiles

Had it not been for the economic crisis that started to affect the Southeast Asian region in July 1997, the Philippines should have been on its way to attaining a tiger economy status.

Records show that the country's glowing performance before the crisis

The linkages among natural resource systems, (e.g., forest, land, water, coastal resources, agriculture production systems, other economic activities) and the people who depend on these for their livelihood need to be understood and appreciated. Such undertaking will provide a more holistic view in maximizing the potential of an area, given the resource constraints and create opportunities for properly implementing integrated development and resource management programs addressing poverty alleviation problems. Understanding these linkages will also provide effective solutions for concerns such as degradation of marine and coastal ecosystems brought about by increasing population, destructive fishing techniques, nutrient runoff from agricultural activities, pollution discharges from industries along coastal areas, and sedimentation from deforestation and mining activities in the uplands. It will also ensure strict protection of biodiversity in populated but biodiversity-rich areas without compromising the rights of the occupants to a productive life.

Natural resources management becomes more effective with the involvement of all sectors of society and through the adoption of indigenous cultural practices. The inherent cultural values of the Filipinos of "maka-Diyos" and "maka-Kalikasan" are closely woven in their concern for the environment. For instance, women have had a long standing interaction with natural resources primarily because they are responsible for preparing the nutritional needs of the family and in ensuring a clean and healthy environment. However, unfavorable economic conditions have forced about two-thirds of the population who are dependent on subsistence living (i.e., farmers, fisherfolk, upland dwellers) to adopt destructive resource utilization practices. Development programs and projects should thus seek to balance both the basic needs of the people and the need to restore natural resources.

Effective natural resources management also hinges on the long-term commitment of all stakeholders to protection and conservation efforts in the face of the long-gestating nature of benefits accruing from the proper management of commercially-important natural resources (i.e., currently overexploited and degraded fishery resources, denuded and overlogged forests).

5. Institutional reforms

The institutional weaknesses inherent in the current administrative structure for the sector require a long-term strategy and program of institutional reforms. Such reforms should be carried out within the context of devolution that requires an institutional structure and support that enhances the role of LGUs in carrying out field-level responsibilities which have been devolved to them.

The short-term disruptions in the implementation of field-level programs previously borne by the national government arising from devolution also need to be addressed. While majority of the LGUs were not prepared and lacked the resources to take on the responsibilities previously ascribed to national government agencies, they can be mobilized to identify, plan, finance and implement sectoral programs to accelerate development in the sector. In this regard, the capacity of LGUs to design and implement development plans and programs must be upgraded. At the same time, an effective monitoring and evaluation framework which is imperative in a decentralized system, should be put in place.

Apart from this, the most disadvantaged and the marginalized should be empowered in order to bring them into the mainstream of economic development. In this regard, programs like Gintong Ani for Marginal and Poverty Stricken Areas (GAMA) and ARCs, and Gintong Ani Linkage Program (AGAP) should be continued in the pursuit of social equity.

Recent initiatives seek to complement the spirit of devolution and promote the empowerment of all stakeholders to enhance their involvement in the development of the sector. EO 263 (Adoption of the Community-based Forest Management Scheme), for example, encourages more participation from upland communities in forest management. In addition, the Indigenous Peoples Rights Act (IPRA) provides the IPs with a legal mandate to utilize and manage resources within their ancestral lands and domains. It also provides IPs with an opportunity to forge partnerships with the

occurred with gross national product (GNP) growing at a "tigerish" rate of 7.2 percent in 1996. In 1995, the GNP rate was 5.0 percent, 5.3 percent in 1994, and 2.1 percent in 1993.

But when the financial crisis struck in 1997, the year ended with a lower 5.3 percent GNP, which worsened the following year with almost nil of 0.1 percent. Before the crisis struck, the country's gross domestic product (GDP) was highest at 5.8 percent in 1996 from 4.8 percent in 1995. In 1994, the GDP was 4.4 percent and 2.1 percent in 1993.

It was in this gloomy atmosphere that the Estrada administration crafted a Medium-Term Philippine Development Plan that would incorporate an adjusted macro-economic framework. The Plan, now popularly known as ***Angat Pinoy 2004,*** covers the period 1999-2004 and serves as the socioeconomic blueprint that will be in effect as the country begins the next millennium.

The draft of the Plan was subjected to broad-based, democratic consultations all over the country earlier this year. The MTPDP steering committee oversaw the final draft, which was submitted to and approved by President Estrada and the Board of the National Economic and Development Authority (NEDA).

The committee was chaired by NEDA Director-General Felipe M. Medalla, and co-chaired by then Senate economic affairs committee chair Francisco Tatad and Deputy House Speaker Daisy Fuentes of the legislature, and Vicente Lim of the private sector.

Angat Pinoy 2004 projects an average GNP of a low of 5.2 percent and a high of 5.8 percent for the period 1999-2004. The GDP is projected to grow from a low of 4.7 percent to 5.3 percent over the six-year period. This means a recovery from the almost negative growth rate in 1998 to a GNP target range of 3.0 to 3.7 percent in 1999 and a GDP target range of 2.6 to 3.2 percent in 1999.

This is consistent with the attainment of the following goals by 2004: reduction of poverty level from 32.1 percent in 1997 to 25-28 percent; unemployment rate to decrease from 10.1 percent in 1998 to 6.6 to 7.9 percent; inflation from 8-9 percent in 1999 to 4-5 percent; 91-day treasury bill rate from 11.3 percent in 1999 to 9.1 percent in 2004; exports growth to average 14.8-15.4 percent; and a P36.7 billion surplus will be realized in 2004 from a P15.5 billion deficit in 2001.

To attain these objectives, the Plan has called for certain measures that will support macro-economic stability:

- Economic agencies — particularly the Bangko Sentral ng Pilipinas, Bureau of Treasury, Department of Budget and Management and the National Economic and Development Authority (NEDA) — are to implement programs that will promote sustained development of the financial banking sector, strengthen external debt management by prudent cash management, improve fiscal discipline and priorities of government resources, and closely monitor the economy to follow the medium-term economic targets of ***Angat Pinoy 2004***.

The driving force behind this, notes the Medium-Term Philippine Development Plan for 1999-2004, is the lack of government resources to sustain a big, growing bureaucracy saddled with conflicting functions and regulations, and duplication of efforts.

On the other hand, Filipinos have realized that they are consumers of government-allocated goods and services. They now demand better value for their tax money. "They look for service delivery that is quick, responsive and effective," the Plan declares.

Also known as ***Angat Pinoy 2004,*** the Medium-Term Plan incorporates government directions, plans and programs in governance and institution-building and major sectoral development concerns. Before the Plan was finalized, the National Economic and Development Authority (NEDA) subjected it to a series of multisectoral consultations and public discussions in regional capitals nationwide.

The broad-based, democratic consultations solicited recommendations from various sectors for inclusion in the final draft of the six-year development plan.

The plan steering committee oversaw the preparation of the final draft that was submitted to and approved by President Estrada and the NEDA Board. This committee was chaired by NEDA Director-General Felipe M. Medalla and co-chaired by then Senate economic affairs committee chair Francisco Tatad and Deputy House Speaker Daisy Fuentes of the legislature, and Vicente Lim of the private sector.

The Estrada administration declared that the reengineering of the bureaucracy is one of its top priorities from now until the year 2004. For one, the Philippine civil service, which employs 1.4 million public officers and employees or 1.98 percent of the total population, is seen as overstaffed or bloated.

The National Capital Region (NCR), which makes up only 0.2 percent of the country's land area, has the largest bureaucratic concentration with 13.8 percent of the population. Teachers and the police comprise 40 percent of government civil servants.

State expenditure for the bureaucracy has expanded enormously, reaching 30 percent of Gross National Product (GNP) in 1996 alone. The average per capita salary in government has increased by 29 percent from P82,847 annually in 1996 to about P106,668 in 1997.

Fighting corruption in the bloated bureaucracy is another major concern of the administration. The 1998 Corruption Perception Index of Transparency International placed the Philippines as the third among the most corrupt countries in the ASEAN region. The ordinary citizen believes that it is close to impossible to complete any type of transaction, be it securing a building permit or redeeming a confiscated driver's license, without paying off government officials.

Studies show that as much as 20 percent of the national budget is lost to graft and corruption. Private surveys report a higher range of 35 to 50 percent.

- To support the private sector, the Securities and Exchange Commission should strengthen the regulatory and supervisory framework of the financial sector as well as encourage the development of capital markets. The efforts of these economic agencies must be well supported by the government's improved databanks at the National Statistical Coordination Board, the National Statistics Office, and the Statistical Research and Training Center.

- To ensure industrial peace, the Department of Labor and Employment should work to preserve employment by facilitating the forging of social agreements as well as support the government's employment-generation programs by carrying out infrastructure projects.

For the period 1999-2001, the government has lined up three priority legislative measures: reforms in the power industry, retail trade liberalization, and the Clean Air Act.

For the monetary, financial and capital markets, the government will push to amend the Revised General Banking Act, the Philippine Deposit Insurance Corporation Act, the Agri-Agra Law, and the Securities Act of 1998.

There must also be reforms for the fiscal sector, like implementation of tax census/tax amnesty program, comprehensive rationalization of tax incentives, re-engineering of the bureaucracy, rationalization of taxation on the financial sector, road user charge, idle land tax, and tax to discourage conversion of agricultural lands.

For the labor sector, the government will push for the institutionalization of Public Employment Service Offices, and amendments to the Apprenticeship Law and Productivity Incentives Act of 1990.

Other legislative agenda of the present administration include the Revised Investment Company Act, amendments to the Corporation Code of the Philippines, Securitization Program, Pre-need Plan Securities Code, and Customs Modernization Act.

Once these measures are done, the economic targets should fall into their right places. Only then can the new administration claim success in steering the country's economy back on the growth path. And hopefully, there will be no second financial crisis hitting the region.
(top)

Fighting corruption in the bloated bureaucracy, for one, is a major concern of the national government.

ANGAT PINOY 2004 ARTICLES

Estrada administration set to reengineer bureaucracy

By Roberto C. Navarro

The Estrada administration is set to reengineer its style of governance and to streamline the capabilities of the various departments and institutions that support it.

The present administration believes that to combat graft and corruption, strong policy changes should be put in place. Among these are: lowering controls on foreign trade; removing barriers to private industry; and reducing government regulation of the private sector to the essential minimum.

Angat Pinoy 2004 emphasizes that the government has been consistently waging a war against criminality. In the last six years, fewer crimes were reported to police agencies, but this is questionable. A local polling group recently noted in a seven-year study that crime victims report less than one in every 100 crimes because of lack of faith in the police and legal system.

Corruption among men in uniform, particularly the police, is attributed to their low salaries and lack of benefits. PNP employees are among the lowest paid. The lowest ranking officer in the police force, for instance, is paid P5,000, with allowances increasing it to P7, 650. The PNP director-general earns a basic monthly salary of P16,000, rising to P28,180 when allowances are factored in.

Despite the unprofessional behavior of some men in uniform, the creation of the Presidential Task Force Against Organized Crime and the Presidential Commission Against Organized Crime has proven to be working in favor of the government's anti-crime initiative.

The Plan also notes that the autonomy of local government units (LGUs) must be sustained and deepened. Many LGU officials believe that the internal revenue allocations of provincial and municipal governments are unable to cover the costs of devolution. Many LGUs are unable to afford the salaries of national government personnel devolved to them.

At the national level, the NEDA Plan sees the need for an active Legislative-Executive Development Advisory Council (LEDAC) chaired by the President and co-chaired by the Senate President and the Speaker of the House.

The targets of the administration on governance and institutions development in the next six years include:

- Rationalizing government remuneration package and putting in place a productivity-based compensation system.
- Introducing a comprehensive and sustained value-formation and gender-responsiveness training program to be availed of by at least 80 percent of government officials and personnel.
- Increasing investment in information technology for a more efficient bureaucracy.
- Instituting performance measurement, monitoring and evaluation systems to determine effectiveness of government programs and projects.
- Adopting the new National Accounting and Auditing System and a Multi-year Expenditure Framework as a process of allocating and prioritizing public resources.

- Realizing an annual average income of P30 billion from the privatization program.
- Upgrading the basic pay and other benefits of the PNP to reduce the incidence of corruption in graft-prone agencies by at least 80 percent.
- Providing a 40 percent share of national internal revenue taxes to LGUs.
- Improving the annual crime solution efficiency rate to at least 95 percent from its 1997 level of 91 percent.
- Institution of a lasting peace settlement with remaining rebel groups.
- Setting up an effective defense system through the Armed Forces of the Philippines modernization program and a sound foreign policy.

Convening the LEDAC for top-level consensus-building **(top)**

How will the government help the poorest of the poor?

ANGAT PINOY 2004 ARTICLES
Basic services designed to promote self-reliance

By Perla Aragon-Choudhury

RUDY works 18 hours a day to support his sickly wife and six kids. Sometimes he is so tired he cannot even walk home from the junkyard. By sheer force of will, he brings home a kilo of rice, a few pieces of fish and some wrinkled vegetables.

For Rudy and his family, who are among the poorest of the poor, the Estrada administration has the Medium-Term Philippine Development Plan, 1999-2004 (MTPDP). Its vision is: "Economic growth with social equity achieved through the joint efforts of a dynamic and internationally competitive business sector, an efficient and impartial government, and a vigilant and responsible civil society."

To pursue this, the government has embarked on the delivery of basic social and development services in health, nutrition, education, training, housing, social welfare, social security, and other social safety nets. Government resources have been prioritized for these basic services to attain a 20 percent allocation ratio. Such basic services are meant to give the people the means and the opportunities to get out of the poverty trap.

Programs are designed to meet tests of fiscal viability and effective delivery and to encourage self-reliance over the long term. There will also be a population program that respects cultural and religious beliefs.

Another guiding principle of the Plan is empowerment and gender equity in development. "The most vulnerable sectors of society shall be economically empowered by expanding their capabilities and opportunities to generate

＜E/S 用の TOR 作成支援＞

本件実施時に必要なコンサルタンツによるエンジニアリング・サービスを実施するために必要な TOR の案を提示して NIA の準備作業を支援する。

＜必要な専門領域＞

本件の計画書作成時および E/S 実施時に必要となる専門技術は次の分野と想定される。

* Project Management
* Equipment Management
* System Engineer
* Architect
* Mechanical Engineer

＜想定事業工期＞

本件は JBIC の特別円借款を申請することを想定しているが、2001 年に L/A 締結し、直ちにコンサルタンツとの E/S を同一年次末迄に行うとと想定する。この場合、2002 年から 3 ヵ年で全ての事業を完了させることを前提に計画を進めたい。

Irrigation Sector Development Program

IRRIGATION (1)	1998 COVERAGE			Total Coverage By 2004 (Hectares) (5)	Cumulative Accom-plishments (Hectares) (6)	Total Percentage of Accomplishment (7)	1994-2004 COVERAGE	
	Coverage in Hectares (2)	Accomplish ments (Hectares) (3)	Percentage of Total Irrigation Area (4)				Target Hectarage (8) = (6)-(3)	Investment Requirements (million P) (9)
1). National irrigation Administration (NIA)								
a). New Area	3,126,340	1,344,326	43.00	3,126,340	1,690,074	54.06	345,748	90,910
b). Rehabilitation / Improvement		(422,826)					(705,964)	
2). Bureau of soil and Water Management (BSWM)								
a). New Area		131,158	4.20		276,441	8.84	145,283	7,837
b). Rehabilitation / Improvement							(41,061)	
TOTAL	3,126,340	1,475,484	47.20		1,966,515	62.90	491,031	98,747

Source : NIA / BSWM

NIA Irrigation Program, 1999-2004

REGIONS	Areas for Rehabilitation (Hectares)							New Area Generation (Hectares)						
	1999	2000	2001	2002	2003	2004	TOTAL	1999	2000	2001	2002	2003	2004	TOTAL
CAR	3,160	3,370	7,470	8,080	3,590	3,530	29,200	650	1,680	3,060	4,290	660	640	10,980
1	9,460	4,370	10,640	11,470	16,090	17,420	69,450	1,960	2,510	4,060	5,440	8,820	9,380	32,170
2	12,360	6,430	14,150	15,440	15,750	15,370	79,500	3,880	3,220	7,380	8,820	4,620	2,010	29,930
3	23,420	33,390	42,790	49,220	49,480	54,130	252,430	7,400	7,080	10,550	17,430	18,640	27,810	88,910
4	7,040	3,300	7,820	8,300	8,460	8,260	43,180	2,280	2,350	3,690	5,190	3,270	4,200	20,980
5	6,140	2,580	6,570	6,840	6,990	7,300	36,420	1,960	1,860	2,890	2,120	7,600	1,550	17,980
6	5,150	2,450	8,480	12,190	14,040	8,660	50,970	1,950	1,710	2,660	2,130	2,880	4,310	15,640
7	1,310	390	1,100	1,130	1,170	1,120	6,220	780	990	2,130	2,630	2,860	5,010	14,400
8	5,920	4,360	6,230	6,880	3,360	3,310	30,060	2,020	2,330	5,590	4,110	2,460	3,450	19,960
9	1,990	930	2,200	2,350	2,400	2,640	12,510	620	550	840	580	410	1,190	4,190
10	2,230	1,010	2,390	2,610	2,690	2,600	13,530	1,760	2,180	4,180	1,040	940	1,090	11,190
11	5,270	2,460	5,700	6,250	6,430	6,220	32,330	2,450	2,200	3,380	2,390	1,720	1,650	13,790
12	4,420	2,060	4,800	5,240	5,390	6,120	28,030	3,080	3,820	7,980	2,740	2,550	2,850	23,020
13	2,400	960	2,360	2,680	2,820	2,660	13,880	1,870	1,650	6,250	5,770	1,920	2,420	19,880
ARMM	1,530	480	1,270	1,580	1,730	1,660	8,250	8,760	3,990	4,720	1,960	1,590	1,710	22,730
TOTAL	91,800	68,540	123,970	140,260	140,390	141,000	705,960	41,420	38,120	69,360	66,640	60,940	69,270	345,750

Source : NIA

substantial sources of income," states the MTPDP. "All policies shall be supportive of gender equity in the development process."

The draft of the Plan was subjected to broad-based, democratic consultations all over the country before the Plan was finalized. The MTPDP plan steering committee oversaw the final draft, which was submitted to and approved by President Estrada and the Board of the National Economic and Development Authority (NEDA).

The committee was chaired by NEDA Director-General Felipe M. Medalla, and co-chaired by then Senate economic affairs committee chair Francisco Tatad and Deputy House Speaker Daisy Fuentes of the legislature, and Vicente Lim of the private sector.

The MTPDP policy and strategy will be to make the health care delivery system more dynamic, efficient, effective and responsive to devolution.

Targets during the Plan period include a substantial increase in life expectancy from the current 67.4 years to 68.9; a substantial decrease in the crude death rate from the current 6.3 per 1,000 live births to 5.9; a decrease in the maternal mortality rate from the current 0.6 per 1,000 live births to 0.52; and a decrease in the infant mortality rate from the current 48.93 per 1,000 live births to 41.2.

The sector of social reform and development also includes education and manpower development, shelter and urban development, and social welfare and community development.

To end discrepancies in educational outcomes, the MTPDP aims to forge active partnership between government and the private sector for a sustainable process of human resources development, as well as for more effective social capital formation. To meet this objective, the government will institutionalize a system of resource allocation that gives priority to the most basic learning needs and targets the most underserved or disadvantaged groups and areas.

How will this policy and strategy occur in basic education? One policy and strategy will be to expand the resources for basic education to close the access and quality gap between public and private schools, urban and rural areas, and disadvantaged and less disadvantaged areas. A second policy-strategy will be to improve teaching and learning environments and processes.

As for technical-vocational education and training as well as higher education, the MTPDP will accelerate the delivery implementation of flexible, market-oriented and user-driven tertiary education and training systems and programs.

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Present Equipment Fleet of NIA

As of Sept. 30, 1999

Region	Heavy Equipment (H)			Light Equipment (L)			Other Equipment (O)			Special Equipment (S)			Surface & Deep Well Irrigation Pumps (P)			Total						Percent of Operable (A1)					
	A1	A2	R	A1	A2	R	A1	A2	R	A1	A2	R	A1	A2	R	H	L	O	S	P	Total	H	L	O	S	P	Total
1	59	9	17	239	17	16	136	15	15	13	1	0	51	29	0	85	272	166	14	80	617	69%	88%	82%	93%	64%	81%
2	66	15	17	272	33	34	129	35	46	9	9	5	66	7	0	98	339	210	23	73	743	67%	80%	61%	39%	90%	73%
3	70	24	21	419	36	84	188	57	59	22	9	26	86	48	0	115	539	304	57	134	1,149	61%	78%	62%	39%	64%	68%
4	69	36	21	386	78	110	98	138	88	14	3	2	28	31	1	126	574	324	19	60	1,103	55%	67%	30%	74%	47%	54%
5	50	8	40	211	18	193	99	19	127	5	0	3	19	0	2	98	422	245	8	21	794	51%	50%	40%	63%	90%	48%
6	60	27	36	250	32	83	131	19	63	0	0	0	0	0	0	123	365	213	0	0	701	49%	68%	62%			63%
7&8	65	22	25	227	35	81	152	27	151	1	0	12	0	0	0	112	343	330	13	0	798	58%	66%	46%	8%		56%
9	21	10	18	66	3	44	69	7	39	1	0	1	0	0	0	49	113	115	2	0	279	43%	58%	60%	50%		56%
10	50	14	33	148	15	117	85	33	154	0	0	0	0	0	0	97	280	272	0	0	649	52%	53%	31%			44%
11	90	16	84	301	33	121	130	16	76	6	0	13	2	0	0	190	455	222	19	2	888	47%	66%	59%	32%	100%	60%
12	75	37	26	312	52	55	151	83	38	3	1	0	30	14	0	138	419	272	4	44	877	54%	74%	56%	75%	68%	65%
13	75	22	146	164	41	273	108	40	288	24	0	111	0	0	0	243	478	436	135	0	1,292	31%	34%	25%	18%		29%
MRISS	46	10	25	247	13	38	57	7	14	14	4	4	0	0	0	81	298	78	22	0	479	57%	83%	73%	64%		76%
UPRISS	23	22	8	234	31	25	44	21	4	11	1	9	0	0	0	53	290	69	21	0	433	43%	81%	64%	52%		72%
CAR	33	8	3	96	39	7	74	19	8	0	0	0	0	0	0	44	142	101	0	0	287	75%	68%	73%			71%
C.O.				36	6	0	2	0	0	0	0	0	0	0	0	0	42	2	0	0	44		86%	100%			86%
Total	852	280	520	3,608	482	1,281	1,653	536	1,170	123	28	186	282	129	3	1,652	5,371	3,359	337	414	11,133	52%	67%	49%	36%	68%	59%

note: Heavy Equipment (H)
Cranes, Bulldozers, Excavators, etc.
Light Equipment (L)
Services Vehicles, Motorcycles, etc.
Other Equipment (O)
Chainsaws, Motorboats, etc.
Special Equipment (S)
Drilling Rigs, Rice Threshers, etc.

A1: Operable Equipment
A2: Non-operable Equipment / Equipment under repair
R : Equipment recommended for disposal

INVENTORY OF EQUIPMENT SHOWING DEPRECIATED COST

AS OF SEPTEMBER 1, 1999

REGION	QUANTITY	STATUS			% OPERABLE	ACQUISITION COST	NO. OF UNITS FULLY DEPRECIATED	% FULLY DEPRECIATED	REMAINING BOOK VALUE (X 10^6)	NO. OF UNITS DISPOSED (1994 to DATE)	TOTAL SALE FOR DISPOSED EQPT (x 10^6)
		A1	A2	R							
1	670	440	93	137	66%	74.49	569	85%	13.44	47	4.51
2	846	582	147	117	69%	107.40	752	89%	30.96	115	26.36
3	719	541	97	81	75%	147.92	563	78%	40.29	50	6.11
4	1,359	627	333	399	46%	121.61	1,110	82%	14.44	149	16.79
5	845	402	69	374	48%	70.44	686	81%	8.58	4	0.11
6	754	480	101	173	64%	76.78	635	84%	12.97	2	0.18
7 / 8	864	476	161	227	55%	96.83	608	70%	30.17	3	0.15
9	318	144	47	127	45%	36.67	240	75%	4.93	17	3.14
10	754	329	76	349	44%	65.58	526	70%	10.71	46	3.26
11	1,140	658	136	346	58%	175.47	871	76%	30.06	486	36.57
12	470	301	152	17	64%	60.99	346	74%	9.46	5	0.09
13	1,139	377	150	612	33%	103.55	856	75%	12.34	24	2.43
UPRIIS	551	398	69	84	72%	92.56	204	37%	19.15	4	0.60
MRIIS	503	383	35	85	76%	63.02	362	72%	8.03	42	6.53
CAR	326	186	51	89	57%	31.15	260	80%	3.53	32	5.40
C.O.	71	61	2	8	86%	24.08	27	38%	8.02		
BHIP	144	105	21	18	73%	39.16	55	38%	17.59		
MMIP	172	139	24	9	81%	96.89	47	27%	30.58		
KIADP-IC	154	106	34	14	69%	36.79	52	34%	15.41		
SPIADP	128	71	5	52	55%	25.36	41	32%	5.22		
PDDP-IC	111	72	16	23	65%	48.24	23	21%	31.81		
LADP-IC	26	20	3	3	77%	17.14	4	15%	15.50		
BBMP	226	84	43	99	37%	20.36	123	54%	4.99	11	0.10
TOTAL	12,290	6,982	1,865	3,443	57%	1,632.48	8,960	73%	378.18	1,037	112.33

Note: A1: Operational
A2: Under repair
R : To be disposal

Number of Available Equipment

Equipment, Capacity	Acquisition date	Status	Total	Region																										
				1	2	3	CAR	UPRIIS (3)	PDDP (3)	MRIIS (2)	BBMP (3)	Sub-total	4	5	6	7&8	SPIADP (4)	Sub-total	9	10	11	12	13	MMIP (12)	KIADP (12)	LADP (12)	BHIP (10)	Sub-total
Crane, Crawler																														
25T	90-99	1	11	2		3		3				8						0						3				3
25T	90-99	2	1									0						0						1				1
Crane, mounted																														
12.5-38t	85-87	2	1																					1				1
	90-99	1	1																		1							1
Excavator, Crawler																														
0.35m3-0.45m3	85-87	1	9		6							6						0		1	2							3
0.35m3-0.45m3	90-99	1	39	1		4		2		4	1	12		1	4	7		12			11	2		1			1	15
0.35m3-0.45m3	85-87	2	4									0	4					4										0
0.40m3-0.45m3	90-99	2	9	1				2				3				2		2		1	2	1						4
Excavator, Wheel																														
0.35m^3	85-87	1	4									0						0			4							4
0.35m^3	90-99	1	6									0						0			6							6
0.35m^3	85-87	2	2									0						0			2							2
Grader, Road																														
76-135HP	85-87	1	8		2	1						3			1	1		2			1	1					1	3
76-135HP	90-99	1	19	1	1							2				2		2	1	1	5	2		3	2		1	15
76-135HP	85-87	2	11	1	2	1		1			3	8	1					1			1	1						2
76-135HP	90-99	2	2									0			1	1		2										0
Loader, Wheeled with Backhoe																														
0.76-0.80m3	85-87	1	16	2	3	2		1				8	1	2	3	1		7			1							1
0.76-0.80m3	90-99	1	156	13	15	12	3	5		2		50	21	13	11	11		56	5	8	18	8	10		1			50
0.76-0.80m3	85-87	2	17			4		1				5	2		1	1		4	3	1	1	2	1					8
0.76-0.80m3	90-99	2	9			1	3					4	2		1			3	1			1						2
Loader, Wheeled FE																														
1.0-1.7m3	88-89	1	4				1	1		1		3	1					1										0
1.0-1.7m3	90-99	1	23			4		1				5				3		3			6	2		4	2		1	15
1.0-1.7m3	85-87	2	6	1	2		1				2	6						0										0
1.0-1.7m3	88-89	2	2				1					1	1					1										0
1.0-1.7m3	90-99	2	4	1								1				2		2							1			1
Roller, Vibratory																														
5-6.75T	90-99	1	18									0					1	1		1	3	1	1	4	3	2	2	17
5-6.75T	85-87	2	2	1							1	2						0										0
5-6.75T	90-99	2	2									0						0			2							2
Tractor Crawler (Bulldozer)																														
6-9 t (90HP)	85-87	1	5	1		1						2			1			1			1		1					2
6-9 t (90HP)	90-99	1	18	1		1		1		1		4		1		7		8			1	1		2		2		6
11t (105HP)	90-99	1	2			2						2						0										0
6-9 t (90HP)	85-87	2	1			1						1						0										0
6-9 t (90HP)	90-99	2	2									0						0						2				2
Pick-up Truck																														
1T	85-87	1	42	6	7			3		2		18	2	3	6	2		13	1	1	5		4					11
1T	88-89	1	15				3	7		4		14						0				1						1
1T	90-99	1	220	14	20	13	3	5		6		61	21	17	21	31		90	6	8	32	16	7					69
1T	85-87	2	12	2								2	2	1		3		6	1		2	1						4
1T	88-89	2	3				1	1		1		3						0										0
1T	90-99	2	11									0	4			1		5		2	1	2	1					6
Jeep / Utility vehicle																														
		1	52		5	3	2	0	0	26	4	40	1	1	2	1	0	5	1	0	2	3	1	0	0	0	0	7
		2	26		1	0	1	0	0	1	2	5	4	1	6	1	0	12	0	3	0	2	4	0	0	0	0	9

Note: ESC will be located in region number 3. 4, 10.
Status 1 shows that equipment is good condition
Status 2 shows that equipment is under repaire

PERFORMANCE FOR THE LAST FIVE(5) YEARS EQUIPMENT RENTAL VS REPAIR EXPENSES

YEAR	NUMBER OF EQUIPMENT	% OPERABLE	TOTAL RENTAL GENERATED	TOTAL RENTAL COLLECTED	TOTAL REPAIR EXPENSES	FUNDING SOURCE	REPAIR / RENTAL GENERATED RATIO (%)	REPAIR / RENTAL COLLECTED RATIO (%)
			(P 000,000)					
1994	10,904	78.0%	147.72	112.41	30.12	REFER	20%	27%
1995	11,822	79.0%	236.18	162.90	54.40	REFER	23%	33%
1996	10,715	82.0%	292.60	191.57	43.50	REFER	15%	23%
1997	10,658	83.5%	298.99	212.24	57.70	REFER	19%	27%
1998	10,664	82.0%	307.09	233.65	46.33	REFER	15%	20%
AVE.	10,953	80.9%	256.52	182.55	46.41	REFER	18%	25%