



**New Partnership for  
Africa's Development (NEPAD)  
Comprehensive Africa Agriculture  
Development Programme (CAADP)**



**Food and Agriculture Organization  
of the United Nations  
Investment Centre Division**

## **GOVERNMENT OF THE REPUBLIC OF BOTSWANA**

### **SUPPORT TO NEPAD–CAADP IMPLEMENTATION**

**TCP/BOT/2902 (I)  
(NEPAD Ref. 05/37 E)**

**Volume I of VII**

**NATIONAL MEDIUM TERM INVESTMENT PROGRAMME  
(NMTIP)**

*July 2005*



## **BOTSWANA: Support to NEPAD–CAADP Implementation**

**Volume I: National Medium–Term Investment Programme (NMTIP)**

*Bankable Investment Project Profiles (BIPPs)*

**Volume II: Pandamatenga Commercial Arable Farms Infrastructure Development**

**Volume III: Establishment of Plant Quarantine Facility and Phytosanitary Services**

**Volume IV: Establishment of an Enabling Environment for Agro–Chemicals  
Management and Control**

**Volume V: Management & Control of Quelea Birds**

**Volume VI: Beekeeping Development**

**Volume VII: Improvement of Tsetse Fly Control Surveillance**



## BOTSWANA:

### NEPAD–CAADP National Medium–Term Investment Programme (NMTIP)

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### Currency Equivalents

(July 2005)

Local Currency	=	Botswana Pula (P)
US\$1.00	=	P5.49
P1.00	=	US\$0.18

### Abbreviations

CAADP	Comprehensive Africa Agriculture Development Programme
CBO	Community Based Organization
CFC	Common Fund for Commodities
EDF	European Development Fund
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FMD	Foot and Mouth Disease
GEF	Global Environment Facility
GOB	Government of Botswana
GDP	Gross Domestic Product
IMF	International Monitoring Fund
MDG	Millennium Development Goals
MOA	Ministry of Agriculture
MLG	Ministry of Local Government
MEWT	Ministry of Environment, Wildlife, and Tourism
NAMPAAD	National Master Plan for the Development of Arable Agriculture and Dairy Development
NDP	National Development Plan
NEPAD	New Partnership for Africa's Development
NSPR	National Strategy for Poverty Reduction
OIE	<i>Office internationale des épizooties</i>
RDC	Rural Development Council
RNPRD	Revised National Policy for Rural Development
SAP	Structural Adjustment Program
UN	United Nations



## *Preface*

*In an effort to halt and reverse the decline of the agricultural sector in the continent, the African ministers for agriculture unanimously adopted, at the 22<sup>nd</sup> FAO Regional Conference for Africa, held on 8 February 2002 in Cairo, a resolution laying down key steps to be taken in relation to agriculture in the framework of the **New Partnership for Africa’s Development (NEPAD)**. As a follow–up to this resolution, they endorsed, on 9 June, 2002, the **NEPAD Comprehensive Africa Agriculture Development Programme (CAADP)**. The recent **Declaration on Agriculture and Food Security in Africa**, ratified by the African Union Assembly of Heads of State and Government during its Second Ordinary Session, held in Maputo between 10 and 11 July 2003, provided strong political support to the CAADP. During this session, the Heads of State and Government agreed to adopt sound policies for agricultural and rural development, and committed themselves to allocating at least 10 percent of national budgetary resources for their implementation within five years.*

*The CAADP provides an integrated framework of development priorities aimed at restoring agricultural growth, rural development and food security in the African region. In its very essence, it seeks to implement the key recommendations on food security, poverty reduction and sustainable use of natural resources, made at recent global conferences. The CAADP comprises **five pillars**:<sup>1</sup>*

- 1. Expansion of the area under sustainable land management and reliable water control systems.*
- 2. Improvement of rural infrastructure and trade–related capacities for improved market access.*
- 3. Enhancement of food supply and reduction of hunger.*
- 4. Development of agricultural research, technological dissemination and adoption to sustain long–term productivity growth.*
- 5. Sustainable development of livestock, fisheries and forestry resources.*

*As an immediate follow–up to the Maputo Declaration, representatives of 18 African ministries for agriculture from member countries of the NEPAD Implementation Committee, the NEPAD Steering Committee, the African Development Bank, the World Bank, the International Fund for Agricultural Development, the World Food Programme, FAO and civil society, participated in a meeting held in Rome on 17 September 2003, in order to discuss the implementation of the CAADP, and more specifically the:*

- Methodology for the review/update of the **national long–term food security and agricultural development strategies**.*
- Preparation of **National Medium–Term Investment Programmes (NMTIPs)**.*
- Formulation of the related “**Bankable Investment Project Profiles**”(BIPPs).*

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<sup>1</sup> Pillar 5 was initially not part of CAADP, but has been added in recognition of the importance of the sub–sectors.

*It is within this context that the Government of Botswana, in an effort to reinforce its interventions aimed at fighting poverty and food insecurity, has requested FAO to assist in preparing a NMTIP and a portfolio of BIPPs, with the aim to:*

- *create an environment favourable to improved competitiveness of the agricultural and rural sector;*
- *achieve quantitative objectives and mobilize resources to the extent needed for the associated investment in agriculture;*
- *achieve the targeted allocation of national budgetary resources to this area, reflecting the commitment made in the Maputo Declaration; and*
- *create a framework for coordinated bilateral and multilateral financing of the sector.*

*The present NMTIP, which draws on work of the recent Vision 2016 (Perspective Plan), the National Development Plan 9 (NDP9), the National Master Plan for the Development of Agriculture, the Revised National Policy for Rural Development and the National Strategy for Poverty Reduction (NSPR), was prepared by a team of consultants<sup>2</sup>, under the overall supervision of the National Project Coordinator/NEPAD focal point in the Ministry of Agriculture<sup>3</sup>. The team was assisted by an officer of the FAO Investment Centre Division<sup>4</sup> while the Office of the FAO Representative in Botswana provided crucial administrative support. In the process of preparing this document, participation was sought from major stakeholders from government, development partners, farmer’s organisations, private sector and civil society. Key to the finalization of the NMTIP was the **National Stakeholder Workshop** held on 7 March 2005, during which a draft of this document was discussed and validated, and project ideas for the BIPPs prioritized, based on agreed-upon selection criteria. Six of these were further developed into BIPPs that are presented in a separate document.<sup>5</sup> Lastly, the NMTIP and the BIPPs were reviewed by an FAO Virtual Task Force of technical experts.*

*This document starts with a brief description of Kenya’s agricultural sector in the context of the country’s economy and poverty and food security situation. This is followed by a review of national and development partner strategies and programmes, lessons learned, and an analysis of the principal constraints to, as well as opportunities for, the development of the sector. Based on this analysis and taking into account existing government strategies and the five pillars of CAADP, priority areas for investment have been identified. Finally, an attempt has been made to estimate the financing gap in terms of additional resources that would be required to meet the target of allocating 10 percent of national budget to the sector within five years, and a proposal put forward for monitoring and evaluation of the NMTIP implementation.*

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<sup>2</sup> Mr M. Bingana and Mr K. Baatshwana.

<sup>3</sup> Mr T. Makepe.

<sup>4</sup> Mr F. Sidelil, Development Economist, TCIS Consultant.

<sup>5</sup> For the purposes of the present exercise, “Bankable Investment Project Profiles” are defined as documents elaborated in a format and with the information that could make them favourably considered by the financial institutions, donors and private investors foreseen in the Maputo Declaration. These documents should enable cooperating partners to make preliminary indications of interest, and of approximate level of funding commitment. Further feasibility analysis and subsequent processing through the concerned partner(s) regular project formulation systems would follow to obtain a project/programme proposal elaborated to the feasibility study level.

## I. INTRODUCTION

### A. The Economy

I.1. Botswana is a landlocked, semi–arid country of 582,000 km<sup>2</sup>. It shares a boarder with Zimbabwe, South Africa, Namibia, and Zambia. Botswana’s dry and poor soils account for its varied population. The population is concentrated in south eastern parts of the country suited for arable production due to relatively more favourable climatic and soils conditions. Because of the country’s location in the sub–tropical high pressure belt of the southern hemisphere in the interior of southern Africa and away from oceanic influences, rainfall is low and temperatures high. There is, therefore, high inter– annual variability of rainfall and drought is a recurring element of Botswana’s climate.

I.2. The 2001 *Population and Housing Census* yielded a population size of 1,680,863 of which about half lived in rural areas and derived their subsistence from agriculture and other rural subsistence activities. Botswana’s population grew at an average rate of 2.4 percent during the inter–census period. However, the population growth rate in Botswana has been declining over the years. Annual growth rates between 1971 and 1981 were 4.5 and 3.5 percent, respectively. While the HIV/AIDS pandemic might have exacerbated the decline in recent years, the trend was, however, noted earlier. Factors such as declining fertility rates, increased women participation in economic activities, access to better health, increased literacy, etc may have effect on the growth rate of the population.

I.3. Botswana is blessed to have had the rare but perfect combination of the economic and political factors necessary to bring about rapid development. The discovery of diamonds and their prudent exploitation provided Botswana with badly–needed capital for development. A democratic, stable and transparent political system and civil service committed to growth endowed the country with the scarcest factor in the process of development. These favourable conditions created the opportunity to plan, and manage the economy with prudence, efficacy and efficiency. Hence, in Botswana we have the ideal world of resources endowment coupled with a development friendly political situation that ensures the utilization of resources in ways that would help to achieve both rapid economic growth and social progress.

I.4. Since its independence in 1966, Botswana has drawn–up and implemented eight *National Development Plans* (NDPs). In 2003, it launched NDP9 that guides the development of the economy from the years 2003/04 to 2008/09. The NDP8 covered the period from 1997/98 to 2002/03. The objectives of the plans remained constant:

- Sustainable development;
- Rapid economic growth;
- Economic independence; and
- Social justice.

I.5. The successful implementation of these plans paved the way for the sustained and rapid growth of the economy for well over three decades. According to NDP 9 “*GDP growth averaged around 9.2 percent per annum in real terms over the entire post–independence period up to the beginning of NDP8*”. According to a study by the World Bank<sup>6</sup> “*Over the past three decades, Botswana’s real per capital income grew by more than 7 percent per annum which is comparable to the rates of growth achieved by Korea and Thailand*”. With a per capita GDP of US\$3,000, Botswana

<sup>6</sup> *Botswana: A Case Study of Economic Policy, Prudence and Growth* (see Annex 3).

is now classed as a middle income country and is one of the richest countries in Sub–Sahara Africa, coming only next to South Africa.

I.6. During this period the structure of the economy also showed dramatic changes. At the time of independence agriculture accounted for 42 percent of GDP but in 2000/01 its share had declined to only 2.6 percent while that of mining, a sector that virtually did not exist in 1966, reached 36.5 percent. Reflecting the structural change of the economy, the proportion of the population that lived in urban areas increased from 9.1 percent in 1971 to 54.2 percent in 2001.

I.7. Other indicators of economic and social progress also point remarkable achievements. The expansion of basic education and health services in particular, has been quite impressive. Primary school enrolment ratio, for example, reached 92 percent in 2000. The number of university graduates increased from 20 in 1966 to 3,100 in 2000. Equally impressive achievements have also been registered in the expansion of water, roads, electricity and other social and economic infrastructures

I.8. Botswana is also one of the least indebted countries. Total external debt stands at US\$352m (2002), which is only 5.8 percent of GDP. Debt service as a proportion of export of goods and services is only 2.4 percent. The foreign exchange reserve of US\$5.8bn (2003) is enough to cover 32 months of imports. Although the reserve is slightly lower than the preceding years (due to the fall in the export of diamonds) it is still high enough to give the country a very solid financial position.

I.9. In recent years, however, because of the recession in the major economies, Botswana's economy is experiencing slightly reduced growth performance. Thus, from 1997/98–2002/03 real GDP increased only by 6.4 percent per annum. Although this rate is lower than its historical records, Botswana economy is still one of the fastest growing economies of the world.

I.10. In furtherance of the objective of consciously guiding the development of the economy the GOB, after broad consultations with all sectors of the society, has adopted in 1997, a Perspective Plan, known as *Vision 2016*, which articulates the national goals and targets that must be achieved by 2016. Of the goals and targets the plan sets the achievement of full employment, eradication of absolute poverty and the tripling, in real terms, of the per capita income of the population would be most relevant for this exercise. To realize all the goals the Perspective Plan sets, it targets a real GDP growth of 8 percent and an investment–GDP ratio of 41 percent per annum. Indeed this is quite ambitious. NDP9, though based on the objectives and strategies of *Vision 2016*, sets the more realistic targets of achieving, in real terms, an average GDP growth of 5.8 percent per annum and an annual investment: GDP ratio of 31 percent.

I.11. Despite its extraordinary economic performance, Botswana also faces some of the problems pertaining in all developing economies. Poverty, unemployment and HIV/AIDS feature as the major challenges that Botswana must come to terms with. According to NDP9 the proportion of the population below the Poverty Datum Level which was 47 percent in 1997 has fallen to 36.7 percent in 2001. The estimate for rural poverty is, however, believed to be around 40 percent.

I.12. The second major challenge is that of the HIV/AIDS pandemic. An HIV survey undertaken in 2001 puts the estimate of those infected by the virus at 38.6 percent of the adult population. The third challenge is unemployment. According to NDP9 the level of unemployment which was 21.5 percent of the labour force in 1996 declined to 15.8 percents in 2000. While this is an encouraging progress, the size of unemployment is still high enough to warrant serious attention. These three basic challenges are no doubt interrelated. Along with these, there is also the problem of income inequality. Botswana needs to give especial emphasis to mitigate these problems in order to ensure the sustained development of its society as envisaged in *Vision 2016*.

## B. The Agricultural and Rural Sector

I.13. **Contribution to the Economy.** The agriculture sector includes livestock, crop production, fishery and forestry. Livestock, particularly cattle grazing, which accounts for 80 percent of the sector's output, is the mainstay of Botswana's agriculture. On the basis of the most recent Veterinary Counts (2001) the livestock sub-sector is made up of 2.5 million cattle, 2.5 million sheep and goats, 250,000 donkeys, 30,000 horses and 170 camels. During NDP8 productivity indicators showed marked improvements. Thus, off-take under traditional production system increased from 8 to 10 percent while mortality rates decreased from 15 to 12 percent. Through a system of cordon fences and strict animal movements control measures 80 percent of Botswana is now classified by the international animal society organization, *Office internationale des épizooties* (OIE) FMD-free with out vaccination. Since 2000 Botswana has also been implementing the Livestock Identification and Trace back System (LITS) which has helped it to improve cattle data collection and to meet the latest beef export market requirements. The Crop production sub-sector is mainly based on sorghum and maize production but also includes beans, cow peas, ground nuts millet, wheat and sunflower.

I.14. Over the last few years, however, the contribution of agriculture to GDP has been declining. Thus, in 2002 for example, agriculture accounted for only 2.4 percent of GDP. The proportion of the population that depends on agriculture has also been declining albeit at a much slower rate. Hence, 42.1 percent of the population still relies on agriculture for its livelihood. The low contribution of agriculture to GDP is, therefore, a reflection of the very low productivity of the labour force engaged in the sector. Despite its low performance agriculture accounted for 5 percent of total exports in 2001.

I.15. In terms of food security, however, domestic production of cereals has never been sufficient to meet the national food requirements. During NPD8, for example, annual cereals production was on average 17,840 metric tons while the annual average requirement was 210,780 mt. Since the domestic production met only about 10 percent of the requirements the balance had to be imported. With respect to the intake of protein and other dietary requirements, however, the situation is slightly different. According to NDP9 "*Botswana meets all her domestic requirements and is a net exporter of beef*". As the plan confirms Botswana has in fact attained self sufficiency in poultry production and the average poultry meat consumption of the population has increased from 10.9 kg in 1999 to 16.1 kg in 2000. As the production data suggest Botswana is meeting the protein requirements of the population. The challenge remains to be, however, in terms of producing food crops requirements of the population. Given the low productivity of the crop sub-sector and the climatic condition it may take some time for Botswana to ensure food security at house hold level. Thus, food security both at national and house hold level would have to be met through imports and transfer of entitlements.

I.16. **Physical.** Botswana is not well endowed with agricultural land. Most of the land is semi-arid and hence only 5 percent of the land is suitable for arable agriculture. Rainfall is also scanty and varies from over 650 mm/year in the North East to less than 250 mm/year in the South West. There are only few rivers and water is generally scarce and costly to develop. There are three categories of land tenure in Botswana; freehold land, state land and communal land. Those on the freehold land have legal titles to their land and boreholes and hence can easily transfer their rights. Communal land holders, on the other hand, do not enjoy the same rights. These dualistic arrangements have been identified as issues that need to be resolved in order to ensure that the traditional farmers have adequate incentives to increase the productivity of their farms.

I.17. **Structure.** There are two main categories of farmers: traditional and commercial. The commercial farms that are established on free land holding occupy 8 percent of the total land and represent less than 1 percent of the total number of farmers in the country. In terms of output, however,

these farms support 14 percent of the cattle and account for 37 percent of the total production of cereals and pulses.

I.18. Botswana's agriculture is, therefore, made up of mainly traditional farms. These farms, which practice mixed farming, occupy 70 percent of the total land and account for 86 percent of the cattle and 63 percent of cereal and pulses production. These farms are totally dependent on rain fed agriculture and hence are exposed to drought. In addition the prevalence of a communal grazing system, diseases and slow adoption of modern farming practices and technologies are also hampering the growth of productivity in the traditional farms. Traditional farmers are characterized as subsistence farmers who invest very little inputs into their land, use no chemical fertilizers or pesticides, use draught animals for ploughing and rely on family labour for farming operations.

I.19. **Institutions.** The institutional functions and responsibilities for the development of agriculture and rural development are shared by many ministries. The main responsibility, however, rests with the *Ministry of Agriculture* (MOA), which covers crop production, livestock, irrigation, research, training, and extension services. The *Ministry of Environment, Wildlife and Tourism* (MEWT) is responsible for fisheries, forestry, and natural resource management. The *Ministry of Local Government* (MLG) is responsible for rural roads and rural development in general. In addition to these line ministries, there is also the *Rural Development Council* (RDC) which oversees, coordinates, monitors, reviews, and evaluates the implementation of the Poverty Reduction Strategy and the Rural Development Policy.

I.20. **Financing.** Agriculture did not emerge as a priority sector in the past development efforts of the Country. In the NDP8 periods (1997/98–2002/03), for example, the share of agriculture was on average only about 4 percent of the central government expenditure. In fact, the relative share of the sector has been fluctuating from year to year. Thus, while the sector's share out of central government expenditure increased to over 5 percent in 1997/98 and 1998/99, it then decreased to 4.8 percent in 1999/2000. This declining trend continued up to 2002/03 when it reached 4.2 percent of the national budget. Of course total government expenditure on agriculture and rural development is not limited to the budget of the MOA alone. It also includes the relevant budgets of the *Ministries of Environment, wildlife and Tourism* (MEWT) and *Local Government* (MLG). However, these ministries are also engaged in a wide range of activities that do not fall under agriculture and rural development. While disaggregating the expenditures of those items that are strictly agricultural and rural development is difficult, that the government's outlay on the sector will be over 4 percent of the national budget should be born in mind.

## C. The Strategic Framework

### (i) Government Objectives and Strategy

I.21. Both the perspective Plan (*Vision 2016*) and the medium term plan (NDP9) recognize the importance of the agriculture sector to enhance the growth of the national economy, create employment opportunities, improve food security and also to alleviate poverty, particularly rural poverty. As stated in NPD9 the objectives of the development of agriculture will be to:

- Improve food security at house hold and national levels,
- Diversify agricultural production base,
- Increase agricultural output and productivity,
- Increase employment opportunities,

- Provide secure and productive environment for agricultural producers, and
- Conserve scarce agricultural and land resources.

I.22. To realize these objectives and to enhance the contribution of the sector to the national economy the government has devised the following plans or strategies:

- The *National Master Plan for Arable Agriculture and Dairy Development* (NAMPAADD);
- The *Revised National Policy for Rural Development* (RNPRD);
- The *National Strategy for Poverty Reduction* (NSPR).

I.23. The NAMPAADD aimed at devising policies, and programs that would enhance the performance and sustained development of agriculture. The plan addresses:

- Rain fed agriculture (crop production);
- Irrigated agriculture; and
- Dairy development.

I.24. In addition to recommending specific measures relevant to each sub–sector the plan also addresses the broad issues that influence the over all development of the sector.

I.25. ***Rain fed agriculture*** consists of mainly the small, traditional farms. The main thrust of the plan is to transform the small farms into viable commercial farms. To this end the plan calls for the introduction of mechanization service centres and improvement of farm inputs and farm management practices. The plan also envisages the possibility of encouraging the flow of private investment into the development of agri–business.

I.26. ***Irrigated agriculture.*** The high incidence of drought and the inadequacy and unreliability of the rainfall in Botswana make irrigation, to the extent the potential exists, an important method to ensure the sustained growth of agriculture. In irrigation development the emphasis is on horticultural development, an area in which Botswana seems to have a better comparative advantage. In order to exploit this potential the plan recommends the development of irrigation schemes using both fresh water and treated urban wastewater. While the emphasis is on horticulture, the plan also includes field crops such as wheat, maize, fodder, etc. During the current plan period, the target is to bring 5,200–5,400 ha of farm land under irrigation of which 1,600–1,800 ha of land is planned for irrigation with fresh water and 3 600 hectares with reclaimed urban wastewaters.

I.27. ***Dairy Development.*** With respect to dairy development the emphasis will be to remove the constraints that arrested the growth of productivity in the sub–sector. In this regard the plan attaches high importance to increasing the average herd size to 50, which is estimated to be the economic size that will allow the dairy farmer to earn an income level that will be equal with that of the urban skilled worker. In addition the plan also calls for improvements in feed, especially increasing the concentrated feed and the promotion of a zero–grazing system that would allow the cattle’s to get the individual attention required to meet their physiological and production needs.

I.28. On top of these area–specific measures, emphasis will be given to expand infrastructure services such as roads, electrical power, and telecommunication facilities to the production areas. The development and dissemination of appropriate technologies, improvement of storage facilities,

strengthening of extension services, and provision of market information are other areas accorded high priorities. In order to facilitate the dissemination of modern farm management practices to farmers, the government would establish demonstration farms at appropriate locations. With the view to reducing farmers' risks and encouraging private investment in agriculture, the government would establish an insurance fund that would cover lost crops and reduced milk production values caused by drought and other natural calamities.

I.29. The main thrust of the RNPRD remains the improvement of living conditions of the rural population. The policy is based on the following objectives:

- Reducing rural poverty;
- Providing opportunities for income generation and investment in economic activities;
- Creating employment opportunities; and
- Enhancing popular participation in the development process.

I.30. The realization of these objectives depends, among other factors, on the policies and strategies devised to enhance the productivity of agriculture. In addition the government would continue to support the development of the non–farm economy. To this end, the *Revised Rural Development Policy* (RRDP) accords high priority to the diversification of the rural economy. Thus, the growth of rural industries, services and the commercialization of the rural economy in general are viewed as important sources for generating additional employment and income earning opportunities. In order to realize these programs the government would undertake training programs that will in particular equip the youth with the skills and attitudinal changes needed to expedite the development of the rural economy. The government would also take appropriate measures to expand and to strengthen credit facilities with the view to supporting the diversification program and also to promote the development of the rural economy in general.

I.31. The Government of Botswana (GOB) is not a new entrant to the combat against poverty. Since the 1980's the government had designed and implemented programs that had the objective of reducing poverty. The government undertook an evaluation of the program through a consultant and as the results of the study indicate the government's efforts have indeed born fruits. On the basis of this evaluation the proportion of the population that lived below the Poverty Datum Level has decreased from a high of 59 percent in 1985/86 to 36.7 percent in 2002.

I.32. The government's principal strategy to fight poverty was based on the promotion of broad–based growth, diversification of the economy, improvement of the access by poor people to social investment, and the provision of safety nets for the needy. The NSPR, adopted in 2003, re–iterated the continuing relevance of these strategies. While the broad strategies remained the same, more emphasis will be given to sectors and areas that have direct impact on poverty reduction. Hence, in the growth policy more attention would be paid to the development of agriculture and to the strategy to diversify agricultural products as the most effective anti–poverty initiative. The government has always accorded very high priority to the expansion of basic education and health services. The beneficiaries of such social investments were also mainly the poor. The NSPR is giving an additional impetus to the development of social services with the particular objective of reaching the remote areas and disadvantaged social groups. In addition, the government will also give due attention to enhance the participation of the poor in the decision making process. Emphasis would also be given to capacity building both at national and local levels. To enhance the implementation of poverty reduction initiatives, the strategy empowers the *Rural Development Council* to oversee program development and also to coordinate, review, monitor, and evaluate the overall implementation of the strategy.

I.33. The GOB has adopted the UN’s *Millennium Development Goals* (MDG) in 2001. The UN’s MDG calls on member states to halve the proportion of the population living below poverty line and those below the minimum level of dietary energy consumption by 2015. Botswana aims to go even further and, according to *Vision 2016* “*Botswana will have eradicated absolute poverty [by 2016] so that no part of the country will have people living below the Poverty Datum Line*”. The plan also sets a medium term goal of reducing poverty to 23 percent by 2007. Based on these goals and the strength of the economy, it is anticipated that Botswana would achieve the MDG with in the targeted time.

(ii) *Major Partners Strategies*

I.34. Like most developing countries Botswana’s economic history began with a strong dependence on foreign aid and assistance. That has now become history. To day Botswana is one of the few countries that virtually finances all of its recurrent and most of its development budget out of its own resources. Thus, in the Development Fund Revenue for 2000/01, for example, external grants accounted for only 2.8 percent while external loans for 3.3 percent. Botswana is also one of the few African countries that did not subscribe to the *Structural Adjustment Program* (SAP) of the World Bank. As a matter of fact, Botswana is actually one of the only two African countries that are net creditors of the Bretton Woods Institutions. The UN specialized agencies too are not that much involved. Thus, external assistance is playing a very limited role in the development efforts of Botswana. Currently, it is only the European Union and FAO that have on–going programs related to agriculture and rural development.

I.35. *The European Union (EU)*. The objective of EU in development cooperation is to foster the sustainable development and integration of the economy of developing countries into the world economy and to support the campaign against poverty and hunger. The cooperation between the EU and Botswana is based on these mutually acceptable objectives. For the period from 2002–2007 EU has earmarked an amount of €9m for macroeconomic support and sectoral policies and programs (A – allocation) and €2m for unforeseen needs such as emergency assistance (B – allocation).

I.36. The program of cooperation is worked out after a wide range of discussions and consultations with all the stakeholders in addition to government representatives. Three validation workshops were also conducted. On the basis of consensus that emerged from these consultations only 20 percent of the EDF9 is to be allocated for poverty alleviating programs.

I.37. *Food and Agriculture Organization of the UN (FAO)*. FAO’s assistance is devoted mainly to capacity building programs, in which it is supporting MOA to develop:

- Its capacity for designing, processing, and analyzing agricultural and farm management surveys;
- Training manuals both for farmers and extension workers;
- A comprehensive system for monitoring and evaluation of agricultural policies, programs and projects.

I.38. In addition FAO is also assisting in the formulation of a national irrigation policy and strategy and in strengthening the institutional capacity of SADC region for the management of farm animal genetic resources.

I.39. *Common Fund for Commodities (CFC)*. The CFC is financing a project designed to improve and increase the market availability of hides and skins from small producers. The project is

intended to establish collection systems and also to improve quality by improving the production, preservation and storage of hides and skins.

I.40. **Global Environment Facility (GEF).** The GEF is participating in financing the Management of Indigenous Vegetation project. It is a regional project in which Botswana, Kenya and Mali are involved. The objective of the project is to develop models for the conservation of biodiversity and rehabilitation of degraded rangelands, and to develop sustainable natural resource management systems using indigenous knowledge.

I.41. **Conclusion.** Botswana has clearly defined its policies and objectives for the development of agriculture, rural development, food security and poverty reduction. It has also elaborated the broad and specific strategies needed to realize the policy objectives. The objectives and strategies coincide very well with CAADP's pillars. Because of the dominance of the livestock sub-sector, Botswana's strategy is of course leaning more towards the fifth pillar. This is understandable particularly when viewed from a poverty reduction angle. In terms of financing its development efforts, however, Botswana has increasingly become more and more reliant on domestic resources as a result of which technical cooperation is playing a minor role in the economic life of the country. Thus, unlike most African countries we do not find significant involvement of donors in agriculture and rural development. The few donors that are participating in the sector also deal with individual projects and hence do not have well defined programs and policies designed to influence the development of any of the sub-sectors or the sector as a whole.

## II. CONSTRAINTS AND OPPORTUNITIES

### A. Constraints

II.1. **Lack of a Diversified Economy.** The Botswana economy is heavily dependent on the mining sector and in particular on non-renewable resource like diamonds. The mining sector accounts for 36.5 percent of the GDP, and over 50 percent of government revenues. It is also the major contributor to the export earnings of the country. In view of this the national development plans of the country, in particular NDP8 had accorded very high priority to the objective of diversifying the economy. The fact that the share of the manufacturing sector out of the GDP is only 4.1 percent (2000/01) while that of agriculture is only 2.6 percent indicates that not much progress has been achieved in diversifying the national economy. The high dependency of the economy on the mining sector could in the long run negatively influence the prospect for the sustained growth of the economy. The dependency must therefore be recognized one of the constraints that Botswana must seriously tackle in its future efforts

II.2. **Land and Environment.** A major constraint of Botswana's agriculture is its weak resource base and poor environment. Most of the land is arid. Poor soil, low rainfall, and endemic drought are creating unfavourable conditions for the development of agriculture. The lack of clearly defined property rights over communal lands is also one of the constraints that need to be resolved in order to ensure the sustained growth of the rural economy. Water is also very scarce and costly to develop, thereby limiting the possibilities of developing the arid land with irrigation.

II.3. **Agriculture Production.** The growth of agriculture production is constrained by many factors. Poor farming techniques and management, low adoption of technologies, high cost of inputs, insufficient infrastructure, outbreak of pests, limited access to credit, endemic drought, etc are the critical bottlenecks that are hindering the growth of productivity in the sector.

II.4. **Livestock.** The livestock sector, although better managed by the standard of developing countries, is also beset with problems that need attention. Problems of size, lack of adequate feed supply, disease outbreak and poor management are the major problems constraining the growth of the sub–sector.

II.5. **Rural–Urban Migration.** The rate of urbanization in Botswana has been quite high. In just ten years i.e. from 1981 to 1991 alone, the proportion of the population living in urban areas jumped from 17.7 percent to 45.7 percent suggesting a very high rate of rural–urban migration. Although the rate of migration is showing signs of slowing down since 1991, it is still on the high side. As the migrants are mainly the young, the situation is depriving agriculture of the contribution of the enterprising and energetic group. What we have in agriculture today is mainly old men and women. As a socioeconomic survey conducted by the TAHAL Consulting Engineers Ltd (2000), showed the average age of the farmers is 57–58 years. To a degree, this age profile is bound to have effects on the pace of modernization of the sector.

II.6. **HIV/AIDS Pandemic.** As NDP9 states “Based on 2001 HIV Survey it is estimated that 38.6 percent of the adult population is infected with HIV, the worst affected age group being 25–49 years with a prevalence rate of 48.4 percent. Median prevalence rate among the 15–19 years was 24.1 percent”. Not only is the present incidence rated as the highest in the world but the efforts to control the spread of the virus do not seem to have as yet born fruits. Hence, as the UNAIDS report (July, 2002) indicates the proportion of the adults with the virus is estimated to have increased from 33.2 percent in 1996 to 38.6 percent in 2001. The rapid spread of the virus would of course have its negative consequences on the economic and social development of the country. Life expectancy is estimated to have declined from 65 years in 1991 to 56 years in 2001. Infant mortality, the number of stunted children and malnutrition among children are also showing deteriorating signs. The virus is also having adverse effects on labour supply, productivity, saving and capital accumulations and hence on the rate of growth of the economy. As a study by the *Botswana Institute for Development and Policy Analysis* (2000) that assessed the impact of the pandemic on the economy estimates “GDP growth in Botswana would be lower by an average of 1 to 2 percentage points a year” if the present situation continued unabated. Other studies give a more pessimistic picture assuming a higher prevalence rate of the virus. The long term impact of the pandemic will certainly depend upon the government’s success in implementing the intervention program (the *National Strategic Framework*) that it has recently launched. In the short run, however, the country would have to cope up with the rising direct and indirect costs of the pandemic.

II.7. **Shortage of Skilled and Trained Manpower.** The national development plans of Botswana had always accorded very high priority to education. Despite these efforts, however, the shortage of skilled manpower is one of the constraints that the economy is currently facing. To some degree the spread of the HIV/AIDS is also exacerbating the problem.

## **B. Opportunities**

II.8. **Macroeconomic Stability.** Botswana is the first country in modern history to register an average GDP rate growth of 9 percent per annum for well over three decades. The GDP investment ratio of 30 percent per annum that it maintained over these years puts Botswana on a level of achievement that is at par with the rising “tigers” of SE Asian countries. This extraordinary performance demonstrates the government’s exceptional ability to maintain macroeconomic stability and also to adjust its macro policies to changing international and domestic economic situations. Its sound fiscal and monetary policies had helped the country to keep inflation at reasonably low levels and to promote international competitiveness. Botswana’s track record of maintaining macroeconomic

stabilities is one of its strongest assets in determining its success in tackling the challenges of poverty reduction, employment creation, food security, etc.

II.9. **Clarity of Policies and Strategies.** Botswana has adopted a Perspective Plan that elaborates its long-term development objectives, goals and targets. Among the challenges that the Perspective Plan addressed, food security, poverty reduction, and employment creation were given paramount significance. The plan also identified the sectors that would be playing the leading role in mitigating these problems. To concretize the objectives and strategies of the *Perspective Plan* the government has undertaken several studies. Based on these studies the government has adopted appropriate policy measures that would facilitate the realization of the goals and targets of *Vision 2016*.

II.10. It is through such a process that the government has articulated its policy objective for promoting the development of agriculture, rural development and poverty reduction. That the government has clearly and unambiguously defined its objective is a big step forward towards resolving the problems.

II.11. **Efficiency of the Civil Services.** The rapid economic development that Botswana enjoyed over the last three decades was in part due to the dedication, motivation and efficiency of the civil service. With the objective of furthering its efficiency the government has recently introduced a performance management system. The system requires periodical assessment of the achievements of civil servants. As observed by many international agencies the civil service is also comparatively less infested by corruption and other administrative evils that lead to inefficiencies and waste of resources.

II.12. **Government Commitment to the Development of Agriculture.** The Perspective Plan sets the goal of tripling, in real terms, the per capita income of the population by 2016. During the same period the plan also stipulates the attainment of full employment and the eradication of absolute poverty from Botswana. As poverty, food insecurity, etc are predominant in the rural areas, the realization of these goals, of necessity, would require a vigorous action to promote the growth of agriculture and the rural economy in general. The three policy measures recently adopted by the government — i.e. the NAMPAADD, the RNRDP, and the NSPR — emphasize the importance the government attaches to the development of agriculture and the rural economy. It is indeed difficult to see how the goals of eradicating absolute poverty, ensuring food security and the tripling of per capita income could be achieved without significantly improving the productivity of agriculture.

II.13. **Conclusion.** The most serious problems facing the agriculture sector are those that arise from land and environment conditions. True, the government is giving adequate attention to natural resources development. However, investments in natural resources are bound to take a long time to show results. Poor agriculture resources base and unfavourable climatic conditions would, therefore, be the major constraints that would be limiting the growth prospect and hence the contribution of agriculture to the national economy. The other constraints like slow adoption of productivity-enhancing technologies, poor management practices, insufficient infrastructure, etc are problems that Botswana can very well handle.

II.14. On the side of opportunities, the strength and resilience of Botswana's economy to meet the challenges should be recognized and underscored. Botswana is one of the few countries with a proven track record in managing its economy with prudence and efficiency. Relatively speaking, Botswana is not also a country that faces shortage of capital. It has demonstrated its ability to meet the capital requirements of its development plans. Its democratic tradition, the efficiency of its civil service, the participation of the people in the development processes, etc, all these positive developments indicate the existence of favourable conditions to realize the goals and targets of its national development plan.

### III. INVESTMENT PROGRAMME OUTLINE

#### A. Priority areas for Investment in Agriculture and rural Development

III.1. The *National Development Plan 9* (2003/04–2007/08) that articulates the policies for the development of agriculture and the rural economy also elaborates the strategies and investment priorities devised to realize the policies. The section below would provide a brief summary of the strategies and the priority areas and their convergences with CAADP's Pillars of investment

III.2. **Priority #1: Increased agricultural output and productivity.** The main objective of this strategy is to promote the development of the agriculture through increases in output, productivity, and employment creation. It will in particular promote projects and programs that are designed to facilitate the introduction of improved technologies, modern and efficient farm management practices, the commercialization of traditional farms, diversification of agricultural products, the establishment of farmer's insurance fund and specialized agricultural credit institutions and the development of pilot farms that would serve as demonstration centres to the farmers. In addition the strategy also incorporates projects whose objectives are to increase the productivity of dairy farms and the livestock economy in general through improvements in feed, range management, establishments of model dairy farms, strengthening of disease control, veterinary services, marketing and modern management services and infrastructural developments. The resulting increases in output, productivity and employment opportunities are expected to improve the food entitlements of the farmers and to enhance the food security situations at household and at national levels and to alleviate rural poverty. The strategy and the projects it promotes coincide with the second, third and fifth pillars of CAADP.

III.3. **Priority #2: Conservation of Land and Agricultural Resources Management.** The strategy incorporates both land and water development and hence directly coincides with the first pillar of CAADP. The program has two components. The first one aims at improving the implementation of existing policies and legal instruments to enhance the conservation and management of agricultural resources. To this end the strategy stipulates reviewing the existing laws, undertaking an environmental impact assessment, promotion of appropriate land utilization systems and production of vegetation and inventory monitoring and agro–ecological maps.

III.4. The second component is concerned with irrigation and water development. More specifically, the program aims at developing irrigation, constructing new dams and providing assistance to farmers in the rehabilitation and upgrading of existing irrigation facilities, well fields and the harvesting of rainwater and the use of treated waste water for irrigating farms.

III.5. **Priority #3: Development of Agricultural Research and Appropriate Technologies.** This investment programmed, which coincides with the fourth pillar of CAADP, is intended to promote agricultural research programs whose objectives are to develop appropriate technologies that reduce production constraints, increase productivity of agricultural output and conserve the environment.

III.6. The projects foreseen under this program include capacity building, development of research that will lead to the diversification of agricultural products and adoption of sustained technologies, development of gender friendly technologies, development technologies for conservation and utilization of biodiversity in soils, and initiation of bio–technology research that has potential for higher production and productivity.

## B. Project Selection Criteria

III.7. The principal criterion in the identification and selection of bankable investment projects is the government's development plan, NDP9, and its investment program. Based on this, the choice of specific projects would be governed by the following additional criteria:

- **Technical Feasibility and Sustainability.** This is a crucial test of whether the proposal makes technical sense and can be seen as sustainable in terms of resource utilization. The likely effects upon the environment would also be necessary.
- **Financial and Economic Feasibility.** At the early stage of project identification it is difficult to obtain more than a vague idea of the financial and economic viability of the project. But enough information should be included to justify continuation of the project preparation process. Wherever possible a preliminary comparison of benefits with the cost of the project should be made possible using simple cost/benefits ratios.
- **Absorptive Capacity.** This may be a difficult or even subjective factor to treat. However, an intelligent judgment should be made in the context of the experience of the particular department implementing the project and its manpower and technical capacity to execute the project.

III.8. **Projects Selected by the Stakeholder Validation Workshop.** The identification of the Bankable Investment Projects was based on the policies and strategies elaborated in NDP9 and the NMTIP–Botswana that outlined the government's priority in agriculture and rural development. The profile of the projects was then prepared by national consultants. The *Ministry of Agriculture* that endorsed the projects on behalf of GOB submitted the project profiles to a validation workshop that brought together all the stakeholders of the projects. The following are the projects that were duly approved for by this validation workshop that was held on 7 March 2005 in Gaborone, Botswana. These include:

- **Improvement of Tsetse fly Control Surveillance.** The project aims at eradicating tsetse flies from the Okavango Delta to ascertain the prevalence of a healthy environment for the development of a cattle population of 120,000 and the unhindered growth of arable agriculture and the tourist industry in the region. The project also has the additional objective of preventing the reinvasion of the tsetse flies from the neighbouring countries of Angola, Namibia and Zimbabwe.
- **Land and Water Resources Management Project.** The project has the objective of removing the major constraints that kept low the productivity of 50 commercial farms established on 25,000 ha of land situated in the most fertile parts of Botswana and an area that gets relatively a very good amount of rainfall. The project aims at constructing an all weather internal net work of roads and drainage channels for the farms. The provision of these facilities along with improvements in farm management practices and technology is gradually targeted to raise yields from 1.5 to 4 mt/ha.
- **Establishment of Plant Quarantine facility and Phytosanitary Services.** The project is intended to develop and equip a phytosanitary and sanitary facilities for Botswana with the objective of preventing the introduction and spread of pests and diseases of plants and plant products.
- **Management and Control of Pests.** The project is intended to improve the existing management of migrant pests through capacity building, promotion of integrated pest

management system, provision of base line data, etc with the view to controlling and minimizing crop losses due to pests and eventually to decrease the size of the migrant pests.

- ***Beekeeping Development.*** The project is intended to enhance the development of beekeeping in the country with the objective of diversifying agricultural production, generating additional income and alleviating poverty and improving food security situations among the rural and urban population.
- ***Agro–Chemical Management Control.*** The objective of the project is to strengthen the national capacity for management of agro–chemical products through promotion of integrated pest management, development of pesticides residue testing laboratory, capacity building, etc in order to provide the necessary support to the program to enhance the productivity of cereals production both in the traditional and commercial farms.

III.9. A brief summary of the projects content, objectives and benefits is given in Annex 2.

#### IV. FINANCING GAP

IV.1. Cognizant of the seriousness of the challenge that the crisis in the African agriculture poses and the need to vigorously support the efforts to transform the sector, African Heads of States and Governments met in Maputo and Pledged themselves to commit; “*allocating at least 10 percent of the national budgetary resource for the implementation of [CAAPD] and sound policies for agricultural and rural development within 5 years*”. The total expenditure on agriculture and rural development in most African countries as it is true in Botswana too is much below the Maputo commitment.

IV.2. In assessing the expenditure of countries on agriculture and rural development an obvious issue that crops up is the question of definition. In principle expenditure on agriculture and rural development must include the total government out lays on the sector irrespective of institutional boundaries. In Botswana this would mean encompassing the budgets of the MOA and the expenditures of the relevant activities of the MEWT and MLG. However, disaggregating the expenditures of those activities that are strictly agricultural and rural development from the budgets of both ministries was not easy. Because of such difficulties the budget of the MEWT had to be excluded from the estimate of the financial gap. Disaggregating the budget of the *Ministry of Local Government* that is responsible for rural development was not also an easy exercise. The MLG is engaged in a wide range of activities such as primary education, primary health care, water supply, rural roads, etc. Broadly defined rural development includes the services that the MLG provides and others that are aimed at improving the living conditions of the rural population. Adopting such a broad definition would unnecessarily exaggerate the total out lay on agriculture. For the purpose of this exercise, therefore, rural development was narrowly defined to include only rural roads. Thus, *the total government outlay on agriculture and rural development consists of the budgets of the MOA and that of the rural roads of the MLG.*

IV.3. NDP9, which guides the development of the economy over the years 2003/04 to 2008/09, indicates the growth rates and resource allocated to the different sectors of the economy. Accordingly, the projected flows of financial resources to the agriculture and rural development over the next five years are taken from NDP9 and therefore reflect the objectives and priorities of the plan. NDP9, as indicated earlier, accords high priority to poverty alleviation, food security and employment creation. The agriculture sector in particular and the rural economy in general play important roles in the realization of these policy objectives. In view of this, NDP9 stipulates an increase in the allocation of resources to agriculture and rural development. Accordingly, during NDP9 the total government

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expenditures on agriculture and rural development would increase on average at a rate of 8 percent per annum. This would raise the sector’s share out of the national budget to 5.4 percent. Yet the planned allocation of resources to agriculture and rural development would still fall short of the Maputo Summit commitment. In the elaboration of the NMTIP it is assumed that the Maputo commitment will be met over the next five years time. By comparing the financial requirements of the Maputo commitment with the NPD9 projections, the table below indicates the financial gap that Botswana faces. This is the gap that the GOB must fill both from internal and external financing sources in order to measure up to the Maputo Summit’s commitment of rapidly enhancing the development of agriculture and the rural economy.

Botswana: Agricultural Financing Gap( In millions of Pula; in current prices)						
Sector	Actual exp.	Projections				
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<i>Amounts (in Pula million)</i>						
Agriculture	758.7	775.9	851.9	915.1	945	1,014.5
Rural Roads	36.2	75.2	232.4	239.2	214.5	379.2
<b>Sector Total</b>	<b>794.9</b>	<b>851.1</b>	<b>1,084.3</b>	<b>1,154.3</b>	<b>1,159.5</b>	<b>1,393.7</b>
Total National Budget	17,008	19,186.6	21,326.5	22,683.8	24,008.1	2,557.4
Program Requirements		1,151.19	1,492.85	1,814.70	2,160.72	2,557.4
<b>Financial Gap</b>		<b>300.09</b>	<b>408.55</b>	<b>660.40</b>	<b>1,001.22</b>	<b>1,163.7</b>
<i>Share(in percent)</i>						
Agriculture	4.46	4.04	3.99	4.03	3.93	3.96
Rural Roads	0.21	0.39	1.08	1.05	0.89	1.48
<b>Sector Total</b>	<b>4.67</b>	<b>4.43</b>	<b>5.08</b>	<b>5.08</b>	<b>4.82</b>	<b>5.44</b>
Program Requirements		6	7	8	9	10
<b>Financial Gap</b>		<b>1.56</b>	<b>1.92</b>	<b>2.91</b>	<b>4.17</b>	<b>4.55</b>

Source: *National Development Plan 9: 2003/04–2008/09*, March, 2003, pp.88–89.

## V. MONITORING AND EVALUATION

V.1. The main instrument for monitoring and evaluation of the implementation of programs and projects is the Quarterly Reporting System. The system is very elaborate requiring managers to submit detailed information on the implementation of each component of every project. The report has two parts: physicals accomplishments and financial performances. On the physical side the format monitors the duration of the execution of the project and intends to assess the validity of explanations provided to justify delays or changes in the original implementation schedule. Likewise on the financial side it deals with original cost, actual expenditures, differences between planned and actual expenditures and demanding in all cases justifications and explanations for changes if any.

V.2. The GOB has created a separate reporting and monitoring system to closely follow–up the implementation of the NSPR. The *Rural Development Council*, which is empowered to oversee program development and the coordination of the NSPR, is also mandated to monitor the implementation of the strategy. To execute its responsibilities efficiently the Council has in turn established a *Multi–sectoral Committee* consisting of representatives of stakeholder ministries, NGOs, CBOs and the private sector. The main thrust of the monitoring system is to ensure the timely reporting of the progress made and proposals for remedial actions, if hindrances are faced. The main instrument for monitoring and evaluating the implementation of the PRS is what is known as the Logical Framework Matrix. The *Minister of Finance and Development Planning*, who is also the chairman of *Rural Development Council*, will bi–annually report to the cabinet and later to the parliament on the progress made in implementing the Poverty Reduction Strategy.

## **ANNEXES**

- Annex 1: Ongoing Government and Partners Sector Investment Pipeline and Linkages to CAADP**
- Annex 2: Summary of Projects Selected for NEPAD/CAADP Financing**
- Annex 3: List of References**



**Annex 1: Ongoing Government and Partners Sector Investment Programme  
and Linkages to CAADP**

**A. Government Investment Programme**

Sector/Policy/Activity	Potential Relevance to CAADP Pillars				
	1	2	3	4	5
<b>Agriculture and Livestock</b>					
<i>Dairy Improvement</i> – Designed to provide dairy facilities where farmers can sell their milk for pasteurization and distribution.					X
<i>Livestock Development</i> – Aims at providing livestock marketing and management infrastructure, drilling grants to farmers & strengthening own farm artificial insemination.					X
<i>Animal Disease Emergency Control</i> – The project aims at controlling and eradicating livestock diseases including tse-tse eradication and control of animal movement.					X
<i>Improvement of Disease Control</i> – The objective of the project is to improve the delivery of health services by constructing additional offices providing equipments, and accommodation to health service staffs.					X
<i>Poultry Development</i> – The objective of the project is to study indigenous poultry and ostrich strains and improve their management through research and extension services.					X
<b>Crop Production</b>					
<i>National Master Plan For Arable Agriculture and Dairy Development (NAMPAADD)</i> – The project is designed to improve the productivity of crop and dairy production and to enhance food security.			X		X
<i>Crop Production and Protection</i> – Aims at facilitating increase production of the main food grain, create employment, income and improve national food security.			X		
<i>Cooperative Development</i> – Aims at expanding services to farmers in rural areas particularly in marketing services and supply of inputs and mobilization of savings and provision of credits to members.			X		X
<i>Research Development</i> – The components of this project includes: <ul style="list-style-type: none"> <li>• establishing bio-technology &amp; bio-safety laboratories</li> <li>• farm machinery development</li> <li>• food technology laboratories</li> <li>• development of appropriate irrigation systems</li> </ul>				X	
<i>Horticulture and Water Development</i> – Aims at improving water sources in the form of small dams to avail water for irrigation and providing marketing infrastructure needed to make the diversification of agricultural activities efficient and competitive.	X		X		
<i>Development of Extension Services</i> – The objective of the project to strengthen the extension services to crop production and forestry sub-sectors.			X		
<i>Land Resources Management</i> – The main components of the project are: <ul style="list-style-type: none"> <li>• Vegetation inventory and monitoring</li> <li>• Soil survey and mapping</li> <li>• Land using inventory and mapping</li> <li>• Ranch demarcation</li> <li>• Rehabilitation of degraded lands</li> </ul>	X				

NEPAD – Comprehensive Africa Agriculture Development Programme  
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Sector/Policy/Activity	Potential Relevance to CAADP Pillars				
	1	2	3	4	5
<b>Environment</b>					
<i>Natural Resources Management</i> – The components of the project include: <ul style="list-style-type: none"> <li>• Review of the agricultural resources conservation</li> <li>• Herbage preservation and forest acts</li> <li>• Formulation of forest and fire management policies</li> <li>• Assessment of the impact of veld fires on veld products</li> </ul>	X				
<i>Environment Management Activities</i> – The component of the project include: <ul style="list-style-type: none"> <li>• Environmental assessment and audits of NDP9 Policies Programs and Projects</li> <li>• Environmental education</li> <li>• Information technology interventions</li> </ul>	X				
<i>Community/Private Sector Support</i> – The project aims at promoting community based natural resources management programs	X				

**B. Activities/Interest of Major Donors**

Donor	Area of Interest/Project	Potential Relevance to CAADP Pillars				
		1	2	3	4	5
EU	Interested in Poverty Alleviating Projects			X		
FAO	FAO is assisting MOA <ul style="list-style-type: none"> <li>– In designing, processing and analyzing agricultural and farm management</li> <li>– In preparing training manuals both for farmers and extension workers.</li> <li>– In the formulation of national irrigation policy.</li> </ul>	X		X		
Common Fund for Commodities (CFC)	The fund is financing a project designed to improve the production, processing and marketing of hides and skins.					X
Global Environment Facility (GEF)	The agency is involved in the financing of the Indigenous Vegetation Project	X				

## **Annex 2: Summary of Projects Selected for NEPAD/CAADP Financing**

### **1. Improvements of Tsetse Fly Control Surveillance**

#### ***a) Background***

During NDP9 the GOB successfully implemented a tsetse fly eradication program from a land area covering 16,000 km<sup>2</sup> of the Okavango Delta. The government, however, decided to terminate the annual aerial spraying operations in 1992 due to environmental considerations. In lieu of this the government introduced the Odour–Bait technique which it considered to be environmentally friendly method. The technique worked well for some time mainly due to continuation of long drought periods that made the area easily accessible. However, the resumption of the normal rainy seasons made access to many of the target areas difficult. This led to the gradual deterioration of the routine management of the target on the scale required as a result of which the tsetse population slowly began to recover.

In 2000 the tsetse fly population had almost doubled and cattle close to the edge of the Delta began to contract trypanosomiasis. Thus, after 15 years Nagana reappeared and over 300 cattle died of it. With more than 120,000 cattle at risk of becoming affected by the re–emergence of the tsetse fly the direct loss in animal production and reproduction due to mortality and infertility is feared to be quite significant. If the situation is not quickly brought under control it could lead to reducing the entitlement set of the farming families in the delta. In addition, there is also the concern that the human trypanosomiasis might occur with the detrimental effect on the tourist industry that employs about 13,000 people. The tsetse and trypanosomiasis problem is also of a transboundary nature affecting Namibia, Angola and Zimbabwe that share a common tsetse fly boundary.

#### ***b) Objectives and Benefits***

The over all objective of the project is to eradicate tsetse flies from the Delta and prevent the reinvasion of tsetse flies from the neighbouring countries of Angola, Namibia, and Zimbabwe.

Controlling trypanosomiasis not only has the effect of reducing livestock mortality but also improves the general health of animals and leads to body weight increases and improvements in meat production and milk yields. In addition, to the direct benefits the project would also enhance the growth of crop production through improved supply of draught power and increased capability to transport heavy materials. The control of tsetse fly would also help the unhindered growth of the tourist industry. On the whole the direct and indirect benefits would result in increasing the population's entitlement sets and hence reducing poverty levels and improving food security both at household and national levels.

#### ***c) Project Description***

The project is expected to run for four years and would comprise of the following components.

- Tsetse fly surveillance;
- Prophylactic treatment of sick animals;
- Aerial spraying;
- Sterile insect technique.

*d) Indicative Cost*

The total cost of the project is estimated to be US\$18,1m of which the government is expected to contribute US\$3.5m or 19 percent of the total cost.

**2. Land and Water Resources Management**

*(The Pandamatenga Project)*

*a) Background*

With a fertile soil and a rainfall of 600 mm in a year Pandamatenga is one of the most suitable areas for dry land crop production in Botswana. With the view to exploiting this potential 50 commercial arable farms, each with a size of 500 ha, were developed on 25,000 ha of land. The objective of the development was to boost local production as part of the national drive to achieve self sufficiency in cereal grain production. The farms however, did not succeed very well in contributing to the realization of the goal because of low productivity. At the planning stage the farms were projected to yield 1.7 to 1.9 metric tons per hectare. Actual yield, however, ranged only from 0.5 to 1.4 mt/ha. Although the actual yield of the farms is lower than the projected ones, it is still quite high compared to the national average of 0.3 mt/ha. As a number of studies that assessed the performance of the farms showed the main obstacles to achieving satisfactory yields on the farms were the frequent flooding of the farms and the lack of all weather road net works within the farms.

*b) Objectives and Benefits*

The objective of the project is to remove the major constraints to increase the productivity of the commercial farms through the provisions of drainage systems and the construction of an all weather internal road net works.

The removal of the constraints with improvements in farm management's practices is projected to increase yields from 1.5 to 4 mt/ha. This will help the country reduce its heavy dependence on grain imports. It will also generate additional employment opportunities and also pave the way for the development of agro-industries. The project is, thus, targeted to contribute towards the goals of improving food security situations at household and national levels and also alleviating poverty.

*c) Project Description*

The project consists of two major components. The first one is the construction of an all weather internal road net works measuring 160 km. The second component is that of constructing drainage channels measuring 150 km to drain the excess water while attenuating peak run off discharge to conserve moisture.

*d) Indicative Costs*

The total cost of the project is estimated to be US\$65.4m. Of this, the government is expected to contribute US\$16.3m or 25 percent of the total cost.

### **3. Establishment of Plant Quarantine Facility and Phytosanitary Services**

#### ***a) Background***

Botswana is a net importer of food and other commodities of plant origins. With each importation of plant material into the country, it runs the risk of introducing new pests and diseases. The risk also extends to the non-acceptance of Botswana's agricultural products to both the regional and international markets.

The various on going programs in bio-technology and germplasm exchange from all over the world introduces new forms of risks on a scale that was not seen before. Botswana as a signatory to the *World Trade Organization* (WTO) is also obliged to comply with the sanitary and phytosanitary agreements.

The Government of Botswana over the years has invested large sums of money in crop production and forestry. The increased investments in crop production have not been matched by increased investments in plant protection services which have a bearing on the sustained growth of the sub-sector.

This project aims at providing the country with urgently needed infrastructures to set up a strong foundation for an efficient plant protection services.

#### ***b) Objectives and Benefits***

The objective of the project is to build phytosanitary and sanitary the facilities and the capacity to secure common and effective actions to prevent the introduction and spread of pests and diseases of plant and plant products into the country. By improving the access to inputs and plant materials of high quality which are free of diseases the development of the facilities will strengthen the national effort to ensure the sustained growth of crop production. The phytosanitary facilities by promoting the efficient use of both the flora and fauna of the country will also help develop the conditions that will support the policy of diversification of agriculture.

#### ***c) Project Description***

The project consists of the construction of:

- 25 office blocks to accommodate specialist staffs at the headquarters' in Sable;
- Three laboratories for testing, processing, fumigating, and inspecting plant materials;
- Upgrading of office and accommodations facilities at five gazette border posts;
- Provision of equipments to improve capabilities and prompt delivery of services.

#### ***d) Indicative Costs***

The total cost of the project is estimated to be US\$3.5m of which the government is expected to put up close to US\$0.8m or 22 percent of the total cost.

#### **4. Management and Control of Migrant Pests**

##### ***a) Background***

In order to enhance food security and also alleviate poverty the government attaches high priority to the growth of output and productivity of the crop sub–sector. Among the constraints that limit the growth of crop production is the crop losses due to migrant pests. According to a study by FAO, damages on crops by pests in Africa are estimated to account for as much as 30 percent of total crop damages. The reality in Botswana is not expected to be any different from the general situation in Africa.

The three migrant pests that are most common in Botswana are the *quelea* bird, locust, and the army worm. *Quelea* bird occurs more often than the other migrant pests and is a very serious pest of sorghum and millet which form part of Botswana’s staple food. The locust and the army worm also cause a serious damage on cereals crops and grass lands.

The project is intended to improve the existing management of migrant pests through capacity building and the provision of base line data on crop losses due to migrant pests.

##### ***b) Objectives and Benefits***

The over all objective of the project is to control or minimize crop losses on fields due to migrant pests and to eventually decrease migrant pest population so as to ensure increases in the productivity of agriculture on a sustained basis. More specifically the project aims at reducing crop losses from 30 percent to 15 percent and there by contributing to the realization of the national target to raise cereal yields from 200 to 500 kg per hectare.

##### ***c) Project Description***

The project will be carried out in six components which consist of:

- Environments impact assessments of pest control methods;
- Development of crop damage assessment methods for *quelea* bird;
- Capacity building;
- Promotion of integrated pest management;
- Evaluation and monitoring of the spray techniques;
- Mapping the distribution pattern of *quelea* bird sites and crop damage assessments.

##### ***d) Indicative Costs***

The total cost of the project is estimated at US\$2.1m of which the government is expected to put up 25 percent of the total cost.

## **5. Beekeeping Project**

### *a) Background*

Beekeeping is one of the economic activities that the Government of Botswana promotes to diversify the rural economy and to lessens the dependence of the rural communities on livestock and arable production. The diversification effort will enable the farmers to generate additional income that will increase their entitlement set and contribute to enhancing of food security and reduction of poverty at household level.

### *b) Objectives and Benefits*

The over all objective of the project is to promote the development of beekeeping and to increase honey production through transfer of appropriate beekeeping technologies to the farming communities. The benefits of the project include:

- Alleviation of poverty among rural and urban communities through generations of additional incomes
- Improvements of the health status of the population by using bee products as supplementary food staff and for medical purposes
- Creation of additional employment opportunities
- Reduction of imports and foreign exchange savings
- Contributions to GDP growth

### *c) Project Description*

The project has the following components which include:

- Training of skilled beekeeping professionals;
- Establishing 2 bee breeding stations;
- Establishing 2 bee products processing plants;
- Conducting farmers training;
- Establishing 50 income generating projects;
- Conducting research on Varroa Mites pest;
- Providing 6 vehicles to strengthen the extension services to the farmers.

### *d) Indicative Costs*

The total cost of the project is estimated to be US\$2.8m of which government contributions is expected to be about 33 percent.

## **6. Agro–chemicals and Management and Control Project**

### *a) Background*

At present, Botswana uses relatively small quantities of pesticides which are, however, bound to increase with the planned effort to enhance the productivity of traditional farms. Currently most of agro–chemicals are used on the irrigated and commercial arable farms. There are more than 1,000 chemicals with primary applications in agriculture. These are used to control pests in arable crops, livestock and public health. Botswana is also signatory to a number of international agreements and conventions which call for prudent management of the movements, distributions, use and disposals of agro–chemicals. On account of all these factors the efficient management of the uses and disposals of pesticides have become major concerns.

### *b) Objectives and Benefits*

The objective of the project is to strengthen the national capacity for the efficient management of agro–chemical products. Through improved management of agro–chemicals the project intends to support NDP9's priority to enhance the productivity of cereals in both the traditional and modern farms.

### *c) Project Description*

The project consists of six components which include:

- Promotion of integrated pest managements;
- Development of pesticides residue testing laboratory;
- Removal of obsolete pesticides;
- Development of public awareness strategies;
- Capacity building and;
- Development of registration and licensing systems and websites.

### *d) Indicative Costs*

The total project cost is estimated at US\$4.5m of which the government is expected to put up about 33 percent

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