



**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 NAMIBIA

SUPPORT TO NEPAD–CAADP IMPLEMENTATION

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Volume III of VII

BANKABLE INVESTMENT PROJECT PROFILE

Support to Smallholder Irrigation Schemes

July 2005

NAMIBIA: Support to NEPAD–CAADP Implementation

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

Bankable Investment Project Profiles (BIPPs)

Volume II: Infrastructure Upgrade of Rural Water Supply

Volume III: Support to Smallholder Irrigation Schemes

Volume IV: Development of Infrastructure for Marketing Horticultural Produce

Volume V: Integrated Farming Support Programme for Resettled Farmers

Volume VI: Livestock Improvement

Volume VII: Support to Aquaculture Development

NEPAD–CAADP BANKABLE INVESTMENT PROJECT PROFILE

Country: Namibia

Sector of Activities: Irrigation

Proposed Project Name: Support to Smallholder Irrigation Schemes

Project Area: Caprivi, Kavango Ohangwena, Kunene and Omusati

Duration of Project: 10 years

Estimated Cost: Foreign Exchange US\$471.6 million
Local Cost.....US\$52.4 million
Total US\$524.0 million

Suggested Financing:

<i>Source</i>	<i>US\$ million</i>	<i>% of total</i>
<i>Government</i>	52.4	10
<i>Financing institution(s)</i>	471.6	90
<i>Beneficiaries</i>	–	–
<i>Total</i>	<i>524.0</i>	<i>100</i>

NAMIBIA

NEPAD–CAADP Bankable Investment Project Profile

“Support to Smallholder Irrigation Schemes”

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Currency Equivalents

(July 2005)

Local Currency	=	Namibian dollar (N\$)
US\$1.00	=	N\$6.57
N\$1.00	=	US\$0.15

Abbreviations

CAADP	Comprehensive Africa Agriculture Development Programme
DAE	Division of Agricultural Engineering
DBN	Development Bank of Namibia
GRN	Government of the Republic of Namibia
MAWF	Ministry of Agriculture, Water and Forestry (<i>since January 2005</i>)
MAWRD	Ministry of Agriculture, Water and Rural Development (<i>prior to January 2005</i>)
NamPower	Namibia Power Corporation
NamWater	Namibia Water Corporation
NDC	Namibian Development Corporation
NEPAD	New Partnership for Africa’s Development
NCCI	Namibia Chamber of Commerce and Industry
NIP	Namibia Irrigation Project

I. PROJECT BACKGROUND

A. Project Origin

I.1. The *Namibian Irrigation Project* (NIP) is an initiative of the Government of the Republic of Namibia (GRN), which while purposed to implement Government strategy of enhancing the performance of smallholder farming, is also supporting the implementation of NEPAD’s *Comprehensive African Agricultural Development Programme* (CAADP) in Namibia. In particular it addresses CAADP’s agricultural component: increase food security. Namibia’s northern border rivers (Zambezi, Kavango and Kunene) have potential to support irrigation development in that part of the country. Yet, Namibia’s utilisation of these resources for irrigation purpose is insignificant. Farming in the areas along these rivers remains rainfed and subsistence, dependant only on grain food crops and rearing a few heads of animals, on average less than 10 herds of cattle, goats or sheep for own consumption, thus making no meaningful living above subsistence. Supporting irrigation development along these rivers could help transform the subsistence agricultural economy of these regions into market-oriented economy livelihood of the over 70 percent of the population living in rural areas. The majority of these families spend over 60 percent of their earning (from selling their agricultural produce) on basic needs such as food, education and health care. Also, agriculture is by far the major employer in the country, directly supporting some 70 percent of the population.

B. Economy, Agriculture and Food Security

I.2. Namibia is almost 100 percent self-sufficient in red meat production but imports 60 percent of its total grain food requirements and 90 percent of its horticultural commodity consumption requirements.

I.3. Over the past 15 years agriculture’s contribution to the national economy has fluctuated between 9 and 10 percent. Most of this contribution coming from livestock production — 98 percent of agricultural income is earned from livestock, mostly from the commercial sector. The livestock sector also comprises 90 percent of agricultural exports, which in turn is more than 15 percent of national export earnings.

I.4. The main agricultural enterprises are livestock (cattle, sheep and goats); grain crops (maize, millet, wheat, barley, and sorghum). Horticultural, including fruits production is limited to mainly grapes, dates, cabbage, spinach, onion, carrots sweet potatoes and potatoes, but to very limited quantities.

I.5. The agricultural sector supports 70 percent of the country’s 1.8 million persons. Yet the sector is characterised by scarce productive land and fragile soils, coupled with erratic rainfall regime. And persistent periods of draught over the past 20 years or so have made access to natural resources for agricultural production even tighter. About 34 percent of the total land area (824,300 km²) receive an average annual rainfall of 400 mm and therefore regarded good for reliable crop production. But, then, due to poor soil conditions, only one percent of the total land area is regarded good for rainfed or irrigated arable farming. (Some 97 percent of soils have clay content of less than five percent).

I.6. Until today, agriculture in Namibia is distinctively divided into two farming systems — a commercial sector, which operates on title deeds land, and a communal sector, which operates on state land run under the traditional authority and the *Land Boards*. The communal areas directly support about 95 percent of the nation’s farming population, which is about 71 percent of the country’s total population, but occupies only 48 percent (33.5 million ha) of total agricultural land. Average land size

is 2 ha supporting a household containing on average 6 persons. The communal sector contrasts with the commercial sector in that the latter operates on 36.2 million ha, mainly used for extensive ranching, is made up of 6,200 freehold title deed farms belonging to about 4,000 large-scale farms each having an average landholding of approximately 8,620 ha. This sector's primarily produces for the market. In contrast with the communal farming sector that is subsistence. The latter is whole rainfed-based and is characterised by low levels of inputs and productivity and low utilisation of improved technologies.

C. Irrigation Development

I.7. Namibia's irrigation potential is between 40,000 and 50,000 ha depending on the limits that one set on the distance from, and the height above watered resources¹. Yet irrigation farming in the country has been limited and developing slowly indeed. Total area under irrigation in the country has grown from 5,000 ha in 1990, to only 8,600 ha in 2004. Most of the irrigation is confined to the commercial sector or State/Parastatals farms (over 90 percent). In 1990 for example, commercial sector occupied 4,550 ha of irrigated land, while small farmers, who make up 95 percent of the total farming population, were only irrigating about 300 ha. Today, of the 8,600 ha total irrigated land, only 650 ha are irrigated by small farmers (mainly resettled farmers on government estates).

I.8. Irrigation farming takes place either by way of flood recession, ground water, or using surface waters either pumping from the rivers or from storage reservoirs. Namibia has reached agreement with and/or is collaborating with neighbouring countries for the utilisation of border rivers with its counterpart riparian states (Angola, Botswana, Zambia) with which it shares its northern border.

I.9. Namibia's overall strategy and policy for water and sanitation sector places the provision and utilisation of water for irrigation development, among other economic activities, as second priority, with water for domestic purposes, including livestock watering taking first priority. At the heart of the policy is that in all cases, irrigation water supplied by the state is chargeable at an economic rate. This rate may be reduced through a special subsidy determined by the value of the produce relative to its socio-economic benefits. Subsequently, it requires therefore that irrigation development focus on of high value cash crops.

I.10. At present, no water fees are imposed on smallholders or commercial owners who have their own water sources. Where irrigation water is drawn from Water Affairs supplies, an annual fee of US\$52 is charged for the first 15,000 m³/ha. Thereafter, each additional cubic meter of water per hectare is paid for at a rate ranging between US\$0.0057 to US\$0.042, depending on the total additional quantity used.

I.11. Most of the existing smallholder irrigation farms are settled on Parastatals/state projects, on settler components. For all intents and purposes, provision of inputs, mechanisation services, record and bookkeeping, cropping programme, settler farmers depend on the commercial components (normally referred to as the service provider component). The irrigation project is being modelled after the existing schemes. Yet, virtually no thorough evaluation has been undertaken so far to assess the performance of existing schemes. However, what can be said at this stage is that with the exception of the commercial sector schemes, most of the Parastatals/state schemes have so far been receiving substantial support from the government in terms of operational, capital and implementation

¹ The limits have direct influence on the capital and energy costs and thus on the viability of any irrigation project.

monitoring. It might therefore be necessary to make a thorough review of these schemes to assess to what extent they have achieved their objectives before future schemes can be modelled after them.

D. Institutional Capacity in the Sector

I.12. The *Division of Agricultural Engineering (DAE)* in the *Ministry of Agriculture, Water and Forestry (MAWF)* is the main institution that has so far been responsible for the technical planning and designing and overseeing the implementation of irrigation projects. Until 2002, and in addition to their won irrigation scheme, the *National Development Corporation (NDC)* had been the implementing arm of all State irrigation projects. The same year, 2002, the NDC was resolved by the *Development Bank of Namibia (DBN) Act, Act No 8 of 2002*. Consequently, the NDC can no longer implement those projects. Its assets will be transferred to the DBN. Currently the DAE is implementing those projects including the new ones.

II. PROJECT AREA

II.1. **Geography and Climate.** The regions where the project will be implemented are 700 km north of the capital city Windhoek. With the exception of some parts in the Caprivi region, most of the project areas are readily accessible by road and with a sedan or normal 2 x 4 or 4 x 4 vehicle. Future road infrastructure needs will be developed depending on the specific location of the individual project. Average temperature range is 30°C. The specific project areas are on average approximately 70 km from the regional (main) commercial centres.

II.2. **Formal and Informal Institutions/Organisations.** The MAWF's extension and research services are decentralised to all thirteen regions in Namibia. The extension service has been limited to community mobilisation, input supply distribution, and has not handled advice regarding enterprise budgeting and business planning and management. On the other hand, the *Co-operative Division* in the same ministry has only been supporting the formation of co-operative groups. Thus, so far in the ministry, there is not institution that specialises in providing advice and support in drawing up business plans, enterprise budgeting and all other aspects related to business management or production economics. The *Irrigation Commission*² will only be responsible for appraising already drawn-up business plans and not helping farmers in the drawing them up. The *Agricultural Bank* that has so far financed agricultural enterprise has limited its support only to evaluation of business plans. The ministry is in the process of establishing two specialised functions within its exiting structure. One function will be giving advice on production economics (what to grow, how much it will cost and how much income to get from there) and a rural enterprise function that will support individual in planning and managing their enterprises.

II.3. **Target Population and Scope for Development.** Although, broadly speaking, agriculture as a whole in Namibia is risky primarily due to prolonged periods of ever-declining rainfalls³, small farmers, because of their socio-economic conditions, are more vulnerable to the drought relative to their counterparts in the commercial sector. Small farming sector is, for intense and purposes, rainfed and production is therefore only limited to rainfall periods. Farm sizes are very small, mainly between

² A body that will be constituted to co-ordinate, guide and monitor the implementation of the *Green Scheme*.

³ The latter has, over the last thirty years, gradually fallen to an average of two rainfall months per year compared to the past when rains would fall over a period of six months. Rainfall is also low (250 mm) and unreliable. In recent years, average temperatures during rainfall periods could be as high as 30 degrees Celsius, subjecting water to high levels of evaporation.

1 and 3 ha, and cultivation focuses only on food crops, mainly grain crops — millet, maize and relatively small proportion of sorghum, for own consumption. Any surplus is stored at household level against future risks, which means that very limited grain is sold. Moreover, since every household (both large and small) in these areas provides for its own grain food requirements, the market for these crops has not been developed to its full potential and possibilities for making a meaningful economic gain from these crops are therefore very slim.

II.4. Soils are also not of good quality. The majority of the fields is as old as 90 years and has been cultivated without fallowing. Soils in the project areas tend to have low water retention capacity due to their sandy nature. They also tend to have relatively low levels of fertility. The result of these factors together, is that per hectare productivity level for these farmers has fallen to low levels.

II.5. The climatic conditions also mean that rainfed-based cultivation of broadly any other crops, for example, horticulture and fruits, without additional water sources, is virtually impossible.

II.6. Opportunities for making meaningful cash income from livestock (mainly cattle, goats, sheep and chickens) are also limited in the short-to medium terms. It is also subsistence and in part affected by climatic conditions in a similar way as crops. In addition, herds are small for most farmers — on average less than 10 herds of cattle and small stock. Poultry production is insignificant. The marketing strategies and marketability of smallholder livestock and livestock products is very poor. Farmers tend to market their animals and animal products only to satisfy their immediate cash income needs. The harsh climatic condition combined with poor marketing strategies lead to farmers marketing animals with poor quality. As a result, prices received by these farmers at formal marketing channels tend to be very low compared to those received by their counterparts in the commercial farming areas.

II.7. Furthermore, due to historic neglect of black farmers, the northern communal areas specifically do not have disease free status yet. Consequently, animals and animal products from these areas have difficulties accessing local markets to the south of the country and more importantly export markets directly where producer prices are relatively higher. Thus, producer prices for these farmers are significantly low.

III. PROJECT RATIONALE

III.1. Since independence in 1990, the government with support from its international cooperating partners has made tremendous efforts towards transforming the agricultural practices of the smallholder-farming sector, which is still predominantly subsistence. There has been a policy shift in favour of improving performance of smallholder agriculture. The key principle of this policy shift has been that 80 percent of government spending in agriculture should be targeted towards small farmers and only 20 percent would be allocated towards the large (commercial) farming sector. This emphasis rested on government's strong conviction that the former, due to past neglect, has great potential to significantly increase total agricultural output, reduce unemployment and poverty, improve food security at both household and national levels, and moreover increase agricultural share to the country's gross domestic product.

III.2. Four distinctive and crucial strategies were to support this policy shift. First, the government would continue to give attention towards improving the productivity of small farmers' food crops to ensure food availability and food security at household level. Second, the government would support the diversification from traditional low yield, low value crops (mainly food crops) to high yields, high

value crops so that it can improve small farmers’ opportunities to increase their cash income from crop farming. Third, there has been a need to improve the marketability and marketing strategies of smallholder animals and animal products, through improved rangeland management practices, animal husbandry, and animal health. Fourth, the government would establish strong research and extension services to support the implementation of the above strategies.

III.3. However, there appears to be tremendous opportunity to improve small farmers cash economy through irrigation development. Existing settlement project do suggest that farmers can earn as much as over N\$10,000 per annum after repayments of expenses. In most cases this is considerably above what they could have expected from their traditional farming activities. There is even a chance to improve this figure as farmers become more experienced in irrigation farming.

IV. PROJECT OBJECTIVES

IV.1. The project intends to improve smallholder farmers’ income, from their current levels, to crop farming through irrigation development. Farmers to directly benefit from the project are those currently residing in the communal farming areas of the six northern regions of Namibia (Kavango, Caprivi, Ohangwena, Oshikoto, Oshana and Omusati). Production will be limited to high value cash crops and to land areas adjacent to the three northern border rivers (Zambezi, Kavango and Kunene rivers).

V. PROJECT DESCRIPTION

V.1. The project involves making financing by banks accessible to small farmers so that they can establish profitable small-scale irrigation schemes. Terms and conditions for traditional financing from banks, including the country’s agricultural bank and other financial institutions are not appropriate for small farmers. The government will establish subsidy schemes for the development of bulk infrastructure, that is off-land infrastructure for the supply of water and electricity; on-land irrigation infrastructure; for long-, medium- and short-term funding requirements from individual farmers. The government will further make provision for loan guarantee to a value not exceeding 30 percent of the loan requirement.

V.2. Small farmers are also limited by their lack of technical know-how regarding irrigation farming as well as marketing. To address this, experienced farmers (from the commercial farming sector) and/or other investors who are knowledgeable and have experience in irrigation farming will be given leasehold rights to land adjacent to small farmers for skill transfer to the latter.

V.3. Thus, the irrigation project will consist of individual irrigation schemes. Each scheme will consist of a group of small farmers and one experienced farmer. The suggested ration for the small farmers to an experienced farmer is 10:1. The minimum size of plot for small farmers will be 5 ha each, while that of the experienced farmer will be equal to the total of the size of individual small farmers in that particular scheme. In other words, going by the suggested ration, the total size of the land for the large farmer will be 50 ha. Farmers will be independent of one another. In other words, they will have clearly demarcated individual farming plots, make independent production and farm management decisions, including loan requirements and obligations.

V.4. However, the experienced farmer (entrepreneur)’s access to land is subject to his willingness to train and facilitate skill development of small farmers in irrigation development. He will act as a

service provider and will take on certain obligatory functions. For example, he will be obliged to engage the small farmer in effectively designed training and apprenticeship programs to convey the required know-how, best practices and necessary business management skills. He will take on the responsibility for the delivery, to small farmers, of agricultural support services at cost recovery (not premium charge). Such services include provision of water, crop production inputs, mechanisation services, and marketing and distribution services. The service provider will be able to utilise pre-determined government subsidy schemes in order to account for risk and opportunity costs incurred for the facilitation the provision of these requirements.

V.5. The relationship between the smallholder farmer and the entrepreneur/service provider will be strictly trade related. In other words, each farmer makes farm decisions independent of one another.

V.6. Participants in the irrigation project will not obtain title deed to their farming plots. The relevant *Land Boards* will allocate leasehold rights in term of the *Communal Land Reform Act*. Annual lease payments will therefore be collected by the relevant *Land Board* to a fund established to foster the regional development as constituted under the Land act referred to earlier. In addition, the relevant traditional authority will share in the profit of the scheme. This sharing will be negotiated between the project and the traditional authority concerned.

V.7. **Community Mobilisation.** The MAWF has sensitised communities in the respective regions about the opportunities provided for under the proposed project. There appears to be tremendous amount of interest from both local and foreign farmers and investors, as far as Europe. Indeed, the ministry has been inundated with queries on when the project will start. Also both local and foreign investors and farmers have placed already their application forms with the *Irrigation Commission*. Thus, once funding is made available, the project will start immediately. The ministry is also discussing/negotiating with local financial institutions in order to secure local funding.

V.8. **Marketing.** Most of what will be produced under the project will be high value horticultural crops that make better economic use of scarce water. At the moment, Namibia imports over 90 percent of its horticultural produce from South Africa. Because, in part of Namibia's historic association with South Africa, local wholesalers and traders have established longstanding purchase/supply contracts with South African producers and suppliers of fresh horticultural commodities. This has been a serious disincentive for Namibian producers as they have not been able to penetrate this market. Currently, the government is implementing a complementary project, called the *National Horticultural Development Initiative*, which is purposed to open up local markets for locally produced horticultural commodities. The results so far have been encouraging and local traders/wholesalers are willing to buy local producers provided they have constant supply of comparable qualities and prices to that of produce coming from South Africa. In this regard, the involvement of “*Team Namibia*” through the *Namibia Chamber of Commerce and Industry* (NCCI) is very crucial.

VI. INDICATIVE COSTS

VI.1. Development costs are divided into two categories: the capital costs and the operational costs.

VI.2. Total **capital costs** for irrigation development under the over irrigation project for a period of approximately 20 years beginning 2004 is estimated at N\$2.5bn to develop a total area of 40,000 ha of which 58 percent is for on land irrigation systems and the remaining 42 percent for bulk infrastructure. Average total capital costs per ha N\$71,000. This amount includes N\$25,000 bulk water infrastructure

up to the farm gate, land preparation N\$9,000, and N\$25,000 for on-land irrigation system development. However, for table grapes it can be as high as N\$300,000 per ha.

VI.3. Development costs will vary from scheme to scheme, depending on the circumstances. The following are just a few parameters that will play a role in determining the final cost of any particular scheme.

- Locality of the project in terms of distance over which materials will have to be transported;
- Abstraction conditions will determine the type of pump stations to be built;
- Distance from the river to the irrigation fields will determine the pipeline length and sizes;
- Availability of existing power will determine the new infrastructure needs (power lines, sub-stations and transformers);
- Existence of good access roads will dictate how many and what quality of new roads will have to be constructed;
- The degree to which land clearing (de-bushing) and land preparation (ripping and/or stone removal, levelling) have to be done;
- The crops to be planted will determine the type of irrigation systems to be used (fruit trees – micro or drip irrigation systems, maize, wheat or groundnuts – centre pivots or sprinkler systems);
- Water quality in terms of impurities will determine the degree to which water has to be filtered;
- Crops like grapes require very high capital costs for the construction of trellises and pack houses;
- Different crops have different needs in terms of mechanization requirements and this is a very significant cost attribute;
- Finally the necessity for packing and/or cooling as well as for storage facilities has a significant influence on capital development costs.

VI.4. **Operational costs.** As with capital costs, a number of factors influence the production, harvesting and processing and marketing costs. Again, only a number of important considerations are mentioned below. There could be many others.

- The type of crop. For example, the annual budget to cultivate one hectare maize differs tremendously (by approximately 400 percent) from the annual budget requirements for the same size for table grapes;
- Energy requirements will differ for different schemes because of differences in pumping heights and flow rates;
- Water requirements differ for different crops and water costs will therefore be for example much higher for Lucerne than for date trees;

- Certain crops like table grapes, paprika and cotton are very labour intensive and this can add significantly to production costs;
- Post harvesting requirements in terms of washing, sorting, packing, cooling and storage of products play a major role in the operational budget.

VI.5. Indications from existing projects that operate on a financially sound basis, are that between N\$15,000 and N\$20,000 per ha per annum is required to sustain operations. This is true for production areas where two crops are cultivated on the same land per annum, and one must remember that inputs for the second crop have to be purchased before the first harvest is sold. For table grapes the budget is approximately N\$80,000 per head per annum. The total operational budget to cultivate 40,000 ha will therefore be about N\$800m per year. It should be noted that the actual cost would depend on the nature of each individual project.

VII. PROPOSED SOURCES OF FUNDING

VII.1. Off-land or bulk infrastructure for the provision of water and electricity will be the responsibility of government. Two options are being considered. First, government uses the development budget for this infrastructure for both water and electricity for supply to the irrigation schemes. Second option would be for the relevant institutions — in the case of water supply, NamWater, and NamPower in the case of electricity supply — to finance the setting up of these infrastructures and charge the appropriate levies as they would under their normal business activities. The government’s role in this case will be to support the cost of maintenance charges. The government is discussing the second option with the relevant institution.

VII.2. Each farmer will be responsible for developing irrigation infrastructure on the farm under either loan guarantee or interest rate subsidisation or both.

VIII. PROJECT BENEFITS

VIII.1. Project benefits are primarily improved income for small farmers from agriculture, from a subsistence base to as much as over N\$10,000 per annum. The project is expected to create employment for close to 500 persons per year if we consider the irrigation development potential of between 1,000 and 2,000 ha of land per year. Namibia stands to benefit from the reduction in food import bill especially of horticultural products since the project will focus on the production of these crops. In addition, certain food crops such as maize will also be produced under the project improving food availability at national level.

IX. IMPLEMENTATION ARRANGEMENTS

A. Initiation Process

IX.1. Once funding for the scheme has been established and financing is made available, it is left to the farmers to initiate individual schemes. First, a group of small farmers with their respective service provider obtain leasehold rights to a land. The process for obtaining this include, getting approval from the traditional leader (usually a Chief) for the community within which the particular land is situated. After this they apply to the relevant *Land Board* for obtaining rights to lease that land for a specified period and purpose (in this case irrigation farming). Once the leasehold right has been formally confirmed and obtained, participants draw up project proposal, which they will submit, to the *Green Scheme* for appraisal and approval by the MAWF. Upon approval of the project, each participant is offered with a certificate which qualifies him to participate in the irrigation scheme and which he can then use to apply for loan requirements from the financial institutions of their choice under the irrigation project–financing framework. The project certificate referred to earlier only gives permission to the prospective farmer to seek funding and make other arrangements necessary before actual development of the land takes place. For example the project might require a feasibility study to be carried out first before actual production takes place. The certificate is therefore not in itself giving right for actual development of the land. That is subject to the leasehold agreement, which will be drawn up, based upon, among others, the acceptability of the project in terms of financial, economic, social and environmental aspects.

IX.2. The farmer will also enter into an agreement, loan–financing agreement with the financial institution of his/her choice. This agreement will be drawn up within the financing framework of the overall irrigation project.

B. Project Management Structure and Organisation

IX.3. The project will be implemented under the responsibility of the *Ministry of Agriculture, Water and Forestry*. The ministry is already in the process of setting up the co–ordinating body, the *Co–ordinating Commission*, comprised of persons who are experts in the field of irrigation/agronomy, policy, law. The *Commission* will act purely in an advisory and co–ordinating capacity touching matters such as the approval process of individual projects; establishment of overall irrigation project objectives, rules and guidelines; appraisal of individual projects in relation to overall irrigation project objectives, rules and guidelines; and reviewing the irrigation policy. The *Commission* will be contracted over a period of 5 years, renewable.

IX.4. The MAWF will be supported by the key ministries fulfilling their roles according to their individual mandates. For example the *Ministry of Lands, Resettlement and Rehabilitation* will be responsible allocation of leasehold rights and the final approval of such rights. The *Communal Land Act* gives the authorisation of leasehold rights to the *Land Board*. However, such authorisation is subject to the consent of the traditional authority of the community in whose communal area the land is situated.

X. RISK AND ASSUMPTIONS

X.1. The success of this project will depend on financing made available to set bulk infrastructure, and for lending to farmers.

X.2. It will further depend on extent to which:

- small farmers acquire the required skills and can operate independently;
- local markets open up for local produce — i.e. traders are open to local produce and local produce is comparable to that imported particularly from South Africa with respect to reliable supplies and prices;
- the other stakeholders are willing to adhere and committed to the initiative.

Appendix: List of References

1. **Government of the Republic of Namibia, MAWRD.** 1995. *National Agricultural Policy*. Windhoek.
2. **Government of the Republic of Namibia.** *Etunda Irrigation Monitoring Report*. Windhoek.
3. **Government of the Republic of Namibia, MAWRD.** 2003. *Green Scheme Irrigation Policy*. Directorate of Planning. Windhoek.