NATIONAL IRRIGATION PLAN (NIP)

Firth National Development Plan
2006-2011

Ministry of Agriculture and Cooperatives
INTRODUCTION

- Zambia is very vulnerable to weather and climatic vagaries
- This affects food production, national and household food security
- Urgent need to break cyclical pattern of food insecurity and low productivity
- A National Irrigation Policy and Strategy have been developed
- A National Irrigation Plan (NIP) within context of Firth National Development Plan (FNDP 2006-2011) is a logical follow up
IRRIGATION POTENTIAL

- Over 1,740,380 million cubic metres of underground water resources
- Over 423,000 ha of irrigable land
- About 100,000 ha is actually irrigated among large scale, emergent and smallholder farmers
- Government wants to transform the irrigation potential into reality to achieve food security,
- NIP is a strategy for full, efficient and sustainable exploitation of both surface and underground water resources by promoting irrigation in its various forms and targeted at the different farmer types to ensure all round agricultural production of food, cash, export and industrial crops.
MISSION, VISION, OBJECTIVES AND TARGET GROUPS

- **Mission:** is to expand the production base, productivity and stability of irrigated farming systems through the use of improved and appropriate irrigation technologies and services.

- **Vision:** is “to promote development of an efficient, competitive and sustainable agricultural sector, which ensures food security and increased income”.

- **Objective:** to promote the use of irrigation to accelerate sustainable agriculture development.

- **Target Group:** is inclusive of smallholders, emerging commercial and large scale commercial farmers, all living in areas with a high potential for irrigation.
PROPOSED INTERVENTIONS

- Finance and Investment
- Policy and Legal
- Institutional and Social
- Market Linkages

NIP interventions should be implemented as a mutually reinforcing set in complementarity in order to stimulate an irrigation-based agricultural industry required to generate economic impact.
Establishment of an Irrigation Development Fund (IDF): The IDF would be a source of capital for investment in irrigation-related projects and acquisition of technology by farmers and industry operators falling in the following categories:

1. **Peri-Urban farmers** (boreholes, irrigation systems, pumps, pipes, drips, sprinklers, etc) for cash and export crops in peri-urban areas;
2. **Outgrower farmers** (Treadle pumps, sprinklers, drips, pipes, etc) for cash and food crops linked to contract/outgrowing in rural and peri-urban areas;
3. **Smallholder farmers** (watering cans, treadle pumps, rope and washer pumps, low pressure sprinklers, low cost drips, etc) to utilize water from dambos, rivers, streams, lakes and other water bodies for food and cash crops in rural areas;
4. **Large scale commercial farmers** (centre pivots, selfmoved systems, rain guns, fixed systems, etc) to produce cash, food and export crops;
5. **Other private farmers** requiring to establish medium to long-term large water transfer systems such as dams, weirs, canals and pumps at individual farm level.
6. **Manufacturers** of irrigation equipment and tools wishing to expand or test new irrigation technology for import substitution and cost saving,
7. **Communal water supply systems**: financing of communal water supply systems of a public nature, for irrigation drawing from existing water bodies like lakes, rivers, dams, canals, etc.
**POLICY AND LEGAL**

- **Reduction of cost of energy:** Electricity and diesel are key inputs in the utilisation of irrigation technology. In order to encourage more investment in the short term, a reduction in electricity tariffs and pump price of diesel are proposed at 75% of market rates for the next 2-3 years.

- **Reduction in cost of Irrigation Equipment:** Most equipment required for irrigation is imported and therefore subject to duty and VAT charges. It is recommended that during the first 2-3 years of NIP, duty and VAT on basic irrigation equipment be reduced to a manageable level. It is also important that customs and excise duty as well as the base lending rate for irrigation equipment loan be reduced.

- **Improved Incentives for investing in Irrigation:** Apart from the above incentives, it is proposed that tax rebates on irrigating farmers be implemented to encourage retention of re-investable capital.
Streamlining Issuance of Water Rights: streamlined process of acquiring and renewal period for water rights in order to improve access to communal water bodies.

Improved Capacity for MACO Extension: MACO staff need training and re-orientation to irrigated and market oriented farming. Investments will be required in improving technical skills and knowledge, development of irrigation extension packages for the different types of farmers and systems, outreach and mobility are supported.

Improved Capacity of Farmer Organisations: Farmers and their organisations require technical, managerial and agri-business skills related to application of irrigation technology. Training will be required in these aspects.

Support to Outgrower Promoters: In terms of expansion of outreach and mobilization capacity, outgrower promoters dealing with irrigation will require support in form of transportation.

Support to Irrigation Research: improve research capacity at the National Irrigation Research Station (NI RS) at Nanga to maintain, generate and disseminate improved technology packages. Assist Technology Development and Advisory Unit (TDAU) at the University of Zambia to improve its capacity to test and manufacture irrigation equipment.
MARKET LINKAGES

- Irrigation is a high cost enterprise and for it to pay back quickly, requires strong market support and linkages.
- Link NIP to Agriculture Market Development Plan (AMDP)
- Consider market factors during appraisal and evaluation of proposals submitted for assistance
- Target high potential areas
- Identification of the right crop enterprises
- Mobilise irrigation farmers through farmer organizations/groups to reduce transaction costs
- Impart market skills to farmers and their groups
- Improve access to regional and international markets for the irrigated products through improved Sanitary and Phyto Sanitary (SPS) advisory services and facilities.
CROSS CUTTING ISSUES

- **Environmental Considerations:** Irrigation interventions tend to generate some environmental impacts. The proposed set of technical interventions shall be subjected to an environmental impact assessment before they are approved for funding.

- **HIV/AIDS Considerations:** Most of the proposed irrigation interventions have potential to mitigate the impact of HIV/AIDS on livelihoods through their labor-saving capacity, increased production of nutritious foods and income generation.

- **Gender:** Women contribute 70% of agricultural labour and participate in both cash and food crop production. Therefore, user friendly and affordable irrigation technologies will be identified to enhance the participation of women.
IMPLEMENTATION
ARRANGEMENTS

- MACO to establish an Irrigation Development Agency (IDA) with four components (IDF, CWDU, I&SSU, and Finance and Administration)

- NIP interventions through a Steering Committee.
  - MACO PS as chairman
  - MACO Director of Agriculture
  - ZNFU (two members, including a farmer)
  - National Association for Peasant and Small Scale Farmers
  - Agri-Business Forum
  - Representative of irrigation equipment traders
  - Bankers Association of Zambia
  - MFI Representative
  - MACO, TSB (Secretariat)

- Use MACO institutional hierarchy of PACO, DACO and BEO and CEO to facilitate, awareness creation and technical backstopping roles.
COSTS, FINANCING AND RETURNS

- GRZ political will and leadership good
- Winter Maize project and PRP budget line for irrigation initiatives.
- Far greater commitments required to stimulate irrigation farming.
- Follow funding precedents of the Food Security Pack, Fertiliser Support Programme, Rural Investment Fund, etc
- NIP is a home grown Initiative financially supported through the National Treasury as special programme under National Development Plan.
- Total budget is estimated at US$150million for the five year period
- Cost-Benefit Ratio is estimated at 1.7
- Net Benefit Income is estimated at US$104 million whose Net Present Value is US$79.2million
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<th>Strategy</th>
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<tr>
<td>Irrigation Development Fund (IDF)</td>
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<td>Infrastructure Development (public)</td>
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<td>Institutional and Social</td>
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