

CAPE TOWN DECLARATION

October 2000

In all developing countries of the world, population growth puts pressure on available water resources and increases the demand for food. Technological and managerial improvements have led to higher food production and increases in the real per capita gross domestic product (GDP), a proxy for real income per head of the population. Over the last 50 years the GDP per capita has more than tripled for Asia, more than doubled for Latin America, but only increased by 55% for Africa. Furthermore, HIV Aids and tropical diseases like malaria will have a significant impact on Africa's GDP. It is estimated that by the end of the next decade GDP per capita will be approximately 5% less than in each country than it would have been without Aids.

Management of irrigation schemes is a complex task and the necessary managerial skills are often lacking, particularly in modern, often high technology, systems. This calls for increased professionalism in irrigation management through specialised service providers, using more sophisticated tools. The opportunity to provide this level of support for irrigation system management is often limited in practice, especially where irrigation is part of a development initiative.

Thus, planners and designers must understand users' needs clearly before they can offer appropriate technologies and designs for people to choose between. A user-orientated approach is recommended with the added provision that particular attention is paid to understanding and addressing the decision making priorities of stakeholder groups such as poor people, women and men. Improved access to irrigation, appropriate technologies for individual and collective operation and pro-poor institutional arrangements are recommended. Micro-irrigation is particularly suited to provide opportunities for irrigation for small scale enterprises and female-headed farming households.

The 51st IEC Meeting held in Cape Town, together with the Micro 2000 Congress and associated workshops concluded the Golden Jubilee Celebrations of the ICID, by addressing burning issues relevant to irrigated agriculture on the African continent. Sensitive to the dynamics of food security, poverty alleviation and dwindling water resources, the ICID submits the following as recommendations for consideration and implementation.

1. APPROPRIATENESS OF MICRO-IRRIGATION FOR POOR WOMEN AND MEN INVOLVED IN FARMING

- Micro-irrigation systems have great potential to create significant opportunities for smallholder agriculture, including farm operations managed by women.
- Farmers and technical people must work together to analyse gender impacts and poverty reduction, ensure gender visibility and appropriate policies, technical development and research agendas and to disseminate lessons learned.
- Appropriate and innovative use of micro and other irrigation, both inside and outside irrigation schemes should maximise poor women and men's access to land and water.
- Micro-irrigation techniques and management may need to be adapted to specific needs of women and men.
- Participatory involvement in design and management and in developing simple management procedures is needed to capture the benefits of water-saving strategies and technologies.
- Men and women farmers should be involved in decision-making at all levels from field to river basin on technology choice and water management in proportions that reflects the gender balance among users.

2. APPROPRIATENESS OF MICRO-IRRIGATION TO SMALL FARMER DEVELOPMENT AND POVERTY ALLEVIATION

Micro-irrigation can play a significant role in poverty alleviation among smallholder farmers in rural areas. It can contribute to increased crop yields of high-value crops such as vegetables and fruit,

especially under conditions of water scarcity. Proper business management, including attention to crop choice, market outlets and access to credit is also needed to reap the benefits of improved product quality and higher yields.

3. APPLICABILITY OF MICRO-IRRIGATION TO COMPREHENSIVE PLANS TO REHABILITATE IRRIGATION SCHEMES

Micro-irrigation is one of numerous tools for rehabilitating irrigation projects. Whereas micro-irrigation is an application technology, softer techniques such as irrigation scheduling provide additional opportunity for significant and positive change.

The water economy feature of micro irrigation ensures it has an important role in water use efficiency and high production. Upgrading and modernising systems through attention to adequate storage and delivery facilities is required to assure a reliable water supply at the right time and amount.

4. TECHNOLOGICAL DEVELOPMENT OF MICRO-IRRIGATION FOR SMALL FARMER DEVELOPMENT

Micro-irrigation has developed to the point where it is now available for developing agriculture. Further innovation and improvements should be undertaken by researchers, developmental institutions and the private sector. The aim should be to further reduce cost, to make technology ergonomically sound and acceptable to a wide range of users and to reduce and simplify managerial requirements. The availability and accessibility of support services will be one of the key success factors.

The relatively low cost per user has made micro-sprays and bucket-drip systems the delivery system of choice in an appreciable number of poverty-relief initiatives. Where systems were distributed free of charge, results have been mixed and generally negative.

5. EDUCATION AND TRAINING NEEDS

Education of potential users and advisors of the benefits of micro-irrigation is necessary to initiate a change process.

Small holder micro-irrigation development should always involve technical, business and management training for women and men farmers.

The training should be broadly based to include the operational, managerial agronomic and financial aspects, which can be accrued from a change to micro-irrigation. The training should utilise appropriate learning technology at the various levels of operation, from illiterate farmer to training of trainers at higher educational levels.

6. APPROPRIATENESS OF MICRO-IRRIGATION TO IMPROVE FOOD SECURITY WITH RELATIVELY SCARCE WATER RESOURCES

Micro-irrigation is an important tool in the drive towards food security. Its future impact on agricultural production, particularly of bio-income nature, will be determined by low-cost, appropriately designed systems and adequate training on the use of the system. Micro-irrigation has proved in many cases to be more cost effective than traditional surface irrigation systems with lined canals.

Scarce capital resources will be a constraint to investments in micro-irrigation. Promotion through private development and service providers will provide a foretaste of potential contributions and opportunity for development of low cost alternatives.

7. CONCLUSION

The Congress concluded that in view of the potential advantages of micro-irrigation, and in spite of the constraints it may have in a developing agriculture situation, currently available simplified versions of the technology can provide a stimulus to irrigated agriculture where food security is threatened and water the limiting resource.