1. Country and Sector Background

Country Issues:
Malawi’s population of about 11 million in 2003 is among the poorest in the world with a per capita income of about US$170 per year and with 60% of the population living below the poverty line. About 89% of Malawi’s poor are rural, and agriculture is their key source of income. Of these poor, the overwhelming majority (i.e., 49%) are in the Southern region; 40% in the Central region, and 11% in the Northern region. Malawi faces huge challenges in achieving the Millennium Development Goals (MDGs) of “eradicating extreme poverty and hunger” by the year 2015, which would require, among other priorities, sustained investments to increase agricultural productivity and to improve the effectiveness of agricultural investments. Raising agricultural productivity and diversifying its agricultural base to improve value-added is key to reducing the widespread food insecurity faced by Malawi’s population and to increasing rural incomes.

Sector Issues:
Agriculture is the single most important sector of the Malawi economy, contributing about 36% of value-added to GDP, employing 85% of the workforce, and contributing 90% of foreign exchange earnings in 2003. Total cultivated area in the past five years have averaged about 2.7 million hectares, of which 1.1 million hectares is held in some 30,000 estates with average farm size ranging between 10-500 hectares.1 The remainder (1.7 million ha) is under smallholder cultivation of average farm sizes of about 1 ha. Land pressures (and correspondingly extreme poverty) are severe throughout the country and, in the South, farm sizes are as low as 0.2 ha per household. The National Sample Survey of Agriculture for 1998/99 indicated that nationally, 78 percent of farmers have less than 1 hectare of land. This suggests that agricultural intensification must be the main strategy for increasing agricultural production. The dominant food staple crop

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in Malawi is maize, which is increasingly being supplemented by root crops, such as cassava and sweet potatoes, and cereals such as rice. For agricultural tradables, tobacco is Malawi’s largest export, accounting for 50% of export earnings, followed by tea and sugar. Maize and tobacco are grown throughout the country, whereas sugar and tea are produced mostly in the South.

The overarching development issue facing Malawi agriculture is the low productivity and profitability of smallholder agriculture, which has been characterized by low and stagnant yields, particularly in maize production systems. Average maize yields have remained below 1.0 metric ton/ha for the past decade. Low and stagnant yields have been influenced by dependence on rainfed farming and low level of irrigation development, poor varietal selection, declining soil fertility, and overall poor agricultural practices. Low profitability of smallholder agriculture has been influenced by weak links to markets. The challenge for agriculture is to pursue targeted investments to improve yields and strengthen market linkages to contribute to economic growth, poverty reduction and food security.

Four issues underlie the low productivity and profitability of Malawi’s agriculture. First is the issue of low irrigation development and poor water management. The country experiences unreliable rainfall combined with extended periods of dry spells which adversely affects the productivity of its agriculture. This calls for full and supplementary irrigation. Major droughts occurred in 1991/1992 and 1993/94 and floods in 1997/98 and 2000/01, which call for improved water management. Investments in harvesting and management of water during period of plenty for irrigation use during period of scarcity is critical to meeting the food and fiber requirements for a growing population.

Agricultural intensification through irrigation has the potential to quadruple yields and provide at least two harvests per hectare to the small farmer in a given year. According to an FAO Irrigation Issues paper, analysis of data from Asia showed yields per hectare for most crops increased by between 100-400% as a result of irrigation. In the same paper, it was also noted that analysis of small irrigation schemes in Africa (Kenya and Zimbabwe), where average size holdings ranged between 0.5 ha to 1.0 ha, revealed that irrigation generally contributed 25-80% of total household income, thereby contributing substantially to poverty reduction. Moreover, according to this Issues Paper (page 9), “farmers appeared to have a reasonable standard of living and were able to cover the cost of school expenditures and health needs.” Similarly, in this project’s FAO/CP preparation report, it was noted that farmers who are involved in irrigation schemes in Malawi are more food self-sufficient and economically better off than rainfed farmers. In the mid-1990s, only limited support was provided by the donor community to irrigation because the Government of Malawi’s (GOM) focus was on supporting rainfed crop production. In recent years, the GOM is committed to expanding sustainable irrigation development to promote rural economic growth and food security. At present, the total formal or semi-formal irrigated area in Malawi is only about 28,000 hectares (against a potential of up to 0.5 million ha), of which 6,500 ha is under self-help small holders schemes, 3,200 ha is under government-run smallholder schemes, and 18,300 ha is under estates, which suggests that there is a significant scope for further irrigation development. About 62,000 ha is under simple, traditional irrigation (wetland cultivation). The total irrigation potential of Malawi has been

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1 FAO International Programme for Technology and Research in Irrigation and Drainage (IPTRID), Poverty and Irrigated Agriculture, Issue Paper, No 1, January 1999.

estimated to range from 207,300 ha (Gibb Report)\(^3\) to 0.5 million ha (Dept. of Irrigation). Most of the irrigation presently is from surface water, either from diversion weirs or by pumping from rivers, or increasingly from shallow wells in Dambos (wetlands) where temporary or perched water tables are close to the surface.

The GOM has adopted a National Irrigation Policy and Development Strategy (NIPDS) on June 2000. The NIPDS, supported by an Irrigation Act passed in 2001, states that GOM will assume the role of facilitator of sustainable irrigation development in areas having potential, using a participatory approach, and will embark on developments only if the smallholder farmers in the area request such development and meet the criteria for sustainable development. The development strategy in the NIPDS aims to: (i) identify areas with irrigation potential, (ii) encourage private sector development of irrigated agriculture (estates and commercial farms); (iii) assist smallholders to develop and manage their own self-help irrigation schemes; (iv) transfer management of existing government schemes to their beneficiaries; (v) assist informal sector irrigation; (vi) enhance national capacities for irrigation development; (vii) conduct research in irrigation technology; (viii) promote the use of both simple and advanced irrigation technologies; and (ix) address the specific difficulties women face in irrigation. The proposed project will address many of these elements of the NIPDS.

The second issue facing Malawi agriculture is that of weak extension services, which has undermined the productivity of Malawi agriculture. In the 1980s and 1990s, Malawi was supported by the Bank and donors to establish a “training and visit” (T&V) extension system, which was based on using lead or contact farmers to spread technical know-how. The T&V system failed because of: (i) the shortage of useful extension messages tailored to farmers real needs; (ii) few contact farmers were interested in sharing know-how with competitors; (iii) in most cases, farmers knew more than the extension officers; (iv) adequate resources were lacking to support extension activity and there were frequent staff transfers; and (v) the surge and initial shocks of the HIV/AIDS crisis (resulting in the many youthful deaths of field staff) adversely affected effective extension delivery. In the Bank’s last agriculture operation in Malawi, the Agricultural Services Project (ASP)-- which closed in 1999, the agricultural extension component was rated unsatisfactory in the ICR because the component had little impact on improving the efficiency or effectiveness of extension delivery. There is growing recognition that the extension must shift to pluralistic approaches.

With support from Germany (GTZ), the government has prepared a new national agricultural extension policy (July 2001) titled, “Agricultural Extension in the New Millenium: Towards Pluralistic and Demand Driven Services in Malawi” which calls for the pursuit of a sound agricultural policy, recommends pluralism (multiple providers) in service delivery, and highlights the importance of the market and demand led impetus for the supply of good and services. It also calls for key organizational reforms under which extension services would be the responsibility of District Assemblies (DA), and operational decisions would be directed by all stakeholders (farmers, NGOs, DAE staff, etc.) through District Agriculture Extension Coordinating Committees and District Stakeholder panels. It is envisaged that, over time, farmers and farmer groups would contribute towards the cost of extension which would be obtained from a range of service providers. The Department of Agricultural Extension Services

DAES) would continue to be responsible for planning, regulation, and quality control of extension, and would maintain a cadre of subject matter specialists (SMS) to address specific problems and technologies but would no longer operate an extensive field force of extension agents throughout the country. The MOA has adopted the above recommendations as official policy for agricultural extension, however, implementing it remains a considerable challenge. The proposed project would seek to support some of the elements of this new extension policy in the form of demand-driven extension and farmer capacity building within the limitations of what is institutionally feasible in the project’s target districts.

The third issue facing agriculture is the HIV/AIDS pandemic. The HIV/AIDS epidemic has an overwhelming adverse impact on agricultural labor and the delivery of agricultural services and has through these channels undermined agricultural productivity, and requires creative approaches of organizing labor and rural resources for production to reduce rural poverty. According to the current CAS (May 14, 2003), the HIV/AIDS epidemic in Malawi is one of the most severe in Africa. It is estimated that 15 percent of adults aged 15-49 are infected, compared to the national prevalence rate of 8.4 percent. According to the National AIDS Commission, about 1 million adults and children were infected with HIV in Malawi in 2001. The fact that HIV/AIDS is the leading cause of death in the most productive age group (20-49 years) points to its potential adverse effects on rural labor and rural labor productivity. This is an issue being addressed in health related projects in Malawi, and the proposed project will coordinate with these efforts to see how extension messages can also embody HIV/AIDS awareness and prevention information.

The fourth issue facing Malawi agriculture is that of inadequate markets and post-harvest assets. Weak linkage of smallholders to input and output markets results in the low profitability of agriculture and low incomes. Smallholders face critical information and infrastructure constraints which results in high input costs and low output prices. Isolation of their produce from profitable markets also locks them into cropping patterns of non-diversified production. Many smallholders crop diversification has meant getting into burley tobacco production with its attendant limitations. Export prices for Malawi’s main export crop earners—tobacco and tea—have been declining, which has significantly undermined the profitability of smallholder agriculture. This calls not only for diversification away from tobacco in smallholder production systems but also of developing better links to more lucrative markets. Input costs—particularly fertilizer prices, have also been high because of high transport and other costs; fertilizer, for example, domestically retails at three times that of world prices. This calls for smallholders organizing themselves better to do bulk purchases to reduce transactions costs and lower the unit cost of fertilizers, expanding fertilizer retail networks, and/or building capacities on alternative soil conserving technologies. This project will address marketing constraints faced by smallholders under the project, provide demand-driven post-harvest assets for value-addition, and address aspects of input supply faced by resource poor farmers, including the piloting of soil conservation and fertility improving technologies.

2. Objectives
The overarching development objective of the proposed project is to raise agricultural productivity and net incomes of 52,700 poor rural households in 11 target districts of Malawi in

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a sustainable manner by providing an integrated package of support covering irrigation, agricultural/irrigation advisory services, marketing and post-harvest assets and services, and capacity building. The specific objective of the project would be to increase agricultural productivity by 50% and smallholder net incomes by 30% through: (i) developing and rehabilitating irrigation infrastructure to raise cropping intensity by 30% by especially involving the private sector and beneficiaries in scheme development and maintenance; (ii) providing demand-driven technical packages to raise smallholder productivity and diversify crop mix; (iii) improving rural infrastructure and marketing assets and services; (iv) helping mobilize farmers and build capacity of farmer organizations; and of implementing institutions.

Key performance indicators showing the achievement of project objectives would be measured by: (i) about 2,600 hectares effectively served by improved efficiency and reliability of delivery of irrigation water in rehabilitated and new schemes, benefiting 10,600 farm households; (ii) 400 water harvesting civil structures constructed and operational, comprising 100 livestock water storage structures, 100 group backyard structures, 100 soil storage and new measures, and 100 catchment/land conservation structures, resulting in soil conservation and fertility regeneration measures in micro-catchments, benefiting 5,100 farm households (iii) about 23,600 households benefiting from employment, inputs and rural asset creation through input for assets; (iv) about 13,000 farm households benefiting from the FBO fund in the form of post-harvest assets, marketing and extension services; (v) built capacity of farmers, implementing staff, service providers and institutions (benefiting 400 farm households); and (vi) overall, improved cropping intensity by 30%, agricultural productivity by 50%, and farm incomes by 30% in addition to bringing above the poverty line at least fifty percent of the assisted households within 4 years of implementing the project. Additional performance indicators on targeting, gender, HIV/AIDS, as required by IFAD, are in the log frame in Annex 3 and in the Working Papers Technical Volume.

3. Rationale for Bank Involvement

World Bank support could significantly help in addressing the preceding sector issues and constraints. The rationale for the World Bank’s involvement in Malawi’s agricultural development and rural poverty reduction is three fold: firstly, the Government of Malawi accords high priority and requested for this proposed operation, which is in the May 14, 2003 Bank Country Assistance Strategy and is consistent with the CAS’s pillars of establishing a platform for growth and improving service delivery. The CAS specifically mentions that Malawi needs to invest in a “medium-term program for enhancing [smallholder] agricultural productivity and improve farmers’ access to markets. Such a program would include improved (reliable) delivery of agricultural technology and advisory services to smallholder farmers, improved management of land and water resources, reduced cost and reliable availability of fertilizers and improved access to agricultural credit.” The proposed project is addressing most of these issues; the project is also consistent with two of the pillars of the Malawi PRSP, which seeks to promote rapid sustainable pro-poor economic growth and improving the quality of life of the most vulnerable. Secondly, Bank’s involvement adds credibility to the sector’s investment program and acts as a catalyst for the mobilization of Donor support for the sector. In fact, the Bank’s involvement has built on lessons learned in IFAD’s Smallholder Flood Plains Development Project (SFPDP), which also helped mobilize IFAD’s involvement as a co-financier of the
proposed project. Third, Bank’s involvement brings with it accumulated global experience and several years of working on Malawi agriculture (through about seven projects) from which it has learned important lessons to factor into this new project design.

4. Description

1. Lending Instrument

The proposed instrument is a Sector Investment Credit (SIL). It is proposed to finance a time slice of the MOA’s agricultural investment program, focusing on an integrated package of interlocking support, covering irrigation, and demand-driven extension and marketing. The overall project strategy is to support growth-oriented agricultural development by working with the capable poor. In line with the Malawi Poverty Reduction Strategy (MPRS), the principal target group under the project will be the economically active rural poor (those of working age and in good health but lacking productive assets) and, to a lesser extent, the transient poor (those at risk of becoming poor due to periodic or transitory shocks). While this project is aimed at promoting economic growth through development in irrigation and other activities by the capable poor, the ongoing MASAF 3 is focused on providing social protection and livelihoods enhancement. Hence, it is important that a district’s or community’s participation in this project does not exclude them from other sources of safety net type assistance.

(b) Project Development Objective and Key Indicators

The overarching objective of the proposed project is to raise agricultural productivity and net incomes of 52,700 poor rural households in 11 target districts of Malawi in a sustainable manner by providing an integrated package of support covering irrigation, agricultural/irrigation advisory services, marketing and post-harvest assets and services, and capacity building. The specific objective of the project would be to increase agricultural productivity by 50% and smallholder net incomes by 30% through: (i) developing and rehabilitating irrigation infrastructure to raise cropping intensity by 30% by especially involving the private sector and beneficiaries in scheme development and maintenance; (ii) providing demand-driven technical packages to raise smallholder productivity and diversify crop mix; (iii) improving rural infrastructure and marketing assets and services; (iv) helping mobilize farmers and build capacity of farmer organizations; and of implementing institutions.

Key performance indicators showing the achievement of project objectives would be measured by: (i) about 2,600 hectares effectively served by improved efficiency and reliability of delivery of irrigation water in rehabilitated and new schemes, benefiting 10,600 farm households; (ii) 400 water harvesting civil structures constructed and operational, comprising 100 livestock water storage structures, 100 group backyard structures, 100 soil storage and new measures, and 100 catchment/land conservation structures, resulting in soil conservation and fertility regeneration measures in micro-catchments, benefiting 5,100 farm households (iii) about 23,600 households benefiting from employment, inputs and rural asset creation through input for assets; (iv) about 13,000 farm households benefiting from the FBO fund in the form of post-harvest assets, marketing and extension services; (v) built capacity of farmers, implementing staff, service providers and institutions (benefiting 400 farm households); and (vi) overall, improved cropping intensity by 30%, agricultural productivity by 50%, and farm incomes by 30% in addition to bringing above the poverty line at least fifty percent of the assisted
households within 4 years of implementing the project. Additional performance indicators on targeting, gender, HIV/AIDS, as required by IFAD, are in the PAD log frame.

(c). Project Components

The proposed project will support smallholder farmers in 11 (out of a total of 27) districts in Malawi (namely Blantyre, Chikwawa, Nsanje, Phalombe, Zomba in the South; Dedza, Lilongwe, Salima in the Central; and Chitipa, Nkhati Bay, and Rumphi in the North, and have four main components: (1) Irrigation Rehabilitation and Development; (2) Farmer Services and Livelihoods Fund (FSLF); (3) Institution Development; and (4) Project Coordination and Monitoring and Evaluation. The criteria for the selection of districts were: (i) irrigation potential/water availability; (ii) the poverty of the area; (iii) community willingness and readiness to participate in the project; (iv) the presence of another Donor; and (v) technical readiness of the area (as determined by how advanced are the technical assessments, such as site investigations, designs, etc.).

Component 1: Irrigation Rehabilitation and Development (US$11.7 million). This component would support three key activities as follows:

(a) Selective Rehabilitation and Development of Small Scale Irrigation Schemes. This would involve the rehabilitation of existing small-scale gravity irrigation schemes and the development of demand-driven new schemes. For the existing schemes, support would be provided for the rehabilitation, upgrading and gradual management transfer of four government-owned schemes to their smallholder beneficiaries. The schemes, command area covered, and estimated rehabilitation costs are indicated in the table below:

<table>
<thead>
<tr>
<th>Scheme</th>
<th>District</th>
<th>Area (hectares)</th>
<th>Base Cost (US$ m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nkhate</td>
<td>Chikwawa</td>
<td>283</td>
<td>0.9</td>
</tr>
<tr>
<td>Muona</td>
<td>Nsanje</td>
<td>446</td>
<td>1.2</td>
</tr>
<tr>
<td>Limphasa</td>
<td>Nkhati Bay</td>
<td>466</td>
<td>0.8</td>
</tr>
<tr>
<td>Likangala Complex</td>
<td>Zomba</td>
<td>602</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Total 1797 3.8

For the new schemes, the project would support the development of 560 hectares (net 500 hectares) of new small scale schemes and 340 hectares (net 300 hectares) of mini-schemes. Eligibility criteria for these schemes is in Annex 4, appendix 1. These new schemes, including some that are already at an advanced state of preparation, would be reassessed based on the following selection criteria: (i) technical, financial, and environmental soundness of investments with low costs per hectare; (ii) low operation and maintenance costs per hectare; (iii) prospects for achieving higher returns on the investments; and (iv) beneficiary farmers that are familiar with irrigated crops. Scheme specific economic analysis would be carried out for investments greater than US$100,000. Beneficiaries both for rehabilitation and new schemes are expected to contribute 15% of the cost of the works through non-cash inputs, such as labor.

(b) Rehabilitation of Existing Small Storage Reservoirs. This would involve completing the rehabilitation of several small reservoirs in the upland Dambos, including those identified...
and prepared under an earlier DANIDA-funded project, which were never completed due to shifted donor priorities. It is envisaged that about 175 hectares (160 ha net) would benefit from these rehabilitated reservoirs. Surveys and designs for some of these sites have been completed and the support under the project would be to initiate further consultations with the communities to again confirm their needs and priorities and to proceed with the completion of the works.

(c) Small Scale Farmer Demand-Driven Rainwater Harvesting (RWH) and Catchment Conservation. This would involve utilization of the micro-catchment approach and would comprise integrating rainwater harvesting interventions with catchment conservation. Rainwater harvesting techniques for resource poor farmers would be piloted on a catchment basis based on demand. Resources would be provided for planning, design, construction and demonstration of small rainwater harvesting structures for crop, livestock and other backyard agricultural activities integrated with sustainable management of soil conservation and soil fertility. The program will target communities living within the same catchment area as the irrigation schemes, especially the rainfed plots of those members with no irrigated plots to help improve water availability and fertility on those rainfed lands and also to enable the poorer farmers to cultivate high value crops. A total of 400 group civil works, comprising 100 water harvesting group backyard works, 100 water harvesting communal livestock ponds, 100 soil storage and new measures, and 100 catchment/land conservation structures are envisaged to be constructed. For soil conservation works, priority will be given to works in the catchment areas upstream of reservoirs and intake structures to reduce soil erosion and siltation of reservoirs and canals.

Component 2: Farmer Services and Livelihoods Fund (FSLF) (US$11.7 million). This component would support the beneficiary communities, particularly those covered under the irrigation schemes, to obtain complementary services and goods for optimizing their returns from irrigated farming, to add value through micro-processing, to improve the marketing of their produce, and to build their technical and business capacities. Support provided under this component would entirely be demand-driven for proposals formulated by the eligible beneficiary groups and representative stakeholders and approved by the district assemblies under a process described in the operating manuals that the government prepared with MASAF.

(a) Support for Extension: The Government’s new extension policy focuses on developing a pluralist and demand driven extension. The extension service is being devolved to the District Assemblies (DAs). The project would support farmer-based organizations (FBOs) to obtain grants to procure support for pre-identified training they may need, on a demand-driven basis, in irrigation agronomy, soil and water management, and pest management. Farmers could either obtain technical packages from the district extension system or from alternative providers. Currently, there are a range of service providers in the project districts: district public extension workers; farmer apex organizations, such as the National Smallholder Farmers Association of Malawi (NASFAM); NGOs, such as CARE; and private extension agents working in out-grower schemes, such as those in the sugar estates in Kasinthula, Chikwawa district. The list of items eligible for support, the eligibility criteria, the thresholds for funding support and cost sharing arrangements, and the sanctioning procedures under the FBO fund are described in the FBO Operating Manual. Proposals by farmer groups for extension services of a pure public good nature, smallholder farmer training and capacity building would be funded on a 100% basis by
the project. Typically, a sub-project proposed by an FBO with membership of about 15 farmers will be provided funding support of up to US$3,000.

(b) Support for Inputs for Assets (IFA) Program: The Inputs for Assets Program (IFA) is a successful public works program which entails payments in the form of vouchers which could be redeemed for inputs. The program creates employment, community assets, and supports the development of remote fertilizer markets by creating effective demand. The proposed project will help scale it up by expanding its coverage to the project areas but with some modifications to the selection criteria for works. Besides roads, the eligible works will include reforestation on community lands, construction of water harvesting structures, and soil conservation works, benefiting several farm lands. Another stipulation will be that the wage component will not be less than 50% of the estimated cost of work. The fund and accounting management of the program will continue to be by MASAF. Government, working with MASAF, has prepared an Operating Manual for the program which includes eligibility criteria and procedures for accessing funds.

(c ) Support for Marketing and Post-Harvest Assets. This activity would be focused on addressing the marketing needs of the target group of farmers supported under the project and also making a start on a longer-term development of marketing by supporting the MOA’s marketing unit with an MIS. Constraints of marketing information or infrastructure, and also value-addition through low-cost processing would be addressed on a demand-driven basis. To this effect, the project would establish a fund that farmer groups can prepare proposals for appraisal by District Assemblies/DECs and funding by the project through MASAF, on a demand-driven basis and after fulfillment of eligibility criteria. At present, there are a range of service providers that could provide marketing support to smallholders. These include the 105,000 member strong National Smallholder Farmers’ Association of Malawi (NASFAM, which has considerable experience in organizing FBOs, providing marketing advisory services for food and cash crops and is present in 5 of the 11 project target districts. Other marketing service providers include the Horticulture Development Organization of Malawi (HODOM), the Malawi Export Promotion Council (MEPC), and the Initiative for Development and Equity in African Agriculture (IDEAA) The list of items eligible for support, the negative list of items which would not be eligible (such as inputs, working capital related items, credit, banking and insurance services, refinancing earlier loans), eligibility criteria, thresholds for funding support and cost sharing arrangements, and sanctioning procedures are described in detail in the FBO Manual. Proposals by farmer groups for group assets would require a minimum contribution of 10% from the beneficiary groups and 90% from the project. The support for proposals for community assets creation will not exceed 50% of the allocation provided for the eligible activities under the FBO Fund to ensure that the remaining 50% goes to services. Communities’ contribution would be in cash or kind or both. Typically, a sub-project proposed by an FBO with membership of about 15 farmers will be provided funding support of up to US$3,000. In exceptional cases, the DAs may approve proposals involving larger investments for a group of FBOs. In such cases, assistance of up to US$15,000 may be provided. However, the number of such cases will be limited to 30 during the entire project period. This component will be implemented by the District Assemblies with MASAF performing the role of fund and account manager, and working closely with the PCU and DAs.
Component 3: Institutional Development (US$11.9 million). This component will support (a) the Department of Irrigation and Field Irrigation Institutions (Water User Groups, Irrigation Advisory Service, and Implementation Support); (b) the Marketing Unit of the MOA, and (c) Bunda and Natural Resources Colleges to strengthen their irrigation training programs, including practical training. Details are provided below.

A. Support for Department of Irrigation and Field Irrigation Institutions:

(a) Irrigation Water Management: To make a start at addressing long-term water management issues in Malawi irrigation and improving the sustainability of irrigation investments, an Irrigation Water Management Unit (IWMU) would be established in the Department of Irrigation (DOI). Its role would be to take the lead in: (i) organizing water user groups, (ii) support in strengthening Irrigation Advisory Services (IAS) at the district level, and (iii) provide implementation support to DOI for the irrigation component. The composition of this unit would draw heavily on the extensive experiences of the IFAD-funded Smallholder Flood plain Development Project (SFPDP).

(i) Water Users Associations (WUAs). Water Users Associations would be formed as private, non-profit, self-supporting, independent entities for operation, maintenance and management of irrigation and drainage systems. The WUAs would have three main functions: (i) operation and maintenance of the irrigation and drainage systems; (ii) collection of water charges; and (iii) resolution of conflicts among its members, arising from the use of water. In order to carry out these functions, the WUAs would have legal personality, the power to regulate and control water use, collect water charges, impose penalties, settle disputes, enter into contracts, open and operate bank accounts, and institute and answer law suits.

In the absence of an adequate number of experienced staff at the district level, provisions would be made for recruitment of a qualified NGO at reasonable costs to assist irrigation water users organize themselves into WUAs, and to provide technical support and training for future operation, maintenance and management of the schemes. The process of formation of WUAs would benefit from the experiences of the IFAD SFPDP including promotion, group formation, participation and training. The NGO services would be funded for the initial two years of project implementation during which time the project and district irrigation advisory staffs would be supported and trained to take over the NGO’s responsibilities. Such training and support would be extended to irrigation advisory staffs at the three SFPDP districts of Balaka, Machinga and Karonga. The project support would be provided through 4 outreach project offices established at Blantyre, Zomba, Lilongwe and Mzuzu. It is expected that some 90 new WUAs would be formed and trained under the project. Training would also be provided for leaders and members of WUAs.

Irrigation Management Transfer. Based on SFPDP experience, the transfer agreement would be entered into prior to the start of rehabilitation works and would set out roles, responsibilities and obligations of both government and WUAs, timeframe and conditions under which management responsibilities of each part of the irrigation scheme would be transferred. Provisions would be made of the services of a national legal advisor to prepare, or revise the existing transfer agreements. The Irrigation Act 2001 provides the legal basis under which the
management of government schemes may be transferred. However, by-laws for execution of the act have not been prepared; therefore, the project would finance services of a legal advisor to support DOI to prepare the required by-laws.

Land tenure security is an important aspect of the sustainability of irrigation management transfer and farmer’s participation in scheme O & M. It is important that land tenure issues be identified and resolved before commencement of the project. GOM schemes were constructed on land that was initially customary but turned into public land by a Government order.

The thrust of the project is to provide support through the Districts following the already established decentralization process. At central level, DOI is already structured according to the proposals made in the NIPDS and the associated institutional studies. However, due to the lack of District level capacity, DOI is still undertaking implementation as well as guidance, policy making and macro-level planning. Through this project’s third component, the capacity within DOI and the Districts would be enhanced through the provision of guidance, training and professional support in specific areas to develop mechanisms to enable them to carry out their tasks. A new unit dealing with Water Users Associations and community participation would be included in the structure to guide all project developments in the country and ensure that established demand driven processes are institutionalized in irrigation development in Malawi. A number of other donors are already supporting the irrigation sector in Malawi. The support provided at central level to DOI under this sub-component would enhance the coordination and complementarity of such programs.

(ii) Irrigation Advisory Service. The IAS would be a rapid response, complaint redress system at the district level that helps to resolve irrigation problems faced by farmers/WUAs and to provide technical advice to farmers on good irrigation and RWH practices as well as on institutional issues. The IAS is necessary, given the limited irrigation experience of farmers, their relatively low level of understanding and literacy, and the time needed to form WUAs and take over water management roles.

(iii) Support for Irrigation Component Implementation. The IWMU will implement its activities using 4 regional out-reach offices located close to the districts to be supported under the project. National and international technical assistance will be provided to both sections of the IWMU to remedy deficient skills, help build DOI capacity, as well as to support the IWMU with professional services, such as project planning, design and construction supervision. Initial funding for activities at IWMU and the district level will be under the project with irrigation, water management and RWH/conservation being supported under component 1 and 3, and extension and irrigation agronomy supported under the crops and extension departments under component 2. Terms of references of key IWMU staff are in Annex 4 and in the Technical Volume: Working Paper 1.

Preliminary studies would be completed by GOM staff supported by IWMU with planning, designs, and preparation of tender documents being contracted to private sector consultants. Detailed scheme assessment reports would be prepared with the close involvement and participation of the beneficiaries. These reports would be used to complete final designs, bills of quantities and tender and contract documents. Implementation of improvements would
be based on quality and cost control mechanisms that use private contractors engaged through competitive bidding processes that are transparent to all involved and especially to the beneficiary users. Provisions would also be made for preparation of Operation and Maintenance Manuals for each irrigation scheme at the start.

(iv) Water Users’ Association Service Unit at DOI. To harmonize and streamline the process of formation of WUAs at the national level, a Water Users’ Association Services Section would be established within DOI. This section would provide core support to district IAS and WUAs, including the development of national policy guidelines, preparing drafts and follow up legislation, and prepare training materials and guidelines on formation and organization of WUAs and overall monitoring of the performance of irrigation management transfer agreements.

(B) Support for MOA: MOA Market Development Unit and MIS:

The Trade and Marketing Unit of the Ministry of Agriculture would be restructured and strengthened into a “Market Development Unit” to reflect its expanded role, including market development for the smallholder sector. A marketing expert would be provided to work with a national staff, who would be understudies, to put the Unit on a firm organizational footing. Similarly, the Ministry’s Agricultural Marketing Information Service (AMIS) under the Market Development Unit, because of capacity and resource constraints, would be restructured with the help of a temporary consultant to enable it to carry out its responsibility for providing market information to farmers. Training will be provided to the staff and also computer equipment to improve AMIS’s capacity for information gathering, processing and dissemination.

(C) Support for Bunda and Natural Resources Colleges:

Building on previous donor support, support would be provided to these institutions to enable students to be trained and equipped in line with the new private sector demands. The project would therefore support curricula and capacity review at both colleges, the provision of equipment, information technology and training materials. This will be followed by some capacity development, particularly in irrigation, to enable them to provide greater expertise to their students and to take advantage of more experienced regional institutions. This will be achieved through the establishment of links and exchanges and the incorporation of practically oriented irrigation training into the courses with secondments to project sites and consultants/contractors. Provisional estimates have been included into the cost tables to be finalized during the first year of project implementation.

Component 4: Project Coordination, and Monitoring and Evaluation (US$3.80): A Project Coordination Unit (PCU) would be established in the Ministry of Agriculture to oversee project implementation, monitor project progress, and coordinate and account for the utilization of project funds. The PCU would be headed by a project coordinator and adequately staffed with competent and experienced professionals, including: an accountant, a procurement specialist, an irrigation engineer, a monitoring and evaluation specialist, and a social/community development specialist. All PCU staff including the project coordinator will be recruited competitively from the open market. The PCU would coordinate and be the repository of all project information and be the main point of contact on the project between the government, IDA and IFAD.
PCU would coordinate the implementation of both pre-identified investment activities and community-based demand-driven activities. MASAF would be the funding, accounting, and disbursement mechanism for most demand-driven activities under the project, working in close coordination with the PCU and ensuring that all reporting of demand-driven activities under the project are shared with the PCU. Pre-identified investments would be competitively tendered by the PCU, awarded, and implemented, using experienced civil contractors from the private sector.

5. Implementation

(a) Partnership arrangements

Partnership arrangements

IFAD has proposed to do joint co-financing of the proposed operation with about US$ 8 million. IFAD has been funding an ongoing irrigation operation, i.e., the Smallholder Flood Plains Development Project (SFPDP), the development credit of which is due to close shortly. The SFPDP has gained considerable experience in the use of private consultants and contractors, the close involvement of beneficiaries in the development and in the gradual management transfer of government schemes to their users. Although none of these are without problems, the learning cycle that SFPDP has been through will minimize bad experiences and provide a useful basis for the proposed project to build on.

b) Institutional and Implementation arrangements

Project Implementation and Coordination. The project would be implemented by a Project Coordination Unit (PCU) established in the Ministry of Agriculture to oversee project implementation, monitor project progress, and coordinate and account for the utilization of project funds. The PCU would be headed by a Project Coordinator and have the following professionals: an Irrigation Engineer, a Procurement Specialist, a Financial Management Specialist/Accountant, a Monitoring and Evaluation Specialist, and a Community/Social Development Specialist. All PCU staff, including the project coordinator, will comprise of experienced professionals competitively recruited from the open market and acceptable to the Bank and IFAD.

The project will have a Project Steering Committee (PSC), chaired by the PS for Agriculture, which will have general oversight of the project. The PSC will be responsible for general policy making, approval of semi-annual and annual work plans and budgets, review of quarterly and annual implementation progress reports, including audit reports, and inter-ministerial coordination. The Project Steering Committee will include PS for Irrigation and Food Security (MOA); Permanent Secretaries from the Ministry of Economic Planning, Ministry of Finance, Ministry of Local Government, Ministry of Land Resources, Ministry of Trade and Private Sector Development, and Ministry of Environment. The Director of Planning, MOA and the Project Coordinator would be ex-officio members of the Committee. The Project Coordinator would serve as the PSC’s secretary.
Under the PSC would be a Project Executive Committee (PEC), comprising only of the implementing agencies of the project (PCU, MASAF, DOI, DAES, CAETS, LRD, a representative from the district assemblies of the target project districts, and the 4 project outreach offices located in the ADDs—Blantyre and Zomba in the South, Lilongwe in the Center and Mzuzu in the North. The PEC will have technical oversight of project implementation, review and recommend project work plans and budget to the PSC, and carry out monitoring and evaluation of project activities. The PCU will function as the secretariat for both the PSC and the PEC.

The implementation of Component 1 and 3, which have pre-identified investment activities will be the PCU working with the concerned implementing agencies and private contractors. Pre-identified investments would be competitively tendered by the PCU, awarded, and implemented, using experienced civil contractors from the private sector. The implementation of all demand-driven investments (i.e., Component 2 and mini irrigation schemes under Component 1) will be through MASAF as the fund and account manager and the District Assemblies. MASAF, as the funding, accounting, and disbursement mechanism for most demand-driven activities under the project, would have funds channeled through it through the FSLF. MASAF will work closely and in coordination with the PCU and ensure that all reporting of demand-driven activities under the project are shared with the PCU. The detailed working relationship and respective roles of the PCU and MASAF will be described in the Operations Manual for the FSLF component (i.e., Component 2). The Ministry of Agriculture will sign a Memorandum of Understanding with MASAF on the proposed handling of the demand-driven activities of the project.

In the districts, the DAs will be responsible for implementing the demand driven Component 2 of the project, and will be closely associated with implementation of the Irrigation Development component, and identified activities under the Institutional Development and Project Management component. The office of the District Executive Secretary will be strengthened with the addition of a Project Officer who will assist in carrying out responsibilities such as preparing district annual plan and budget for project activities, processing proposals for assistance under the FBO Fund and seeking DA approvals, identifying sub-projects for implementing the Input for Assets program, overseeing implementation and providing prescribed periodical progress reports to the PCU. The project officer will be recruited competitively from the market and appointed on contract for the term of the project.

Community Sensitization and Mobilization:

The community sensitization and mobilization (CSM) process represents the start of activities in the project focal areas and will lay the foundations for successful beneficiary targeting and project implementation at community level. A multi-disciplinary CSM team will be formed in each district to conduct PRAs in project villages and prepare a consolidated action plan (CAP) for the project focal area. The plan will be submitted through the area development committee (ADC) to the district executive committee (DEC) for approval and will provide basis for preparing the annual work plan and budget. Baseline data will also be collected during the PRAs and indicators will identified for subsequent project monitoring and impact assessment activities.
The overall responsibility for coordinating the CSM process will be the PCU community/social (and business) development specialist. It is proposed that a consultant/NGO will be hired to: develop and test the methodology for community sensitization and mobilization prior to project start up, train the CSM teams based in the project focal areas, and provide technical support during the preparation of the consolidated action plans for each focal area. The District Agricultural Development Officer (DADO) will act as the focal point for the team whose membership will be drawn from the area executive committee (AEC), in particular the agricultural extension development coordinator (AEDC) and officers (AEDOs), community development assistants (CDAs) as well as local leaders from the focal area. Staff from the relevant technical departments in the district (namely irrigation, agricultural extension, forestry, community development, agri-business development, public works and land resources conservation) will participate in the orientation of the CSM team, preparation of the consolidated action plan and the next steps discussion with the community. MASAF IEC/PRA staff based in the MASAF zonal offices (Mzuzu, Lilongwe, and Blantyre) may also participate in the training activities and the preparation of the consolidated action plans.

7. **Sustainability**

Through the adoption of the NIPDS in 2000 and the enacting of the Irrigation Bill (2001), the government has demonstrated commitment to sustainable irrigation development. The proposed project’s objectives are envisaged to be sustainable because the project proposes to make a start on two aspects of the sustainability of irrigation investments: (a) irrigation financing and (b) irrigation capacities. The proposed project design recognizes that the funding for irrigation developments (both capital and recurrent) needs careful scrutiny for sustainability. Although the NIPDS assumes cost recovery from beneficiaries, this would have to be gradual, given poverty levels among farmers, and based on capacity to pay. The establishment/restructuring/strengthening of WUAs would be a start in mobilizing irrigation financing, but on a gradual basis. Farmers would initially not be expected to pay cash or take credit for implementation of new irrigation infrastructure but should be closely involved through provision of labor or local material (contributions in kind), and infrastructure rehabilitation designs should be tailored to their management skills. Irrigation capacities would be developed to enhance project sustainability through training of water users groups and the establishment of an Irrigation Advisory Service, which would comprise a rapid response, complaint redress system that would help resolve irrigation problems faced by farmers/WUAs and that would provide technical advise to farmers on good irrigation practices.

**Critical risks and possible controversial aspects**

The potential risks of the project are:

(a) foremost are risks related to the irrigation component. Firstly is the social risk associated with scheme transfer, dealing with competing claims in government scheme transfers over the irrigation land and infrastructure between previous indigenous owners of the land and the current irrigation users. This risk would be mitigated by focusing in the schemes transfer on _gradual transfer to beneficiaries of the management_ of the infrastructure and launching social studies on how best to handle the land and infrastructure transfer. Secondly is the risk in the government schemes of the potential shortage of capacity in the MOA to
undertake engineering design and construction works for scheme rehabilitation. This risk would be minimized by awarding a significant portion of scheme rehabilitation works to private civil contractors. Thirdly is the risk of farmers’ inability to operate and maintain the schemes properly once rehabilitated. This will be mitigated by training of farmers, built into the project, of scheme O&M and the support that would come from the proposed Irrigation Advisory Service.

(b) secondly, delays in the implementation of the decentralization plan, which would affect district level capacities and operating resources and related provision of front line services (e.g., extension) to farmers. This risk is high, but is a matter being resolved between MOA, Ministry of Local Government and Ministry of Finance. This risk would be mitigated by concentrating on project activities least affected by decentralization if, during implementation, there are signs of inadequate progress on decentralization. Also, this would be mitigated by reprogramming funds for district extension to producer groups during implementation that they can use to procure technical services from alternative providers; e.g., NGOs, etc.

(c) thirdly, risks related to the mechanism for administering the “Input for Assets” program, since this has been operated using independent agencies outside the control of government ministries, and MOA has no experience to date on this, and will need to identify possible partners to work with the Department of Extension Services. This risk would be mitigated by involving MASAF in the administration of the funding and accounting for this program, since it has a proven track record of successfully managing such a program.

(d) fourthly, is the risk related to the availability of adequate government counterpart funds during project implementation. The project design has sought to minimize government cash contribution as much as feasible.

(e) fifthly is a risk, which affects all rural projects, and that is the negative impact of HIV AIDS on the agricultural workforce and on agricultural worker productivity. This would be mitigated through social extension, in which prevention messages for the uninfected and advise on alternative livelihood strategies for the HIV infected would be provided.
8. Lessons Learned from Past Operations in the Country/Sector

The agricultural sector and the irrigation sub-sector have benefited since independence from a considerable number of donor and government assisted projects. IDA’s last support strictly for the sector was the Agricultural Services Project (ASP) (credit amount: US$45.8 million), which supported agricultural research, agricultural extension, input supply and institutional strengthening. The main lessons learned and reflected in the project design are that:

- for successful implementation, stakeholders must be involved in the conceptualization and design of a project. The proposed project has involved extensive consultations with farmers, district assemblies, government, and non-governmental organizations (such as Emmanuel International) to build understanding and ownership for the project design.

- Investments at increasing productivity are unlikely to yield enhanced farmer incomes unless market development issues are simultaneously addressed. The proposed project is addressing market development issues.

- Decentralization of MOAIF’s field services to the districts is key to strengthening the Ministry and to achieving positive development results on the ground. The project is supporting the decentralized agricultural extension services in line with the new Extension Policy.

- Effective flow of project resources to the field is key to successful project implementation. The proposed project would use a combination of demand-driven approaches (using MASAF) and contracting with the private sector to ensure the delivery of support to beneficiaries in the field.

- GOM/DOI should not be directly involved in the implementation of irrigation schemes but should be a facilitator, relying on the private sector and also on strengthening its own capacities in planning, monitoring, regulating, supervising and providing back-up support. This is consistent with the GOM’s new irrigation strategy (NIPDS). The proposed project would help in the implementation of this new strategy.

- Reliance on pumping and Lake Malawi as a source, because of variable levels and pumping costs have impeded sustainability of irrigation operations. The proposed project has taken this into account and is supporting largely gravity irrigation schemes and water harvesting and watershed management combined with beneficiary involvement in scheme design and O&M.

- For agricultural extension, dependence on standard routine, visit-based, message delivery extension system is neither effective nor fiscally sustainable and participatory approaches, empowering farmers, are more efficient and cost-effective. The proposed project, in addition to strengthening district extension capacities, would utilize demand-driven, participatory approaches, and make use of other service providers such as the NGOs and the private sector.

9. Safeguard Policies (including public consultation):

From an environmental and social safeguard point of view, the proposed project is a Category B project. That is, the environmental and social impacts of the project, for the most
part, are expected to be minimal, site specific and manageable to an accepted level. There are three Bank Safeguard policies applicable to the project. These include: Environmental Assessment (OP 4.01); Pest Management (OP 4.09) and Involuntary Resettlement (OP 4.12).

These are being addressed through an Environment and Social Impact Assessment and an Environment and Social Management framework.

10. List of Factual Technical Documents

FAO Reports

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