

## SUMMARY

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The Republic of Malawi (hereinafter referred to as “Malawi”) is an inland country in southern Africa. It has a national land area of 118,500 km<sup>2</sup> (approximately one-third of the size of Japan), one-sixth of which is occupied by Lake Malawi. The population is approximately 10.5 million (2001). Since achieving independence from Britain in 1964 together with Zambia, Malawi has relied on agriculture for its economic development because of its lack of mineral resources. However, the falling prices of agricultural products and drought have resulted in a poor agricultural performance. The GNI per capita of US\$ 170 (2000) puts Malawi among the least developed countries with 65% of the people living below the poverty line (based on a 1998 survey). In the face of such a situation, the Government of Malawi considers poverty reduction to be a priority policy target and completed the Malawi Poverty Reduction Strategy Paper (MPRSP) in April, 2002. This Paper calls for social development mainly featuring education and health as a priority task for poverty reduction so that healthy and educated people can live productive lives. The extension of education in particular is given the highest priority by the MPRSP to compensate for the country’s scarce mineral resources.

Since independence, Malawi has continued to emphasise higher education and the expansion of primary and secondary education has lagged behind. Following the establishment of a democratic regime in 1993, the Education for All (EFA) strategy was introduced, followed by the restructuring of the education system to an 8-4-4 system in 1994 together with the introduction of free primary education (FPE). As a result, the number of children enrolled in primary education increased by 50% in the two years to 1996. The number of students enrolled in secondary education was rapidly increased from 70,000 in 1995 (enrolment ratio: 6%) to 200,000 in 1998 (17%), recording a threefold increase, and further to 275,000 in 2000.

In response to the sharply increasing demand for secondary education, the Ministry of Education, Science and Technology (MoEST) has redeployed primary school teachers with two years training to secondary schools teachers, based on their preference. While the number of secondary school teachers reached 5,900 in 2000 through such efforts, the situation of a significant teacher shortage in secondary education is illustrated by the fact that 65% of the existing teachers (3,800) are unqualified.

Because of such a high proportion (65%) of unqualified secondary school teachers with a training background involving only primary education teaching methods, many secondary schools find it almost impossible to organize lessons based on the official curriculum. Even though the MoEST revised the national curriculum in 2000 to reflect social changes, there are not many front-line teachers who are capable of conducting lessons in line with the revised curriculum. Consequently, the pass rates for the examination at the end of the first two year period (JCE: Junior Certificate of Secondary Education) and final examination (MSCE: Malawi School Certificate Examination) have been falling, making the retraining of secondary school teachers and the improvement of teaching methods urgent tasks.

Under these circumstances, the Government of Malawi revised the Policy Investment Framework (PIF), which is the master plan for the education sector, in 2002. One of the most important tasks identified by this revision is a qualitative improvement of secondary education and the training of qualified teachers which are capable of teaching the contents of the new curriculum in a competent manner is urged. Another essential issue is an increase of the ratio of female secondary school teachers with a view to improving the enrolment ratio for

secondary school-age girls in Malawi. Also, the MoEST has defined the desirable pupil / teacher ratio as 27:1 and to realize this ratio the MoEST has decided to train and produce about 8,000 new qualified secondary school teachers.

Meanwhile, there are currently only three institutions which train secondary school teachers in Malawi. These are the Domasi College of Education (DCE) which provides three year courses for a total of some 1,440 students, the Faculty of Education of the University of Malawi which provides four year courses for some 280 students and the Faculty of Education of Mzuzu University which provides four year courses for some 240 students. Among these, the DCE specialises in the training of secondary school teachers and is certified to provide three year diploma courses. As the number of teachers trained by the DCE is by far the largest, the DCE is considered to be the core training institution for secondary school teachers in Malawi.

The DCE was originally established as the Domasi Teacher Training Centre in 1987 to provide two year courses for the training of primary school teachers. In 1993, it was upgraded to a college of education to train secondary school teachers in anticipation of a teacher shortage for secondary education due to the introduction of FPE. The DCE has since been training some 180 teachers a year, targeting primary school teachers teaching in secondary schools and new school leavers (approximately 30% in 2000). Since 2000, the DCE has also been providing secondary school teacher training courses through distance education. However, as the DCE is still using the facilities and equipment for the original primary school teacher training, it faces shortages in terms of the basic facilities and equipment required for secondary school teacher training. In addition, a gymnasium and other facilities required by the new curriculum have not yet been introduced, making radical improvement of the facilities and equipment imperative.

Under these circumstances, the Government of Malawi made a request for grant aid by the Government of Japan for the Project to Expand Facilities at the Domasi College of Education, involving the construction of a demonstration secondary school, staff housing, female hostels, a computer workshop and gymnasium and the provision of educational equipment.

In response to this request, the Japan International Cooperation Agency (JICA) dispatched the Basic Design Study Team to Malawi for the period from 1st February to 3rd March, 2003 to conduct a site survey and a survey on existing and similar facilities and to gather relevant information while consulting with government officials in Malawi on the activity plan and required contents of the new facilities. The Study Team also conducted a geological survey at the planned sites, the drilling of wells and a water quality test in relation to the water supply plan.

As a result, all of the requested facilities were judged to be urgently required in view of the activities and future plan of the DCE and also in view of the range of teaching subjects included in the new curriculum which was adopted in 2000.

On its return to Japan, the Study Team examined the relevance of the Project, the project implementation system, the operation and maintenance system on the Malawi side and the expected effects of the cooperation, etc. and also conducted the determination of the optimal range and scale of the facilities and equipment, selection of equipment and estimation of the project cost. The examination of the facilities was based on the principle of satisfying the minimum scale and specifications established by a survey on similar school facilities.

Similarly, only equipment which would have a high frequency of use was selected in reference to the current situation of education at secondary schools and reagents and consumables which can be easily procured locally at a low cost were eliminated from the scope of equipment and material supply.

The planned facilities include a demonstration secondary school (320 students in four years) which is required for DCE students to learn teaching methods based on the new curriculum and for teaching staff at the DCE to develop such teaching methods. The staff housing is essential to secure the services of excellent teachers and administrative staff for the demonstration secondary school and the construction of 14 houses is planned to satisfy the minimum requirement of the relevant standards in Malawi. Female hostels to accommodate 120 female students (60 double rooms) are also planned as an increase of the number of female teachers should encourage the enrolment of girls in secondary education to improve the enrolment ratio. In the case of the computer room and gymnasium, these are planned to be of the optimal scale as they are both necessary for practical training and exercise based on the new curriculum.

In regard to the water supply plan, it has been confirmed that the required water supply volume for the entire DCE will be secured if the ongoing improvement work for the existing water supply facilities in the Domasi area under the Domasi Water Supply Project which is assisted by the African Development Bank is completed on schedule at the end of 2003. Consequently, a new borehole will not be installed which had been requested in the beginning by the Malawian side. It is planned to use the city water for the project by this improved facility, therefore the measures to be taken for the connection work to this facility shall be done by the Malawi side.

The Draft Summary of the Basic Design, incorporating the above-described contents, was prepared and the JICA dispatched a mission to Malawi for the period from 21st June to 2nd July, 2003 to explain this Draft Summary to the Malawi side.

The facilities to be constructed and the equipment to be provided under the Project are outlined below.

< Construction of Facilities >

- Structure : Brick masonry with RC beam, single story
- Total floor area : 6,262 m<sup>2</sup>

Facility	Main Room
Demonstration Secondary School	Administration Area : Head Teacher's room, Deputy Head Teacher's room, Secretary, Teacher's room, Staff room, Bursar, Kitchen, Storage, WC, Corridor, Hall Classrooms : Classroom(40persons × 8 rooms), Science Laboratory, Biology Laboratory, Home Economics Workshop, Craft Workshop, Preparation room, Storage Public Area : Library, Multi-purpose Hall(100persons), Preparation room, Storage Common Space : WC, Hall, Corridor
Staff Housing	Head Teacher's House (1house), Teacher's House (13houses)
Female Hostel	Study room, WC+ Shower, Laundry, Corridor, Covered Walkway
Computer Room	PC room, Preparation room, Corridor
Gymnasium	Gymnasium, Change room, Storage,

< Provision of Equipment >

Classification	Main Equipment
<Equipment required to implement the curriculum>	
Integrated Science (Physics, Chemistry)	Glass apparatus such as Test tube and Flask, Test tube stand, Wash bottle, Table balance, Thermometer, Stop watch, Hand lens, Spring balance, Bar magnet, Pulley set, Inclined plane set, Ammeter, Voltmeter, Switch, Transistor, Mirror, etc.
Natural Science	Glass apparatus such as Test tube and Flask, Thermometer, Spring balance, Ammeter, Voltmeter, Slide resistor, Knife switch, Bar magnet, Compass, Gas burner, Evaporating basin, Tripod stand, Plane mirror, Optical lens set, Prism, etc.
Biology	Glass apparatus such as Test tube and Flask, Spirit burner, Microscope slides, Dissecting tools, Student microscope, Prepared specimen, Models, etc.
Home Economics	Electric cooker, Kitchen scale, Electric hot plate, Electric oven, Treadle sewing machine, Dressmaking set, Electric iron, Iron board, etc.
Handicrafts	Portable drawing board, T square, Tape measure, Tools for clay modelling, Saw, Planes, Marking gauge, Portable electric drilling machine, Upright electric drilling machine, Hammer, etc.
<Minimum range of equipment required for use of facilities>	
Demonstration Secondary School	Office desk • Chair, Folding table • Office chair, Desk and Chair for principal/Vice principal, Cabinet, Stool, Desk and Chair for student and teacher, Blackboard, Bulletin board, Experimental table and Chair, Library Desk ( large and small ) , Chair, Book shelf, Reception counter
Female Hostel	Bed, Study desk • Chair, Locker, Bulletin board
Computer Room	Computer desk and Chair, Black board, Bulletin board, Cabinet
Gymnasium	Basketball net, Pole, Volleyball net (movable)
<Minimum range of equipment required for school operation>	
Office	Photocopier
Multipurpose Hall	Public address set ; Microphone, Amplifier, Speaker, OHP, Screen

In the case of the Project's implementation with grant aid provided by the Government of Japan, it is assumed that the detailed design work and the construction/procurement work will require 5.5 months and 12 months respectively to complete. The total required project cost is estimated to be ¥628 million, ¥625 million for the Japanese portion and approximately ¥3 million for the Malawi portion (felling of trees at the planned site, extension of the electricity and water supply lines, cleaning of the oxidization pond and procurement of general furniture and fixtures).

The MoEST will assume overall responsibility for the Project and its Department of Planning will coordinate the Project as the responsible office. Meanwhile, the implementation body will be the DCE which will be responsible for the operation and maintenance of the new facilities. As the specifications for the planned facilities and equipment under the Project are generally used specifications in Malawi, no special skills will be required for their maintenance and local organizations will be capable of meeting any maintenance requirements.

It is necessary that the Malawi side shall complete the following matters by the time of completion of the construction work in order to the smooth and efficient implementations of the project.

- 1) The MoEST shall deploy 20 new teachers and 6 administrative staff members who will be necessary to operate the demonstration secondary school. Also, the MoEST shall take necessary measures for the relocation of Form-2 through Form-4 students together with the acceptance of 1st year students is planned to avoid any empty classrooms when the school opens.

- 2) The Malawi side shall procure the 20 PCs for the computer room and deploy an instructor in charge of the computer education and a system engineer for the maintenance of the computer equipment.

The implementation of the Project is expected to have the following effects.

- 1) Through teaching exercises based on new curriculum at the demonstration secondary school, 480 qualified teachers (180 boarding students and 300 distance education students) equipped with teaching methods for real classrooms and practical teaching knowledge will be produced every year.
- 2) The construction of the computer room will enable the production of 150 qualified computer teachers a year in line with the requirement of the new curriculum introduced in 2000 for such teachers.
- 3) The construction of the gymnasium will allow regular physical training for the Physical Education (PE) course which is not interrupted by the weather conditions to produce 30 qualified PE teachers a year in line with the requirement of the new curriculum introduced in 2000 for such teachers.
- 4) The development of laboratory experiment and practice exercise methods as well as classroom teaching methods by the DCE teaching staff and others using the demonstration school will improve the secondary education teaching level. Moreover, through collaboration with the neighbouring Malawi Institute of Education (MIE), an improved curriculum and teaching methods will be developed to serve trainers and trainees (students) in the secondary education teacher training field.
- 5) The construction of additional female hostels will increase the boarding capacity of the DCE, making it possible to accept 120 more female students to equal the capacity for male students, i.e. 270. In 2008 and thereafter when the available spaces for female boarding students are fully taken, 240 qualified female teachers, including 150 for distance education, will be produced every year to rectify the male-female ratio of secondary school teachers which is currently biased towards male teachers.

The implementation of the Project is also expected to have the following indirect effects.

- 1) It is planned that the new demonstration secondary school will act as the core school for the local cluster system (system for mutual assistance for school operation and other aspects through the grouping of several local schools into a cluster) through (a) technical mutual studies by teachers of different secondary schools, (b) assistance for school management and (c) technical advice on teaching methods and school management by more experienced staff of the member schools for other less experienced staff.
- 2) The multi-purpose hall of the demonstration secondary school will offer the place for workshops and other social activities to the local community, and it will promote the social education and activities also the education-related activities such as PTA in particular.

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