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STAFF APPRAISAL REPORT

JAMAICA

REFORM OF SECONDARY EDUCATION

MARCH 4, 1993

Country Department III
Human Resources Operations Division
Latin America and the Caribbean Region

CURRENCY EQUIVALENTS

Current Unit = Jamaican Dollar (J$)
US$1.00 = J$25.0

FISCAL YEAR

April 1 - March 31

ACADEMIC YEAR

September 1 - June 30

PRINCIPAL ABBREVIATIONS AND ACRONYMS USED

ARP	Administrative Reform Program
CAST	College of Arts, Science and Technology
CTC	Cultural Training Center
EMIS	Educational Management Information System
GOJ	Government of Jamaica
HEART	Human Employment and Resource Training
HRDP	Human Resources Development Program
IBMS	Institution Based Monitoring System
ISER	Institute for Social and Economic Research
JBTE	Joint Board of Teacher Education
JSC	Jamaica School Certificate
JTA	Jamaica Teachers' Association
MLWS	Ministry of Labour, Welfare and Sport
MOEC	Ministry of Education and Culture
MOH	Ministry of Health
NAP	National Assessment Program
ODA	Overseas Development Agency (U.K.)
PIOJ	Planning Institute of Jamaica
PIU	Project Implementation Unit
PSIP	Public Sector Investment Program
ROSE	Reform of Secondary Education
SESP	Social and Economic Support Program
SLC	Survey of Living Conditions
STATIN	Statistical Institute of Jamaica
UWI	University of the West Indies

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This report is based on the findings of preparation and pre-appraisal missions which visited Jamaica during 1991/92, led by Ms. Linda McGinnis (LA3HR); and an appraisal mission in October 1992, consisting of Mmes/Messrs. Jill Armstrong, (Mission Leader, LA3HR); Marlaine Lockheed (Evaluation, HRESP); Margaret Grosh (Policy Analysis, PRDPH); Judy Baker (Project Costs/Public Awareness Campaign, LA3HR); Sherry Keith, Gustaaf Brest van Kempen, Lynn Ilon, Carmelle Denning (Consultants). Ms. Maria Victoria Lister (LA3HR) contributed greatly to the preparation of this report. Peer reviews were submitted by Mmes/Mssrs. Cecilia Valdivieso (LA1PH); Marlaine Lockheed (HRESP); and Juan Prawda (LATHR).

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ANNEXES (See also detailed Annex List, Page 37)

MAP: IBRD No. 20846

BASIC DATA SHEET

		Jamaica	Year	Source
A.	General Country Data:			
	1. Population Estimate (Million)	2.41	1990	
	2. Population Projection (Million)	2.7	2000	d
	3. GNP per Capita (US$)	1,380	1991	g
	4. Average Annual GDP Growth Rate (1980-90)	1.6	1980-90	
	5. Area ('000 Km2)	11	1992	a
	6. Urban Population (as % of Total)	52	1990	a
B.	Social Indicators			
	1. Crude birth rate (per 1000)	24	1990	a
	2. Crude death rate (per 1000)	6	1990	a
	3. Average Annual Rate of Population Growth (%)	1.3	1980-90	a
	4. Total Fertility Rate (Births per Woman)	2.8	1990	a
	5. Infant Mortality Rate (per 1000 Live Births)	16	1990	a
	6. Life Expectancy at Birth (years)	73	1990	d
C.	Education Data			
	1. Net Enrollment Rates			
	Preschool	82.1	1989/90	b
	Primary (Grades 1-6)	98	1991	
	Lower Secondary (Grades 7-9)	82	1991	
	Upper Secondary (Grades 10-11)	63.3	1987	c
	Upper Secondary (Grades 12-13)	2.7	1987	c
	Higher	5	1989	a
	2. Expenditure Data			
	Total Public Education Spending (% of GDP)	5.3	1990/91	f
	Total Public Education Spending (% Total Fiscal Expenditures)	13.8	1990/91	f
	Total Public Education Spending (% Total Fiscal Expenditures Net of Debt)	22.6	1990/91	f
	Shares of Public Education Expenditure			
	Preschool	2.2	1990/91	b
	Primary	36.4	1990/91	b
	Secondary	32.2	1990/91	b
	Higher	21.3	1990/91	b
	3. Private Provision			
	Preschool	4.6	1987/88	c
	Primary	4.8	1990	b
	Secondary	5.7	1987/88	c
	4. Efficiency Data			
	Student/Teacher Ratio			
	Primary	34	1989	a
	Lower Secondary	21	1987/88	c
	Secondary	19	1987/88	c
	Repetition Rates (%)			
	Primary	3	1986-88	d
	Dropout Rate (%) h/			
	Primary	18	1986-88	d

Sources and Notes: a) World Development Report, 1992; b) Economic and Social Survey of Jamaica, 1991; c) Jamaica Five Year Development Plan for Education (1990-1995); d) Human Development Report, 1991; e) Access, Quality and Efficiency in Caribbean Education, 1992; f) ESSJ update 5/92; g) World Bank Atlas, 1992; h) proportion of children entering the first grade of primary school who do not successfully complete that level in due course.

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LOAN AND PROJECT SUMMARY

Borrower:	Jamaica
Beneficiaries and Executing Agencies:	Ministry of Education and Culture (MOEC) Planning Institute of Jamaica (PIOJ)
Loan Amount:	US$32.0 million equivalent
Terms:	Repayment in 17 years, including a 4-year grace period, at the Bank's standard variable interest rate.
Project Objectives:	The project will: (a) improve the quality, efficiency and equity of lower secondary education (Grades 7-9), with particular emphasis on schools serving the poorest students, by providing the necessary educational inputs and support services for Phase I of a 15-year junior secondary reform program; (b) strengthen the capacity of the MOEC to plan and monitor the impact of the reform through improved evaluation and management systems; and (c) strengthen the Government's capacity to undertake sophisticated social policy analysis and use the results in formulating more effective and targeted social programs.
Project Description:	The project comprises three main components: (1) Secondary Reform Support (82.4% of total project costs,) would include: (a) the introduction of a common curriculum in Grades 7-9; (b) related pre-service and in-service training of teachers and school administrators; (c) provision of textbooks; (d) provision of educational support materials; (e) improvements in, and limited new construction of, physical infrastructure for schools adopting the common curriculum; and (f) studies and pilot programs for improving upper secondary education (Grades 10-13). (2) Evaluation and Management Strengthening (8.7% of project costs) would include: (a) rationalizing the examination system by reducing the redundancy and improving the utility of exams for selection, certification and monitoring trends by developing a new Grade 9 Test; (b) establishing a Secondary Reform Management Team to ensure that the reform is adequately supported and integrated into all the relevant MOEC functional units; (c) conducting a public awareness campaign to inform key stakeholders and the general public about the benefits of the reform; (d) developing an evaluation system to monitor the impact of the new curriculum on student achievement; and (e) preparing the second five-year phase of the reform.

(3) Social Policy Analysis (8.9% of total project costs), would improve the capacity of the Government to undertake sophisticated social policy analysis and formulate more effective and targeted social sector programs through: (a) the establishment of a Social Policy Analysis Unit in the PIOJ to identify topics for policy analysis, perform and contract out research, provide training and dissemination mechanisms to social sector line ministries; (b) in-service training for policy makers and researchers in key social sector ministries in research methodology and social policy analysis; (c) support to the University of the West Indies (UWI) to upgrade faculty and graduate training in policy analysis and to establish a Data Bank at the Institute of Economic and Social Research (ISER); and (d) support to the Statistical Institute of Jamaica (STATIN) to implement the Survey of Living Conditions (SLC).

Project Benefits: The project would assist the Government in achieving two central education objectives: (a) to improve the quality and equity of basic education, specifically Grades 7-9; and (b) to strengthen the system's capacity to plan and monitor improvements in the quality of education. The increase in educational expenditures for basic education will help redress imbalances in the allocation of public sector resources among different levels of education, by directing more resources to higher-yielding lower education levels. Improved relevance and quality of basic education would ultimately provide better trained and trainable manpower for the economy. Higher overall levels of achievement and increased resources targeted on the poorest groups of students would enhance efficiency in the use of public sector resources. A rationalized exam system would: reduce the redundancy and cost of exams in the education system, and eventually postpone the selection of students for academic streams until Grade 9; provide students leaving the education system at Grade 9 with school leaving certificates reflecting a recognized level of achievement for potential employers; and provide a reliable measure of learning output for policy analysis. Improved social policy analysis through a relevant research agenda will help the Government to more effectively target scarce resources for social sector programs.

Project Risks: Principal project risks relate to: (a) budgetary constraints leading to the scarcity of both counterpart funds and the release of external resources; (b) potential backlash from those benefitting from the existing elitist system; and (c) weak implementation capacity, particularly regarding civil works. With regard to (a), the Bank's financing of a high share (79%) of project costs as well as planned cofinancing (6%) would reduce the need for counterpart funding, thus easing the GOJ's fiscal burden. In addition, the Bank will monitor the maintenance of sector priorities in the context of Annual Reviews of progress towards social sector objectives as reflected in the proposed project and the Human Resource Development Program (HRDP), also supported by the Bank. These priorities have recently been reflected consistently in other policy statements issued by the Government (the Public Sector Investment Program (PSIP), the Medium Term Policy Framework and the Letter of Development Policy in the proposed Private Sector Development

Adjustment Loan). In regard to (b), the MOEC has already begun a phased public education campaign, which the project will support, to ensure that all of the relevant stakeholders recognize the benefits of the reform. Representatives of groups potentially opposed to the reform have been brought into the development process early in the reform planning stages. Finally regarding (c), the MOEC has adopted an integrated management approach to the reform program rather than a stand-alone PIU which will provide: flexibility in managing and implementing both the reform and the project; and ensure that the far-reaching aspects of the reform are infused in all areas of the Ministry. Components with substantial or specialized manpower requirements, such as the day-to-day management of civil works execution, will be contracted out under the overall supervision of the MOEC's Reform Management Team.

Estimated Costs:[a]	Local	Foreign	Total
	US$ million		
Secondary Reform Support			
Common Curriculum	1.4	0.4	1.8
ROSE Training	4.8	0.1	4.9
Education Materials	0.4	1.7	2.1
Textbooks	0.3	0.8	1.1
Infrastructure	9.9	5.9	15.8
Upper Sec Strategy	1.1	0.0	1.1
Evaluation and Management Strengthening			
Exam Rationalization	0.3	0.5	0.8
ROSE Management	0.8	0.2	1.0
Public Campaign	0.2	0.0	0.2
ROSE Evaluation	0.4	0.2	0.6
ROSE Phase II Prep	0.3	0.0	0.3
Policy Analysis and Management			
Policy Analysis Unit	1.4	0.2	1.6
Line Ministries	0.1	0.1	0.2
UWI	0.3	0.4	0.7
SLC	0.4	0.2	0.6
Total Base Costs	**22.1**	**10.6**	**32.7**
Physical Contingencies	0.9	0.6	1.5
Price Contingencies	5.7	0.8	6.5
Total Project Costs	**28.7**	**12.0**	**40.7**
Financing Plan:			
	US$ million		
IBRD	20.9	11.1	32.0
Netherlands	1.8	0.9	2.7
Government	6.0	0.0	6.0
Total	**28.7**	**12.0**	**40.7**

[a] Including taxes and duties, which are negligible. *Totals may not add due to rounding.*

Estimated IBRD Disbursements: (US$ million)

IBRD FY	1994	1995	1996	1997	1998	1999	2000	2001
Annual	2.0	2.6	6.4	6.4	6.4	5.2	2.6	0.4
Cumulative	2.0	4.6	11.0	17.4	23.8	29.0	31.6	32.0

Economic Rate of Return: Not applicable.

Map: IBRD No. 20846

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I. BACKGROUND

A. The Economic Setting

1.1 Jamaica has been undertaking a process of adjustment to achieve a sound macroeconomic framework and establish the basis for sustained growth and development. Various agreements with the International Monetary Fund and four sectoral adjustment loans from the Bank have supported the Government's efforts. Adjustment has been difficult in a small, oil-importing economy, highly vulnerable to sharp changes in terms of trade and other external shocks. Even though Jamaica has done virtually no external net borrowing since the mid-1980s, recent growth in the US dollar value of Jamaica's outstanding external debt because of the appreciation of other major currencies in relation to the US dollar and declines in net official financing have worsened Jamaica's debt over-hang. Now, external debt service consumes almost half of the Government's budget. These factors, combined with natural disasters and domestic policy inadequacies, have led to almost two decades of very low growth and a marked deterioration in the social infrastructure. On a per capita basis, Jamaica's income today is lower than at the beginning of the 1970s, with poverty deepening at the lower income segments of the population.

1.2 The new Government that came into office in 1989 took drastic actions to: (i) accelerate the pace of reforms; (ii) reduce the size of the public sector through cuts in subsidies, streamlining of government expenditures, and a stepped-up privatization effort; and (iii) establish a Human Resources Development Programme (HRDP) to restore the flow of funds to core social sectors, with particular emphasis on the poor, while improving the efficiency and equity of these expenditures.

1.3 Macroeconomic policies and outcomes during 1991 were worse than expected, but major improvements came in 1992. The public sector accounts were roughly in balance by the end of the year. The elimination of subsidies on imported products, negative real interest rates, and the sharp devaluation of the Jamaican dollar a year ago contributed to accelerated inflation--from 28% in 1990/91 to over 100% in the 12 months to March 1992. Since Spring 1992, fiscal and monetary policies have been tightened, the exchange rate has stabilized, and inflation has dropped to about 1% per month. In the EFF with the IMF, approved last December, the GOJ made a commitment to achieve public sector surpluses of 2.5% of GDP in 1993/94--after counting Bank of Jamaica losses and not counting proceeds from divestment--and 3.5% of GDP in 1994/95. The Government recognizes the severe constraints that the country continues to face: vulnerability to terms of trade shocks and natural disasters, the heavy burden of a large external debt, the deficiency of economic infrastructure, the deterioration of social services and the increase in poverty. For the 1990s, prospects for financing growth-inducing capital expenditures do not appear promising as net resource flows have decreased substantially with net transfers now negligible. Medium- to long-term prospects, however, will depend on the Government's capacity to enhance stabilization efforts and step-up policy reforms needed to generate and sustain growth.

1.4 Jamaica's economic performance, in turn, affects its educational provision in two principal ways: it influences the availability of both public and private resources to finance education; and together with the structure of growth, it determines the level and composition of demand for labor.

The economic and liberalization measures adopted to date seek to achieve increased efficiency and growth through enhanced competition and more open markets. If successful, these measures should positively affect labor demand. However, a more competitive environment will encourage growth of non-traditional exports, where Jamaica has or can rapidly develop a comparative advantage. As economic activities change in response to changes in the incentive framework, so will the demand for specific skills. The flexibility of the work force, especially its mobility and ability to quickly acquire marketable skills through a solid general education, will largely determine the rapidity of labor absorption and its productivity in emerging sectors, and ultimately, growth prospects.

1.5 Ensuring that the most vulnerable segments of the population are active contributors to the growth process through enhanced skills will be a high priority. In the education sector, provision of an adequate basic education for all children, but especially those coming from least well-off families, will be a key requirement for achieving broader development objectives.

B. The Social Sectors

1.6 Jamaica's social indicators are generally more favorable than those of other countries in the Latin American and Caribbean region at similar levels of income. A history of relatively high allocations of public resources to the social sectors in part explains these results. The infant mortality rate fell by two-thirds between 1960 and the mid-1980s to only 20 deaths per 1,000 live-births; primary enrollment rates are nearly universal; and, female participation in education is one of the highest in the region. The deterioration of economic conditions and worsening fiscal balances in the 1970s and early 1980s, however, led to deep and ill-targeted cuts in government social expenditures. Budgetary pressures increased such that by 1986, real outlays in education were 25% lower than in 1981 and 35% lower in health. There was an accompanying deterioration in the quality and capacity to deliver social services. And, in 1988, Hurricane Gilbert caused extensive losses throughout the country, further damaging a social service network already in need of repair.

1.7 In response to these mounting problems, the Human Resources Development Program (HRDP) was introduced in 1988, with a Secretariat lodged in the Planning Institute of Jamaica (PIOJ). Covering both new initiatives and ongoing projects (currently numbering 18), the Human Resources Development Program embodies the GOJ's commitment to social sector development and poverty alleviation within the constraints of the economic program. The overall aims of the HRDP are to provide an increased share of resources to the social sectors (Annex 1, Table 9), and to initiate policy reforms to generate greater efficiency and more equity in the use of these resources. Major policy measures include: (i) an increased share of Ministry of Health (MOH) and Ministry of Education and Culture (MOEC) recurrent expenditures devoted to primary health care and basic education (grades 1-9); (ii) improved targeting of nutrition aid (involving the phasing out of general food subsidies, tightened eligibility requirements for food stamps, and targeted expansion of school lunch programs) and employment assistance; (iii) increased cost recovery in public hospitals and secondary schools; and (iv) institutional strengthening and impact monitoring.

1.8 Progress of the HRDP is being monitored, inter alia, through an Annual Review by the Government, with the participation of the Bank and other donors--the first such Review was held in

February 1991.[1] The discussions during the Review take place at two inter-related levels: (i) the meeting of overall policy objectives in the social sectors; and (ii) the fulfillment of project specific objectives.

1.9 At the policy level, the Review evaluates progress made against the contents of the HRDP Policy Matrix, including targets for intrasectoral budget allocations which reflect the priorities contained elsewhere in the Matrix. To date, the Government remains committed to reaching its stated objectives and overall, the Bank and Government are in agreement about the broad direction of social policy (e.g. prioritization of primary health and basic education activities and the introduction of cost sharing). Progress has been achieved on most components of the HRDP Policy Matrix. Of notable achievement are: (i) the complete phasing out of general food subsidies, combined with an expansion of targeted nutrition programs; (ii) proposals submitted to the Cabinet for revising the fee structure of hospitals, drugs, and selected services based on beneficiary ability to pay; and (iii) rationalization of public health facilities.

1.10 Despite the Government's intention to adopt stated policy reforms, the ministries involved in the HRDP have little or no in-house capacity to undertake additional studies to evaluate the impact of policy decisions or to provide flexibility in responding to these policy issues as they evolve. Over time, the policy issues facing the HRDP have become increasingly sophisticated. For example, the extensive coverage of its social services means that the agenda has shifted from the analytically simpler problems of building schools and clinics to the more complex issues of how to improve their quality and efficiency in an extremely tight fiscal situation. Addressing important policy issues (e.g. cost recovery, improved targeting to protect vulnerable groups, private sector provision of services, and decentralization) would benefit from quantitative assessments of the costs and benefits of different options. Jamaica possesses two rich data bases that could guide such policy decisions. The Survey of Living Conditions (SLC) provides information on households' health, education, nutrition, housing and consumption. Ministries in the social sector have point-of-service statistics from their management information systems collated through the Institution Based Monitoring System (IBMS). Unfortunately, recourse to these data bases to answer specific policy questions has been limited.

1.11 In evaluating implementation of individual social sector projects--largely contained in the Government's capital budget--it is apparent that overall implementation has been hampered in large part because the necessary funds have not been made available on a timely fashion through quarterly budget releases from the Ministry of Finance (MOF) to implementing ministries. So, despite the success of the HRDP in mobilizing additional external resources for rebuilding the social sectors, actual expenditures using these resources have been constrained using budgetary mechanisms in order to meet stabilization fiscal targets without making appropriate reallocations to Government's stated priority areas, including investments in the social sectors.

1/The HRDP Secretariat is supported through the Bank's Social Sector Development project. As part of this Project's conditionality, the GOJ is required to hold an Annual Review of the HRDP.

II. THE EDUCATION SECTOR

A. Overview

2.1 Jamaica has placed great emphasis on education evidenced by average net enrollment rates of 98% at the primary level and 82% at the lower secondary level (Grades 7-9). Female participation rates are among the highest in the world. Education in Jamaica is free and compulsory up to age 11 and is provided largely through a public education system. Private institutions figure only marginally (e.g. around 4% of primary enrollment, and 6% of secondary). In 1987/88, the education system served over 500,000 students between the ages of 6 and 17 in over 1,500 institutions islandwide. Male and female enrollments are about equal (Annex 1, Table 1).

2.2 The primary education system boasts almost universal coverage, with a net enrollment rate of about 98% for children in the 6-12 age group. Drop-out rates are relatively low, primarily because Jamaica practices a system of automatic promotion to higher grades without reference to achievement or ability. Universal coverage and low drop-out rates, however, mask the quality of schooling provided to the majority of primary students, which is widely perceived as poor. According to the National Assessment Program's Grade 6 Achievement tests in the late 1980s, over 40% of sixth grade students were found to be functionally illiterate, i.e., unable to read with comprehension at the fourth grade level. Notable differences in achievement exist across schools (with urban school children generally excelling over rural) as well as by gender (with girls typically scoring higher than boys). The Government, along with donors (notably the United States Agency for International Development and the Inter American Development Bank), are beginning to address the poor quality of primary education by adopting comprehensive reform measures.

2.3 Secondary Education. Jamaica also has been highly successful in providing access to secondary education in general terms, with net enrollment rates high relative to other middle income countries. In 1987, the net enrollment rate for lower secondary (Grades 7-9) was nearly 83% and for upper secondary (Grades 10-11) net enrollment was 63%. However, high coverage levels do not necessarily translate into equity of access to a similar form or quality of schooling. Under the existing system, there are six parallel types of lower secondary school programs, each of which varies significantly by the ability of students recruited, expenditure per pupil, and quality of programs offered. These are: Traditional High Schools, Comprehensive High Schools, Technical High Schools, New Secondary Schools, All-Age Schools and Vocational/Agricultural Schools. Over 40% of students in the Grade 7-9 age group attend All-Age schools which receive the lowest quality inputs and the lowest per student expenditures (Annex 1, Tables 2 and 3).

2.4 Tertiary Education. The tertiary education system in Jamaica is characterized by diversity with institutions ranging from community colleges, teachers' colleges, the College of Arts, Science and Technology (CAST), to the University of the West Indies (UWI). Approximately 20,000 students are enrolled in tertiary institutions, with the largest proportion in community colleges (about 40% percent), followed by UWI (25%) and CAST (20%). Quality and efficiency are also of concern at this level of the education system. The failure rate is high in some institutions and programs, evidenced by increasing enrollments with falling outputs. For example, in 1988 the *Economic and Social Survey of Jamaica* reported that 50% of teacher students in their final year failed. It is believed that a major contributory factor is the quality of education received at the secondary level, which then requires remedial instruction at the tertiary level. This highlights the issues of efficiency and cost-effectiveness which characterize the entire education system.

2.5 Sources and Trends in Educational Finance. The MOEC has not escaped the Jamaican Government's financial constraints, the severity of which has increased sharply in recent years. Budgetary cuts have been undertaken at the expense of inputs needed to improve the quality of the system (i.e., instructional materials, teacher training, school supervision, student evaluation, and policy analysis) and to maintain or expand existing infrastructure. In view of the declining resource base, the MOEC has made, and will continue to make, changes in its current policies in order to increase efficiency and attain its objectives within those limits.

2.6 Jamaica has had a long tradition of substantial support for the educational system as evidenced by high enrollment rates. Although as a share of non-debt public expenditures, education rose from 19% in 1981 to 22% in 1991, when debt service is included, education expenditures actually fell from 15% to 12% over the same period--the result of high debt service and fiscal austerity measures. As a share of GDP, education spending also fell from about 7% in 1981 to a low of around 4% in 1985, and has since recovered only to about 5% at present. Overall, education represents about 4% of the capital budget and about 18% of the central Government's recurrent budget.

2.7 In real terms, recurrent expenditures have declined sharply, by 23% over the past decade (Annex 1, Table 4). The shrinking budget has had its greatest impact on non-salary recurrent expenditures such as instructional and resource materials, maintenance, and quality training programs. With three-quarters of the recurrent budget allocated towards salaries, there are few inputs beyond teachers available. The average annual grant per pupil for non-salary recurrent expenditures decreased from J$140 to J$52 (in 1987 constant prices) between 1987/88 and 1991/92. This translates into less than US$2.00 per student for funding quality inputs.

2.8 Within the MOEC's recurrent budget, priority has been given to increasing the share devoted to primary education, consistent with the HRDP policy commitment of strengthening basic education. In 1991/92, primary education accounted for 38% of the budget, up from 35.1% in 1981/82. Per pupil recurrent expenditures at the primary level rose by 31% from J$258 (in 1981 constant dollars) in 1981/82 to J$375 in 1990/91 (Annex 1, Table 5). Increased support to primary level education, however, has taken place by reallocations from secondary and tertiary levels. Of the remaining share in the 1991/92 recurrent budget, 33.3% was devoted to secondary education. On a per capita basis, expenditures for secondary education decreased by 21% from J$810 per pupil in 1981/82 to J$642 in 1990/91. At the Tertiary level--which accounted for 22.4% of the budget in 1991/92--expenditures have also declined significantly. Per capita spending decreased from J$4,316 in 1983/84 to J$2,753 in 1989/90.

2.9 The share of the education budget devoted to capital expenditures has steadily increased in recent years, directly as a result of the HRDP, the majority of which financed with foreign loans and grants. Most of these capital outlays have been programmed for refurbishing and expanding primary and pre-schools, for construction of regional offices to assist in decentralization, and for a variety of activities included under the Social and Economic Support Program (SESP). Although these investment projects are contained in Budget documents, implementation has been severely hampered because of the lack of funds through quarterly budget releases to line ministries from the Ministry of Finance, even for foreign grants.

2.10 Increased government financing of education in the future will have to depend on economic growth as well as the ability to mobilize complementary resources from students, parents, community groups and the private sector. The major non-governmental source of financing in Jamaica is from students and their families. Currently, the Government supports a policy of cost recovery for textbooks through an established rental scheme for secondary schools, excluding All-Age schools. A study completed by the MOEC[2/] estimated family expenditures by type of secondary school (Annex 1, Table 6). Although fees are not charged directly for tuition in government schools, family expenditures include outlays for education-related items, particularly textbooks, writing materials, transportation, uniforms and meals[3/]. The burden of these costs has had an effect on attendance for All-Age schools, and to a lesser extent, for other secondary schools. It is widely acknowledged that one reason for poor attendance at All-Age schools is that some days parents cannot afford to provide lunch or transportation money. The average annual family expenditure of J$1,589 in All-Age schools is almost one-quarter of per capita GDP, which is undoubtedly quite difficult for many families particularly those at lower income levels to afford, and when many have more than one child in school. Family expenditures also vary by type of school with outlays for traditional high schools about double those for All-Age schools. There is also formal cost recovery for tuition fees at the tertiary level. The Cess, which was initiated in 1986, requires students attending UWI and CAST to contribute to the cost of their education. The Cess fees, which are determined by the University Council, are generally low, although the Council is currently reviewing proposals to increase the fee structure.

2.11 Other initiatives have included raising funds from the private sector including contributions from businesses, churches, alumni organizations, and fund-raising activities. In recent years, several employers have agreed to sponsor programs and schools. Some 120 schools have currently been "adopted" by different companies since the scheme was begun in 1989.

B. Selected Issues in Education

2.12 Jamaica's high education coverage masks a number of shortcomings, which become particularly evident at the lower secondary level, although they have their roots at the primary level. The main issues are the *decline in quality* and *the inequity in the provision of resources and education opportunities* across geographic and socio-economic groups. Inadequate funding of educational expenditures provides a backdrop for explaining poor quality and to some extent, inequity. An additional issue is the *inability of the GOJ/MOEC to employ education data on school quality and student achievement to evaluate and monitor the impact of on-going or proposed policy changes* on schools and students.

2/MOEC, "Unit Costs Study," January 1990.

3/ For example, in secondary schools, excluding All-Age, there is a cost recovery scheme for textbooks. Families pay anywhere from J$60 to J$120 per book per child per school year.

Quality of Education.

2.13 Poor quality is reflected in low student achievement, with high levels of functionally illiterate students--over 40%--entering secondary school, indicating deficiencies at the primary level (Annex 2). Poor instructional quality is also evident by the very low performance on terminal exams at the secondary level. The MOEC estimates that about half of those students who finish the nine-year basic education cycle in the most-disadvantaged All-Age schools fail to acquire fundamental literacy and numeracy. Even among the more privileged students sitting the Caribbean Examinations Council (CXC) exam which determines entrance to post-secondary courses, pass rates for both English and mathematics were lower in 1989 in Jamaica than in Barbados or Trinidad and Tobago.

2.14 The situation can be attributed to interrelated deficiencies in the following areas: (a) curriculum; (b) teacher and school administrator training; (c) complementary instructional materials (i.e. textbooks); (d) educational support materials and teaching equipment; and, (e) school infrastructure.

2.15 Curriculum reform recently undertaken has addressed primary Grades 1-6, while the curriculum for grades 7-9 remains both inequitable and inefficient. The curriculum varies by type of school and is a major contributing factor to the unevenness of secondary education provision. Those children attending All-Age schools through Grade 9, and for whom basic education is likely to be terminal, receive essentially a repeat of the primary curriculum from primary-trained teachers with virtually no instructional materials for secondary level teaching. In terms of efficiency, the overall approach of the curriculum is based largely on rote learning by drill ("chalk and talk") and by a didactic style with teachers dispensing information and students taking notes.

2.16 Moreover, the examination system distorts the teaching of the revised curriculum at the primary level because instead, classroom instruction--and parental resources for private tutoring--is concentrated on the content of the highly competitive Common Entrance Exam (CEE-11+), which is taken by students in Grades 4-6, depending on their age. At present, the CEE-11+ exam is the selection mechanism to allocate limited spaces in Grade 7 of the prestigious high schools which, in turn, gives students greatly increased prospects for academic success and future income-earning potential.

2.17 Concerns about teachers, especially at the secondary level, are both quantitative and qualitative. Data related to teacher supply in comparison to student enrollment shows that it is the All-Age schools that are at yet another disadvantage. Teacher-student ratios for All-Age schools are 1:40, whereas for all others at the secondary level the ratio is in the order of 1:20. Teacher qualifications also vary by type of school. Forty percent of all high school teachers are university graduates compared to 8 percent in the new secondary schools and only 2 percent in the All-Age schools (Annex 1, Table 7). Although the percentage of teachers' college graduates in the system has increased considerably, especially in the New Secondary and All-Age schools, the majority have been trained for the primary level, so that they lack the content and methodology appropriate for the secondary level. Finally, the lack of on-going in-service training for secondary school teachers means that the teaching force is not exposed to modern advances in subject content and teaching methodology.

2.18 Inadequate provision of textbooks contributes to the poor quality of learning. Donor support (Annex 3) has contributed to the provision of textbooks for primary level students that are based on the new primary curriculum. At the secondary level, a GOJ/ODA project has provided, on a rental basis, textbooks written for students reading at the so-called Normative and Enrichment levels. However, this scheme does not include Grades 7-9 in the All-Age schools, who must therefore rely on a repeat of materials provided for primary level students. Moreover, the textbook rental scheme has encountered difficulties in that a significant number of students do not rent the books, either because parents cannot afford the rental fees or because students are unable to read the books. Although the proportion of students in each category is not known, the MOEC has estimated that approximately 60% of Grade 7-9 students in All-Age and New Secondary schools read at two or more grades below their present grade level. A survey in 1989 of Grade 7, 8, and 9 students revealed that 42%, 39% and 36%, respectively, would not be able to make full use of these textbooks because of deficiencies in literacy and numeracy.

2.19 Additional educational materials and teaching equipment are also inadequate. There are no laboratories or equipment in All-Age schools to facilitate the teaching of science. Even in the high schools, the lack of funds for maintenance means that many laboratories and pieces of equipment are non-functional. Other teaching aides, such as maps, posters and consumable materials, have also not been available given the size of non-wage recurrent budgets at the school level.

2.20 Physical facilities have also suffered from lack of maintenance. Although the traditional high schools have a greater capacity to solicit funds for maintenance of infrastructure and furniture from Parent Teacher Associations (PTA) or communities, the All-Age schools are usually old and dilapidated with open classrooms separated only by chalkboards. Rooms for different age groups (i.e. those in Grades 7-9) or specialized classes are lacking in the All-Age schools. In many schools, furniture is designed only for use at the primary level, with secondary-age students sharing seating in groups of three or on low benches.

Inequities in Secondary Education

2.21 As evident from the description above, Jamaican education at the secondary level is characterized as a highly stratified and inequitable system. This is reflected by large disparities in teacher qualifications, facilities, instructional quality, learning materials, institutional support, and resource allocation. It translates into limited educational achievement and life-time employment opportunities for a large share of Jamaican children. For example, the All-Age schools comprise about 40% of junior secondary enrollment, serve the poorest socio-economic levels of students, yet receive the lowest levels of resource allocation and educational inputs. About half of those who finish Grade 9 in All-Age schools are functionally illiterate. Yet, over half of students leave school and enter the labor force at the end of Grade 9. To date, the lower secondary cycle has failed to fulfill its critical role in establishing the basis for lifelong literacy, numeracy and other employment-related skills.

2.22 At the other end of the spectrum, although 70% of children age 11-13 sit the CEE-11+, only 20% of these are awarded free places in the relatively well-resourced traditional high schools. These high schools prepare students to take the prestigious academically-oriented regional and international examinations (e.g. CXC and O-levels) that ultimately provide the way into post-secondary education and offer good prospects for employment opportunities.

Insufficiency and Allocation of Funding

2.23 The lack of sufficient resources is an important contributing factor to the poor quality of Jamaican education, as shown by low percentage of non-wage recurrent budgets available for quality inputs and maintenance. Furthermore, the allocation of what little resources the sector does command lies at the heart of the inequity of the education system; the unequal distribution of resources by type of school is striking (see Table 1). Children who attend All-Age schools are clearly not only those who receive least from the public sector, but also come from the poorest segment of society whose parents can least afford to contribute financially (Annex 1, Table 8). In fact, almost half (45%) of the children from the poorest population quintile attend All-Age schools, while an almost equal proportion (47%) of the richest quintile attend traditional high schools. Table 1 shows MOEC grants per pupil that are provided to schools to cover the non-wage recurrent costs, including utilities, maintenance and other quality inputs such as textbooks, resource materials, libraries, teaching equipment. In real terms, resources available have fallen by as much as two-thirds since 1987/88. The table also illustrates the inequality of resource allocation by different types of schools; for example, in 1991/92, students in traditional high-schools received seven times that of pupils in Grades 7-9 in All-Age schools and over twice the amount provided to New Secondary schools.

Table 1
Grants Per Pupil in Grades 7-9, by Type of School
(in constant 1987 Jamaican dollars)

	1987/88	1988/89	1989/90	1990/91	1991/92
All-Age [a]	30	28	24	20	11
New Secondary	100	92	79	67	37
Comprehensive	167	153	131	112	62
Traditional High	200	183	157	133	74
Technical High	312	286	246	208	115

Source: MOEC, Statistics Unit.
a. Equivalent to per pupil grants to primary school students.

Inability of the GOJ/MOEC to Evaluate and Monitor the Impact of Policy Changes

2.24 Given the tight fiscal situation in Jamaica, any improvement in the quality and equity of education will need to be done in a cost-effective manner. Currently, the MOEC lacks the ability to evaluate and monitor the impact of any such policy change. The complexity and multiplicity of the Jamaican examination system, for example, fails to provide key information for measuring the "output" of the educational system and how it changes over time. In addition, the MOEC lacks a fully integrated evaluation system which would give feedback to policy makers on the impact of different levels of inputs. Combined, the examination and evaluation systems should provide present teachers, students, parents and policy makers with the information they need to improve the quality of education and to efficiently allocate scarce sectoral resources. The ability of the MOEC to analyze such information, however, is weak. Management information systems have not been utilized to their fullest, particularly in the areas of education planning and development. Although the donor community has recently provided additional computers and training in their use, many machines remain either unopened, not fitted with appropriate software or not adequately maintained.

C. The Government's Strategy

2.25 Within a setting of tight fiscal constraints, the Government's overall strategy in the social sectors is to improve efficiency, while at the same time, improving the quality of social services. In addition, the Government is focusing expenditures on social services with the highest social rate of return and those which benefit most those who can least afford to pay. In the education sector, evidence worldwide suggests that a basic education covering Grades 1-9 and emphasizing core subjects, is the most cost-effective way to provide both the labor market and the higher education system with trainable manpower. *In support of this strategy, the Government has stated the policy goal of targeting resources to ensure equal opportunity for all children to receive a quality basic education in Grades 1-9.*

2.26 Jamaica has already begun to address the quality of education at the primary level (Grades 1-6), namely the revision of the curricula and the related provision of complementary inputs. Major donor support (USAID and IDB) has already been mobilized in support of these efforts. The Government now intends to improve quality and equity at levels Grades 7-9, which is inherently more complicated because it involves the replacement of the existing system--characterized by six types of schools each with different entry requirements, curricula, per pupil expenditure, terminal assessment and social prestige--with a Junior High School program that provides a common curriculum giving equal educational opportunity for all students.

2.27 The undertaking of reform at the lower secondary levels is timely because it involves critical backward and forward linkages that complement ongoing efforts at the primary, upper secondary and tertiary levels. The reform of Grades 7-9 is a natural extension of reforming the primary level, ensuring that, together, they provide a quality basic education in Grades 1-9. Moreover, the rationalization of the exam system--particularly the postponement of selecting students for academic streams from Grade 6 until Grade 9--is critical for the success of the new primary curriculum. Rationalizing lower secondary education will also have important consequences for upper secondary (Grades 10-12) and tertiary levels. Demand for upper secondary education is expected to increase primarily because of the percentage of students who will be eligible to advance based on their improved ability to meet exam criteria. The MOEC is exploring options of how to respond to the inevitable increase in this demand. Evaluating options will need to take into account the budgetary implications, as well as ensuring the appropriate mix of academic and vocational training depending on needs of the labor market.

2.28 In a Cabinet decision of May 20, 1991, a major reform of secondary education (or ROSE) was officially adopted. It will involve the introduction of a common curriculum with complementary inputs of teacher and principal training, textbooks and other educational materials, furniture, equipment and selected refurbishment of facilities.

2.29 Under assistance from the World Bank Fourth Education Loan (Ln 2899-JM), a feasibility study explored various options of introducing a common curriculum. The Government has selected a gradual method whereby over a period of fifteen years, the curriculum would be introduced into selected schools in three Phases. In the first five year phase, the Government hopes to reach approximately one-third of the total enrollment in Grades 7-9 with the new curricula. The 72 schools to be included in the first five years of the reform will be selected from All-Age and New Secondary schools which traditionally have served the poorest children with the least resources. Provision of curriculum guides, textbooks and related training would be standard across schools officially selected under the project. Other inputs, such as physical refurbishment, will vary depending on the state of existing structures. Schools not formally selected for the first phase of the reform will be able to participate voluntarily (up to a maximum of 10 each year) and receive a package of teacher and curriculum guides and teacher training.

2.30 The Fourth Education Project also supported the development of the new common curriculum. The introduction of this curriculum, along with related inputs, was piloted in four All-Age Schools. Based on this experience, it was determined that the phased introduction of the curriculum would take place by grade into schools selected, i.e. in the first year, Grade 7 would be introduced in the first year cohort of schools. In the second year, Grade 8 would be introduced into the first year cohort and so on. This would give both teachers and students the opportunity to build on previous year's experiences.

D. Donor Support

2.31 Donor activity in the education sector is mainly concentrated in the area of primary education with support for the government's efforts to improve the quality of Grades 1-6 (Annex 3). With two successive projects each from the IDB and USAID, reform at the primary level has included: the establishment of the National Assessment Program (NAP) for Grades 1-6; review and revision of the primary curriculum; upgrading and training of primary school teachers; library services; and physical infrastructure improvements.

2.32 Donor interventions at the secondary level have been mostly small-scale and although none have comprehensively addressed the GOJ's reform of secondary education, several projects have included important elements that would support the reform effort. These include a school mapping exercise, and a tracer study of secondary school graduates which provides useful data and information on the links between educational background and job opportunities.

2.33 Substantial resources have also been directed toward tertiary education. A ten-year development plan (1990-2000) prepared by UWI and supported by several donors is aimed at overall improvement and strengthening of the university system. The project includes: infrastructure, equipment and institutional development components specifically related to the improvement and/or expansion of teaching and research, and a regional component to strengthen outreach services to non-campus countries and off-campus students.

2.34 Other donor support in the education sector is aimed at improving the management capabilities of the MOEC. Activit' ، supported include the development of an information system on the physical status of educational institutions, as well as the production of an instrument for school assessment and the establishment of a comprehensive and computerized Educational Management Information System (EMIS).

E. Past Bank Experience and Lessons Learned

2.35 Since 1966, the Bank has supported four education projects in Jamaica totaling US$38 million. A Social Sectors Development Project (US$30 million), and a Financial and Program Management Improvement Project (US$15.6 million) also contain a component supporting the MOEC. The first three education projects were implemented from the late 1960s to the late 1980s and covered primary, secondary and vocational/technical sub-sectors (Annex 4).

2.36 The ongoing Fourth Education Project, **Education Program Preparation and Student Loan Project** (Loan 2899-JM in 1988 for US$8.3 million) is the basis for the GOJ's Reform of Secondary Education Program. In particular, the MOEC developed a common curriculum in five core subjects for Grades 7-9 as well as training and evaluation structures for the new curriculum. Under the project, the new common curriculum has been piloted in four new Junior High Schools in St. Thomas Parish. Overall, this project has achieved its objectives. Although the project period has been extended by one year to December 31, 1994, this was due to delays in implementing the civil works components; the other components of the project, notably the development of the new curriculum and the strategy for introducing the reform islandwide, have been carried out in a timely fashion.

2.37 Lessons Learned. Based on a review of audit and supervision reports, the main lessons emerging from past projects on project design have been the need to: (a) allow for adequate planning and advanced preparation, especially for projects requiring policy decisions; (b) pay greater attention to institutional arrangements for project implementation, especially if the project is broad-based in scope; (c) ensure flexibility in both project design and implementation arrangements should a loan need to be adapted to changing circumstances; and (d) ensure adequate provision of finances. These lessons are taken into account in the design of the proposed project. Substantial advance planning and preparation has been carried out under the Fourth Education Project and with a Japanese Grant Facility. The Reform Management Team approach addresses issues raised with respect to (b) and (c). Finally, MOF officials have been kept informed during project preparation and several conditions for negotiations and loan effectiveness will require that adequate budgetary releases for this proposed project and the three other social sector projects funded by the Bank are assured for FY 1993/94. In addition, a Country Implementation Review is scheduled for March 1993 to address implementation issues that are common to Bank-supported projects, including the availability of funds from the MOF to implementing ministries throughout the fiscal year. Lastly, the Bank will continue to monitor the release of resources to the social sectors (both retrospectively and projected) through the HRDP Annual Review, simultaneously with the Annual Review provided under the proposed project.

F. Rationale for Bank Involvement

2.38 The Bank has taken a lead role in assisting the GOJ to formulate and implement an economic adjustment and recovery program complemented by a coherent social sector strategy. The Bank's *country assistance strategy* is based on agreed policies as expressed in the government's Medium-Term Policy Framework (July 1992) and the associated Public Sector Investment Program for 1992-95. The strategy reflects an integrated approach to tackling Jamaica's main economic, social and environmental problems. On the economic front, adjustment lending emphasizes private sector development and the growth of employment and incomes through the completion of reforms in the areas of trade, privatization and deregulation. Investment lending, including the proposed project, complements this approach through the continued support of: (a) the development of human resources and (b) the removal of infrastructure constraints.

2.39 Within the social sectors, the Bank's central role in assisting the GOJ to formulate, execute and monitor the HRDP has been a catalyst for Jamaica in developing an integrated approach to social sector development and poverty alleviation, while generating coordinated donor support for their efforts. The proposed education project builds upon the Bank's substantial involvement in the sector and supports one of the central priorities of the MOEC's *Five Year Plan* and the HRDP: improving the efficiency and quality of basic education, with a particular focus on schools serving the poorest students. Other major donors are already tackling the issues of efficiency and quality at the primary level. In a mutually reinforcing manner, this project will address these same issues at the last three grades of the basic education cycle, namely Grades 7-9. The project also draws on the recommendations and analysis of the Bank's regional study *Access, Quality and Efficiency in Caribbean Education*. Finally, the ongoing Fourth Education Project was specifically designed to assist the MOEC in building the conceptual and analytical framework for the reform of lower secondary education and to pilot the introduction of a common curriculum (including related training and evaluation activities) which forms the core of the reform program.

III. THE PROJECT

A. Project Objectives and Scope

3.1 The project aims to improve: (i) the quality and equity of basic education, specifically Grades 7-9; and more generally, (ii) the quality and cost effectiveness of public provision of social services. The key objectives of the project are to:

(i) introduce a major reform of the junior secondary education system (i.e. Grades 7-9) with a focus on the poorest groups within these grades;

(ii) strengthen the MOEC's capacity to manage and evaluate the impact of such a reform; and,

(iii) strengthen the PIOJ's capacity to carry out relevant and timely social policy analysis.

B. Project Description

3.2 Secondary Reform Support (82.4% of total project costs, including contingencies) would provide for: (a) the introduction of a common curriculum; (b) pre-service and in-service training of teachers and school administrators; (c) the provision of textbooks; (d) the provision of minimum educational support materials; (e) improvements in, and limited new construction of, physical infrastructure, including furniture; and (f) studies and pilot programs for upper secondary education.

3.3 Evaluation and Management Strengthening (8.7% of total project costs, including contingencies) would support: (a) the rationalization of the exam system; (b) the establishment of a Reform Management Team; (c) the execution of a public awareness campaign; (d) the evaluation of the impact of the new curriculum on educational achievement; and (e) the preparation of Phase II of the Reform.

3.4 Social Policy Analysis and Management (8.9% of total project costs, including contingencies) would finance: (a) the establishment of a Social Policy Analysis Unit in the PIOJ; (b) strengthening key line ministries in social policy analysis; (c) training, fellowships and the establishment of a Data Bank for the University of the West Indies (UWI) in areas of social policy analysis; and (d) the Survey of Living Conditions (SLC).

C. Project Components

Component 1: Secondary Reform Support

3.5 This component supports the implementation of the first 5-year phase of a 15-year reform program to improve the quality, efficiency and equity of education in Grades 7-9. It would finance the necessary educational inputs and support services for the junior secondary reform program, and the Government's formulation of strategies to address the increased demand for services at the upper secondary level.

3.6 To meet the equity objective of the project, all 72 schools formally selected to receive project inputs will be All-Age and New Secondary schools. Based on the Survey of Living Conditions, these two types of secondary schools serve 79% of the poorest quintile of students, 45% and 34% respectively (Annex 1, Table 8). Although all schools with Grades 7-9 will eventually have the new curriculum introduced by the end of the Reform period, the selection of the 72 schools for the first 5 year phase of the reform will be based on clearly defined criteria (Annex 5, Table 1). The first year's schools are shown in Annex 5, Table 2. Prior to negotiations, the Government confirmed it had identified the selected schools for year 1 of the project (para. 6.1 ((a)). In addition, during negotiations the Government agreed to submit to the Bank not later than September 15 of each year the specific schools to be selected for the following academic year, based on specific criteria (para. 6.2 (a)).

3.7 Other types of secondary schools (e.g. better off traditional high schools) will be encouraged to voluntarily opt into the reform program--up to a maximum of 10 each year--and will receive basic inputs with limited marginal cost to the project involved. Voluntary schools will receive curriculum and teacher guides and teacher training, but will have to purchase other inputs such as textbooks. By the final year of the project, a cohort of approximately 28,000 students will be receiving the new curriculum in Grades 7-9 (Annex 5, Table 3), which combined with a significant number of students from the voluntary schools, would mean that about one-third of students would be receiving the new curriculum in the first of three five-year phases.

3.8 More specifically, this sub-component would include:

(a) Common curriculum

3.9 A new common curriculum for Grades 7-9 (including mathematics, science, social studies, language arts, resource and technology, and career education) has been developed and piloted under a previous World Bank project. The curriculum is learner-centered and combines a basic skills focus with problem solving activities. The proposed project would support the introduction and continuous assessment of this curriculum in 72 All-Age and New Secondary schools. This sub-component encompasses the following activities: (i) production of 10,500 teachers' guides and manuals to facilitate the teaching of the new curriculum; (ii) publication and production of 1,000 Junior High School Handbooks for school administrators; (iii) 2 man-months of overseas training in methods of continuous daily assessment of students; (iv) 52 man-months of local consultants to develop continuous daily assessment; (v) 3 man-months of local consultants in curriculum research to support possible revision in the curriculum during implementation; and (vi) 62 man-months of local consultants to develop remaining additional subject areas. The proposed project would also support the incremental positions for 85 teachers and 30 guidance counsellors.

(b) Pre-service and in-service training of teachers and school administrators

3.10 To assure effective incorporation of the common curriculum in the schools, extensive in-service training of teachers, school administrators and regional education officers will be undertaken during the project. The Joint Board of Teachers' Education (JBTE), a tripartite organization representing the MOEC, the Teachers' Training Colleges and the UWI, will be responsible for the in-service training of approximately 6800 teachers in 72 project schools and 50 voluntary schools using a combination of training strategies including summer workshops, school visits and distance education. The MOEC will be responsible for executing other reform-related training/orientation activities including: (i) 60 regional education officers; (ii) 550 school administrators; (iii) 2200 school board members; (iv) 380 teacher trainers at tertiary institutions (e.g. Teacher Training Colleges, UWI, CAST, CTC); and (v) 2500 final year students in the teachers colleges. Incremental staff salary for a Senior Education Officer responsible for coordinating training will be supported.

(c) Production and distribution of instructional materials

3.11 Although the common curriculum is the major vehicle for achieving equity, it is also clear that currently students arrive at Grade 7 with widely different levels of mastery of the primary school curriculum. Four groups have been identified based on differences in reading proficiency; (i) *Foundation 1* or reading at least 5 grades below grade-level; (ii) *Foundation 2* or reading at least 2 grades below grade-level; (iii) *Normative* or reading at grade-level or 1 grade below; and (iv) *Enrichment* or reading at or above grade level. Therefore, while the curriculum *content* will be the same, instructional materials (i.e. textbooks) will need to be multi-level, based on students' abilities.

3.12 The proposed project would support the: (i) procurement and distribution of about 162,000 textbooks for all reading levels in Grades 7-9 for 28,000 students in the 72 project schools (since the textbooks will be used by four successive cohorts of students, some 112,000 students will be reached); (ii) procurement and distribution of 71,000 Foundation 1 and 2 level textbooks for students in schools not formally included in Phase I of the Reform at a ratio of 2 students per book; (iii) procurement and distribution of 40,000 reading books (High Interest Reading and Language Arts Program or HIRLAP) to the All-Age schools outside the project; and (iv) administrative costs to extend the textbook rental scheme to All-Age schools (Annex 6).

3.13 More specifically, the project will provide Foundation 1 and Foundation 2 textbooks to 17,000 students in All-Age and New Secondary schools participating in the project at a ratio of one textbook per student. The content of Foundation 1 and 2 materials is being developed under the ODA-supported Secondary School Textbook Project. For the 11,000 Normative and Enrichment level students, the MOEC will invite bids from the publishing industry to provide suitable books for the new curriculum by developing or modifying existing textbooks in five subject areas (Math, Language Arts, Social Studies, Science, and Resource & Technology). These textbooks will also be provided at a ratio of one book per student. While waiting for these to be developed and published, All-Age schools selected for the project will receive a set of existing textbooks. Reading books (HIRLAP) will also be provided to approximately 16,000 students at a ratio of 1 book for 4 students.

3.14 All textbooks will be of durable quality (unlike those currently provided at the primary level) and will be expected to serve four successive cohorts of students, implying a replacement rate of every four years. The approximate cost per textbook to the MOEC for Foundation 1 and 2 level is US$ 2.20, for Normative and Enrichment levels, US$ 8.25 and for HIRLAP US$ 1.50.

3.15 The sustainability of the provision of textbooks will be enhanced by the introduction of cost recovery into the All-Age schools which at present are not covered by the existing textbook rental scheme. The proposed project will support the administrative costs of extending the rental scheme to All-Age schools. Given, however, that the project is targeting the poorest students many of whom attend All-Age schools, a mechanism will also be developed as part of the textbook rental policy for identifying and supporting those students who cannot afford to pay. Under the ODA project, an impact study planned for early 1993 will, inter alia, analyze why students under the existing rental scheme do not rent books, either because they cannot afford the fees or that the books provided were too advanced for their reading levels. Because this project provides for more appropriate textbooks for students of lower reading ability levels, the ODA study will be used by the MOEC to design a comprehensive book rental/cost recovery scheme for all secondary schools with Grades 7-9, including an effective mechanism to identify and support those unable to pay the fees. Two additional field officers will be supported by the project to visit All-Age schools participating in the project, as will a Senior Education Officer in the Educational Media Unit which is responsible for the scheme. Local technical assistance will be provided to modify computer programs to include All-Age schools and to input school data onto the computer. Documentation explaining the rental scheme will be provided for new schools and a short training course will be conducted for one school principal and one textbook rental administrator per project All-Age school. <u>During negotiations, the Government agreed to adopt a policy by August 15, 1993 regarding a comprehensive textbook rental scheme, including a mechanism to identify and support those unable to pay</u> (para. 6.2 (b)).

<u>(d) Provision of educational support materials</u>

3.16 In addition to textbooks, provision of educational support materials and teaching equipment to support the new curriculum is an essential aspect of improving educational quality in grades 7-9. Experience in many countries, including Jamaica, has demonstrated that educational support materials and equipment have not always been integrated effectively with the instructional program, leading to their non-use by teachers and consequent wastage. This sub-component is designed to avoid procuring equipment and materials which schools do not need or cannot use. Specifically, it will: (a) provide materials and equipment to project schools that meet each school's particular need configuration; (b) link the provision of educational support materials with the implementation of the new curriculum, through the in-service and pre-service training activities for teachers and school administrators; (c) ensure that each project school has a basic minimum of instructional support materials and that these are available in a timely manner; and (d) develop capacity at the school site level to identify educational instructional support materials and equipment that support the new curriculum.

3.17 The MOEC's Curriculum Unit has identified a basic set of minimum materials and equipment to support the core subject areas. Schools participating in the project will be eligible to receive all materials in the basic minimum packages that they do not already have. To ensure a fit between school needs and the package of resource materials it will receive, a four-step implementation plan has been developed: (a) each school participating in the project will complete an instructional materials inventory, in which differences between the schools existing equipment and supplies and the Core Curriculum's basic minimum for each subject area and school are identified; (b) a review of the school's needs will take place during the School Administrators' Workshop and school-specific lists of items to be procured will be prepared; (c) the MOEC will collate the equipment and materials requests (orders) from the participating schools and procure; and, (d) suppliers and/or distributors will provide equipment and materials directly to schools on a timely basis, with penalties for delays.

(e) Infrastructure improvements for schools adopting the common curriculum

3.18 Civil works. The project would support: (i) the construction of three new Junior High Schools (i.e. those which would draw students in Grades 7-9 from surrounding feeder All-Age schools); (ii) refurbishing and, if necessary, the extension of one laboratory and one workshop for teaching Resource and Technology subjects for 27 All-Age schools; (iii) refurbishing of 10 New Secondary schools; and (iv) refurbishing for 20 small rural All-Age schools. The project would also support on a declining basis the incremental costs of maintaining schools receiving civil works. The civil works are introduced over the life of the project and their timely completion is essential since programming for the other sub-components is based on the availability of buildings for occupancy (Annex 5, Table 4). Since accelerated design is important to get the first year's civil works underway as soon as the project becomes effective, prior to negotiations prototypical architectural designs and draft standard bidding documents for Junior High Schools were sent to the Bank for review (para. 6.1(b)). In addition, during negotiations the MOEC outlined the steps required for acquiring property on which to build the three new schools, indicating that it would take an average of 6 to 9 months. Since the first of the new schools is scheduled to begin construction in year 2, site acquisition procedures should begin early in the first year of the project.

3.19 Given the weakness of the MOEC's civil works management capacity in past projects and the proposed scope of civil works in this project, the project would support the recently upgraded position of Technical Services Director who would be responsible for ensuring adequate civil works supervision across the Ministry as a whole. In addition, the project would fund the incremental salaries of a Building Coordinator and two Building Officers to support the specific civil works targets of the reform program and would report to the Director of Technical Services. Design and site management will be contracted to three architectural design/management firms (see also paragraph 4.28 on Implementation).

3.20 Furniture. Since the new curriculum utilizes both large group discussions and individual student project work, furniture will need to be modular and easily moved. Furniture prototypes were developed and tested to ensure that their designs met curriculum needs. The project would support the procurement of desks/chairs for students and teachers, blackboards and easels, laboratory furniture for the 50 All-Age schools selected.

(f) Strategies for upper secondary

3.21 The Government of Jamaica recognizes that improving the quality of a lower secondary education and extending access to it for all children in Grades 7-9 will have implications for upper secondary and tertiary levels. Because more students will be eligible to advance beyond Grade 9, it is important for the MOEC at an early stage to plan how to accomodate them. By the fourth year of the project, the first cohort to benefit from the secondary reform program will be ready to advance beyond Grade 9.

3.22 The project, therefore, will support 8 man-months of technical assistance to examine the current status and future development of Jamaican upper secondary education. The recommendations of the study will need to take into account the budgetary implications as well as the needs of the labor market for both academically and vocationally trained professionals. The project will also set aside $1.2 million to support a number of pilot projects to test the efficacy of initiatives recommended in the study.

Component 2: Evaluation and Management Strengthening

3.23 The objective of this component is to improve the capacity of the MOEC to monitor the progress of and plan for increasing the quality of basic education, especially for Grades 7-9, through:

(a) Rationalizing the examination system

3.24 The overall objectives of this sub-component are to: (i) develop an exam which incorporates the curricular changes proposed in ROSE and which will provide policy makers with data to monitor the reform; (ii) increase the efficiency of the examination system by reducing test redundancy at the secondary level; and, (iii) improve overall test quality.

3.25 In support of these objectives, the proposed project will support the development and administration of a new Grade 9 exam (Junior High School Certificate or JHSC). This exam should reflect the contents and learning processes incorporated in the new Grade 7-9 curriculum. Since the new Grade 9 exam will function as a selection mechanism for placement at the upper secondary level or for entry into the labor force, it must be developed to satisfy both placement and certification purposes. The development of the new Grade 9 test will be contracted out based on detailed terms of reference that have been prepared with support from the Japanese Grant Facility. The administration of the test will be done by the MOEC's Student Assessment Unit. Initially, the numbers of students tested would be small, but eventually include all Ninth Grade students--estimated at about 50,000.

3.26 Currently, the MOEC administers four secondary-level testing programs that offer 59 different subject tests. Thirteen of these subject tests are "low volume" tests, taken by fewer than 400 students (less than 2% of total candidates); another 28 subject tests are redundant with technical and vocational certification tests being developed by the Human Employment and Resource Training (HEART) Trust. The MOEC has already taken decisions to eliminate the low volume subject tests and to reassign responsibility for the technical and vocational subject tests to HEART by 1995 (Annex 7). The MOEC has also decided to consolidate the existing Grade 9 Achievement Test and two subjects (English and mathematics) of the Jamaica School Certificate (JSC) with the new Junior High School Certificate examination. The project will support the position of an Assistant Chief Education Officer in the Student Assessment Unit who will be responsible for: coordinating the elimination of and reassignment of responsibility for these tests; working with the public awareness campaign to assure that the changes in the examination system are understood and known by the general public; and serving as the liaison between the test development agency and the Student Assessment Unit. Prior to negotiations, the Government submitted a detailed plan for the rationalization of the examination system, satisfactory to the Bank, for implementation during 1993-98 (para. 6.1 (c)).

3.27 Resources saved from reducing the number of subject tests offered by the MOEC will be reallocated to improving the quality of the remaining tests. By eliminating low volume tests and reassigning responsibility for technical-vocational tests to HEART/NTA, the MOEC will save approximately US$50,000 annually. These resources will be used to improve the MOEC test development process with respect to the 6 remaining JSC subject tests and the 6 remaining SSC subjects.

3.28 Finally, the project will support limited computerization of the Student Assessment Unit with hardware and software that is compatible with the Administrative Reform Program (ARP) system. Because some staff training is to be provided through the proposed ARP training program for the MOEC, only limited additional training would be provided by the project. Investment costs for automation (estimated at less than US$50,000 for hardware, software and necessary plant improvements) would be recovered in less than four years, replacing data processing done by outside contractors for US$13,500 annually.

(b) Establishing a Secondary Reform Management Team

3.29 The proposed reform of secondary education will require the involvement of the all MOEC departments, some more integrally than others, if it is to succeed. For this reason, a radical departure from a classical project implementation unit (PIU) is required to manage the implementation of such a broad reform program. Instead of a PIU, a Reform Management Team will be established to plan, coordinate and direct the reform of secondary education, and will be infused *within* (and not duplicate) the recently reorganized functional departments of the MOEC (Annex 8). The Reform Management Team will be chaired by the Permanent Secretary and comprise six other members including a National Coordinator (who will be the Deputy Chair) and the Directors of: Educational Services; Planning and Development; Projects; Technical Services; and Finance. The Team will be collectively responsible for all decisions relating to the reform, as well as for the implementation and evaluation of the program. An advantage of a Management Team approach embedded within the Ministry is that, unlike most PIUs which are dissolved once the project has ended, the experience gained by MOEC technicians during the implementation of the reform will be retained within the Ministry. This is critical, given that the proposed project supports only the first 5 years of a 15-year reform.

3.30 The proposed project would finance the salaries of the National Coordinator and the Reform Management Team Secretariat comprised of: an administrator; a public relations' officer; an administrative assistant; 3 secretaries; a driver; and an office attendant. In addition, the project would finance furniture and incremental running costs of the Secretariat. In order for key members of the Reform Management Team to observe firsthand the experiences of other countries undergoing a similar reform of secondary education, the project will support 5 man-months of study tours. Prior to negotiations, the Government put in place the new reorganized MOEC structure; established the Reform Management Team and appointed a National Coordinator with qualifications and experience satisfactory to the Bank (para. 6.1(d)). A condition of loan effectiveness will be to complete the appointment of the Reform Management Team Secretariat's professional staff, all with skills and experience satisfactory to the Bank, and fill 50 percent of the newly created establishment posts in the MOEC which will be supported by the project (para. 6.3 (a)).

3.31 Finally, to assist the MOEC and the Reform Management Team to effectively plan and monitor the reform program, a functioning Education Management Information System (EMIS) is critical. Although major assistance to strengthen the MOEC's EMIS is forthcoming from other donors, several vital activities have not been funded. The proposed project will support: salaries for the Chief Information Officer, and an Office Technology Coordinator; maintenance for MOEC computers; and the purchase of 30 ancillary workstation units for the Reform Management Team[4/]. Prior to negotiations, the Government provided a detailed analysis of the MOEC computer and office retrofitting needs to be financed under ROSE (para. 6.1 (e)).

(c) Public Awareness Campaign

3.32 Given the widespread impact of the reform on parents, students, educators, employers and the general public, a public awareness campaign will be introduced to present its objectives, phasing and benefits. Already, substantial discussion and debate has taken place on the reform. The Minister of Education outlined the reform strategy to Cabinet members during a Cabinet retreat in the fall of 1992. A nationwide address by the Minister opening the 1992 school year highlighted the MOEC's plans for improving the quality of education, particularly at the lower secondary level. A forum on the Reform of Secondary Education for key members of the education community was held in June 1992 and separate discussions have been initiated with the JBTE and the Jamaica Teachers' Association (JTA).

3.33 A public awareness campaign strategy has been developed, including activities phased during the life of the project on both the national and local level. The strategy is based on building support for the reform at the community level through public meetings, and by dispersing accurate information about the nature, scope and timing of the reform. The National Coordinator will oversee public awareness activities which will be carried out by a project-financed Public Relations consultant and a Public Relations Officer to be located in the MOEC's Management Team Secretariat.

3.34 The campaign will begin formally with a national launch in September 1993 using all media forms and a public forum. An ongoing program of news releases and photos, discussions on radio and television, press briefings and the distribution of fact sheets (Annex 9) and a bi-annual newsletter will be carried out to maintain the level of public interest and awareness at the national level. At the

4/ The World Bank-funded *Financial and Program Management Improvement Project* is providing a mainframe and workstations to the MOEC. Ancillary workstations could be purchased for this mainframe at one-tenth the cost of a new stand-alone computer.

local level, community meetings will take place for school boards and Parent-Teacher Associations in each community where a school is to adopt the new curriculum by September of the year preceding its introduction.

(d) ROSE Evaluation

3.35 The ultimate indicators for the success of the reform program (i.e. improved achievement scores, student matriculation rates into upper secondary grades, securing meaningful work, etc.) cannot be readiiy detected in the early years of the reform because it will take three years for the first cohort to complete Grade 9. In the meantime, however, key indicators or pre-requisites known to be associated with the above outcomes need to be identified and objectively measured to provide program developers and decision-makers with interim data to determine which inputs are associated with the greatest increases in student learning and changes in teacher behavior. In turn, this can form the basis for any needed modifications and guide future planning for subsequent phases. Evaluation requires baseline inventories (a standardized checklist) to be conducted at both project and comparison schools, as well as pre-tests and post-tests for students, and structured observations to measure instructional and learning environment changes (Annex 10).

3.36 Under the proposed project, evaluation (consisting of a baseline data inventory and pre- and post-tests) will be conducted at all 72 project sites, 10 pilot sites, 3 voluntary sites and 19 comparison sites. In addition, in-depth evaluation (consisting of structured observations, surveys, and interviews) will be conducted at a sample of 16 project sites, 4 pilot sites, 3 voluntary sites, and 19 matched comparison sites. The project will support: 1 person-month of local technical assistance to develop content and format of the baseline data inventory; 1 person-month of local technical assistance to revise and develop interim pre- and post-tests; 5 person-months of technical assistance to develop the observation instrument and protocols and related surveys instruments, assist in data analyses, and facilitate the overall evaluation; transportation, communication and duplicating costs to conduct the evaluation. Prior to negotiations, the Government confirmed it had identified five matched comparison sites and received their consent to participate (para. 6.1(f)).

3.37 The proposed project would also support the position of an Evaluator in the MOEC's Planning, Monitoring and Evaluation Unit who would be responsible for ensuring coordination of the evaluation exercise with other inter-related activities of the reform, e.g, curriculum introduction, training, and educational support materials. Strengthening the institutional capacity of the MOEC will also be supported by the project through four local fellowships in program evaluation at UWI (planned for 1994/95). If the program is not available at UWI as currently planned, the MOEC may alternatively invite foreign experts in evaluation to present special courses for MOEC staff. In addition, the project will fund short study tours (about 2 weeks) of 2-3 persons, including at least one evaluation staff and one Reform Management Team member, during the first and third project years to visit evaluation departments of large U.S. city or small state education departments. To further develop the professionalization of the evaluation staff, the project would also support sending an evaluation staff member to one professional conference on evaluation per year (e.g., the American Evaluation Association).

(e) Support for preparation of Phase II of ROSE

3.38 The proposed project covers the first 5 years of what is estimated to be a 15-year Reform program. In the second phase, the new curriculum along with accompanying inputs (e.g. training, textbooks and other educational support materials) would be provided to the remaining schools with students in Grades 7-9. This sub-component will support preparatory activities in years 4 and 5 of this project for Phase II of the Reform, which *inter alia*, will include reviewing and incorporating any necessary lessons that might emerge from the evaluation component (i.e. the effectiveness of combined inputs in improving the quality of secondary education and ultimately, student achievement).

Component 3: Social Policy Analysis Support

3.39 The project would support a series of measures designed to improve the capacity of the Government to undertake sophisticated social policy analysis and integrate the findings to formulate more effective and targeted social sector programs (Annex 11).

(a) Establishment of a Social Policy Analysis Unit

3.40 A Social Policy Analysis Unit will be established in the PIOJ's HRDP Secretariat. The Unit will be responsible for identifying needs for policy analysis in conjunction with sectoral ministries and the UWI. In addition, the Unit would perform simple policy analysis in-house and contract out other research activities and provide training to the line ministries in formulating and carrying out policy analysis. The Unit will disseminate the findings of the research to enhance policy formulation and guide policy decisions. The proposed project will support: incremental salaries for the Director, 3 Socio-economic analysts and a Programmer, plus 3 secretarial staff; 3 months of technical assistance; production costs for reports and studies to be disseminated; equipment (1 computer/printer, 1 fax, 1 copier); and operation and maintenance costs. The project will also support a pipeline (US$50,000 for the first year of the project; US$100,000 for years 2-5) of research on HRDP topics to answer questions on the policy agenda as determined by the Social Policy Analysis Unit and the key line ministries in the social sectors (MOEC, MOH, MLWS). Prior to negotiations, the Government confirmed it had established a Social Policy Analysis Unit in the PIOJ and appointed its Director with qualifications and experience satisfactory to the Bank (para. 6.1(g)). A condition of Board presentation will be to complete the appointment of at least three-fifths of the Social Policy Analysis Unit's professional staff, all with skills and experience satisfactory to the Bank.

(b) Linkages with Line Ministries

3.41 Key line ministries in the social sector (MOEC, MOH, MLWS) will participate in the network of research activities coordinated by the Social Policy Analysis Unit. In addition to taking part in setting the policy agenda, the ministries will receive in-service training in research methodology and social policy analysis for research staff in the respective research units of the ministries. Seminars will be provided for policy-makers to enhance their capacity to frame policy questions and integrate results of research into their decision making. The project will provide: 3 man-months of technical assistance to conduct the seminars for policy makers; 6 months of local technical assistance for in-service training of researchers; and, 24 months of technical assistance for the Ministry of Labour, Welfare and Sport (MLWS) and 2 computers to upgrade its capacity for policy analysis.

(c) Support to UWI

3.42 The project will provide: two years of technical assistance to upgrade faculty in advanced quantitative methods for social policy analysis and to upgrade the curriculum offered by UWI; 8 months of local consultants to conduct faculty upgrading; and graduate fellowships (15 for masters level study and 5 doctoral level) in research methodology and social policy analysis. The project will support the development of a databank at the Institute for Social and Economic Research (ISER) including the acquisition and maintenance of a network of 4 personal computers, appropriate statistical software and one data processor position. Prior to negotiations, the GOJ confirmed it had determined the scope and finalized cost sharing arrangements with the UWI for the ISER Data Bank (para. 6.1(h)).

(d) Support for Survey of Living Conditions

3.43 The Survey of Living Conditions (SLC) is a survey that collects annual data on health, education, nutrition and welfare of households (based on the Living Standard Measurement Surveys). The project will provide support to STATIN to implement the Survey of Living Conditions by establishing a small unit (1 programmer, 2 statisticians, 1 assistant) dedicated to the SLC which will alleviate past problems of data quality and timeliness. The project will also provide: 2 years of technical assistance in areas of survey methodology and data processing; 2 months of local consultancy for computer related assistance; 4 months of overseas study for the statistician; equipment (4 personal computers, 2 printers); and, the incremental costs of the survey field work. As a condition of disbursement for the Survey of Living Conditions sub-component (to be included in the Netherlands Grant Agreement), STATIN will have instituted a plan to implement the recommendations forthcoming from the data quality review satisfactory to the Bank for the improvement of data quality (para. 6.4).

IV. PROJECT COSTS, FINANCING, MANAGEMENT AND IMPLEMENTATION

A. Project Costs and Financing

4.1 Project costs. The total cost of the project, including physical and price contingencies, is estimated at JA$936.9 million or US$40.7 million equivalent, including taxes of US$.02 million on equipment. Base costs are calculated at US$32.7 million equivalent, and contingencies at US$8.0 million equivalent. Investment costs amount to 87% and incremental recurrent costs amount to 13% of base costs. The foreign exchange component would be US$12 million equivalent, or 29.5% of total project costs. The breakdown of costs by project component is shown in Table 4.1. Detailed cost tables are presented in Annex 12, Tables 1-4.

4.2 Basis of Cost Estimates. Project costs are estimated at October 1992 prices. Estimated construction costs for the project are based on unit prices derived from current contracts and cost analyses for similar standards of construction in corresponding facilities. Estimated rehabilitation costs are based on actual estimates done on a sample basis throughout the country. Costs of equipment, furniture, and materials are based on agreed lists of items and on the CIF prices of similar items procured in the country by the MOEC. Costs of training, local and international consultants, and other services reflect local or international rates, as applicable. Cost estimates for textbooks are based on current costs and costing standards used by the MOEC.

4.3 Contingency Allowances. Physical contingencies (averaging 4.6% of base costs) are estimated at 10% for civil works, and at 5% for training, furniture and equipment. Price contingencies (averaging about 20% of base costs) were estimated on the basis of expected annual international price increases of 3.7% a year for the life of the project; and local price increases of 15% for 1993, and 10% for 1994 and 5% per year thereafter. Total contingencies represent 24.5% of base costs.

Table 4.1 : Project Cost Summary[a/]

Estimated Costs:	Local	Foreign	Total	% Foreign Exchange	% Total Base Cost
	US$ million				
Secondary Reform Support	18.0	8.8	26.8	32.7	82.0
Common Curriculum	1.4	0.4	1.8	20.0	5.5
ROSE Training	4.8	0.1	4.9	0.1	14.8
Education Support Materials	0.4	1.7	2.1	79.1	6.4
Textbooks	0.3	0.8	1.1	74.1	3.5
Infrastructure	9.9	5.9	15.8	37.3	48.3
Upper Sec Strategy	1.1	0.0	1.1	0.0	3.4
Evaluation and Management Strengthening	2.0	0.9	2.9	32.5	8.9
Exam Rationalization	0.3	0.5	0.8	66.9	2.4
ROSE Management	0.8	0.2	1.0	25.4	3.1
Public Campaign	0.2	0.0	0.2	0.0	0.7
ROSE Evaluation	0.4	0.1	0.5	27.4	1.6
ROSE Phase II Prep	0.3	0.0	0.3	0.0	0.9
Policy Analysis and Management	2.1	0.9	3.0	30.6	9.2
Policy Analysis Unit	1.4	0.2	1.6	13.1	4.8
Line Ministry Linkage	0.1	0.1	0.2	46.2	2.2
UWI	0.3	0.4	0.7	57.8	0.4
SLC	0.3	0.2	0.5	40.4	1.8
Total Baseline Costs	22.1	10.6	32.7	32.5	100.0
Physical Contingencies	0.9	0.6	1.5	41.4	4.6
Price Contingencies	5.7	0.8	6.5	12.1	19.9
Total Project Costs	**28.7**	**12.0**	**40.7**	**29.5**	**124.5**

a/ Totals may not add due to rounding.

4.4 Foreign Exchange Component. Direct and indirect foreign exchange costs are estimated at about JA$287 million (US$12 million equivalent), including contingencies. Based on a detailed analysis of expenditures of similar projects in Jamaica, the foreign exchange component for the major categories was estimated as follows: civil works 40%, equipment 85%, vehicles 90%, foreign consultants 100%, overseas training 100%, operation and maintenance of equipment, buildings and vehicles 20%, production of reports 20%, and office supplies 20%.

4.5 Financing Plan. Total project costs are estimated at US$40.7 million (Table 4.2). A Bank loan of US$32.0 million would finance 79% of total project costs excluding taxes, which would cover US$31.5 million equivalent of investment costs and US$0.5 million equivalent of incremental recurrent costs to be financed on a declining basis during the life of the project, reaching 0% of the costs by the fourth year of project implementation. To meet a part of the total estimated project costs, the Government of the Netherlands will co-finance the Social Policy Analysis Component with a grant of 5 million Guilders (approximately US$2.7 million equivalent), with recurrent costs of US$0.9 million to be financed on a declining basis. The GOJ would finance US$6.0 million equivalent or about 15% of total project costs, including US$4.1 million in recurrent costs. As condition of loan effectiveness, the Government will sign an Agreement with the Bank as Administrator for a grant from the Government of the Netherlands for cofinancing the proposed project (para. 6.3 (b)).

4.6 The proposed loan of US$32.0 million, together with the Government of the Netherlands grant of US$2.7 million equivalent, would finance 85% of total project costs or 100% of foreign exchange expenditures and 82% of local expenditures. The relatively high share of Bank support is deemed necessary given: (a) the substantial deterioration of Jamaica's capacity to mobilize domestic resources, given the stabilization program and high debt servicing requirements; and (b) the project's emphasis on serving the educational needs of the poorest segments of the population. Although this high share of non-government financing reduces the burden of the GOJ to generate local counterpart funds, difficulties in securing the timely release of external resources through the Government's budget and warrant release mechanisms for other Bank-financed projects in the social sectors have proved to be major obstacles to project implementation. Therefore, during negotiations the Government provided written guarantee that the proposed project, as well as the three existing World Bank social sectors projects,[5] would be given priority in budgetary and warrant allocations for 1993/94 (para. 6.2(c) and Annex 13). During the implementation of the proposed project, evidence should also be submitted to the Bank that adequate budget provision and quarterly warrant allocations be forthcoming for each fiscal year. Specifically, this would take place each fiscal year in three stages. First, during negotiations the Government agreed to present to the Bank during the HRDP Annual Review (or in any case not later than March 31st of each year), the draft budget submission for the forthcoming year of the project (para. 6.2(d)). Second, during negotiations the Government agreed to allocate in its annual budget to be proposed to Parliament the funds, in an amount satisfactory to the Bank, necessary to implement the project in each fiscal year (para. 6.2(e)). Third, the Government agreed during negotiations that the quarterly releases of counterpart financing and external resources, satisfactory to the Bank, would be released to implementing agencies on a timely basis (i.e. notification of quarterly warrants be provided within two weeks of the start of any quarter)

5/ Social Sectors Development Project (Ln. 3111-JM), the Population and Health Project (Ln. 2851-JM), and the Education Program Preparation and Student Loan Project (Ln. 2899-JM).

(para 6.2(f)). Should funds not be forthcoming from the Ministry of Finance, the Bank would reserve the right to adjust the work program accordingly. Finally, as a condition of loan effectiveness, the Government will submit the 1993/94 budget figures, as approved by Parliament, for the proposed project and the existing social sectors Bank-supported projects, satisfactory to the Bank, which reflect line ministries' submission of realistic implementation schedules [6] (para. 6.3 (c)).

4.7 Incremental Recurrent Costs. Total incremental recurrent costs generated over the project's life are estimated at US$5.4 million. During the implementation period, the project would add an average of about US$1.0 million per year (including contingencies) in recurrent expenditures, growing from US$ 0.5 million in 1993 to US$ 1.5 million in 1998 (see Table 4.3). These incremental costs would be generated mainly by salaries (85 new teachers, 30 guidance counsellors, and staff of the Reform Management Team Secretariat, the Survey of Living Condition, Social Policy Analysis Unit, and the ISER Databank), office and school supplies, computer and building maintenance.

Table 4.2: Project Financing by Project Component
(US$ million)

Component	Total Estimated Costs	Netherlands	Bank	Govt.
1. Common Curriculum	2.3		1.4	0.9
2. ROSE Training	6.3		6.3	0.1
3. Educational Support Materials	2.4		2.4	
4. Textbooks	1.3		1.2	0.1
5. Infrastructure	19.8		16.4	3.4
6. Upper Secondary Strategy	1.4		1.4	
7. Exam Rationalization	0.9		0.6	0.3
8. ROSE Management	1.3		1.2	0.1
9. Public Awareness Campaign	0.3		0.2	0.1
10. ROSE Evaluation	0.7		0.5	0.1
11. ROSE Phase II Preparation	0.4		0.4	
12. Policy Analysis Unit	2.0	1.5		0.5
13. Line Ministry Linkage	0.1	0.1		
14. UWI	0.8	0.6		0.2
15. Survey of Living Conditions	0.7	0.5		0.2
TOTAL	**40.7**	**2.7**	**32.0**	**6.0**
(share of total costs)	(100%)	(6%)	(79%)	(15%)

4.8 The financing of the project has been designed to keep the recurrent cost share of the Government to a minimum in the early years of the project, rising from 50% in the first year to

6/ Note that Loans 3111 and 2851 have recently been reformulated at the Government's request to reflect realistic work program schedules and implementation capacity in order to improve project implementation and disbursements.

100% in the fourth year. By the final year of the project, Components 1 and 2 of the project would require approximately US$1.1 million of recurrent expenditures or 1.7% of the MOEC's recurrent budget (both in 1992 prices). The replenishment of textbooks would represent a major recurrent expense for the MOEC, however, the Government intends to extend the current cost recovery scheme for textbook rental in secondary schools to the All-Age schools covered under the project. During negotiations, the Government agreed that it would adopt a policy by August 15, 1993 regarding a comprehensive textbook rental scheme, including a mechanism to identify and support those unable to pay, (para. 6.2 (b)). For the Social Policy Analysis component, much of the recurrent cost will be borne by the UWI and the Statistical Institute (STATIN). During negotiations, the Government provided assurance that the UWI under the Social Policy Analysis component would assume its share of the incremental recurrent costs (para. 6.2(g) and Annex 13).

Table 4.3: Annual Recurrent Costs under the Project
(US$ millions)

	1993/94	1994/95	1995/96	1996/97	1997/98
Total	0.5	0.9	1.2	1.3	1.5
GOJ Share	0.1	0.4	0.8	1.2	1.5

B. Procurement

4.9 Civil Works under the project will involve the construction of 3 new Junior High Schools, the refurbishing and extension of 27 All-Age schools, the refurbishing of 10 New Secondary schools, and the refurbishing of 20 small All-Age schools. With the exception of the three new schools (for which the base construction cost varies from US$0.8 million to US$1.1 million), the average cost for individual school upgrading varies from US$50,000 to US$400,000 equivalent. Therefore, construction contracts valued less than US$500,000 and not to exceed an aggregate of US$11.0 million would be awarded according to local competitive bidding (LCB) procedures acceptable to the Bank and open for competition from foreign bidders. Construction contracts over US$500,000 will be awarded according to international competitive bidding (ICB) procedures, and subject to the Bank's approval. The two schools scheduled to be built in 1995/96 should be packaged together in order to attract foreign bidders. To overcome MOEC's present weakness in managing procurement activities, a procurement officer, a building coordinator and two building officers will be hired under the project. Prior to negotiations, the Government submitted draft bidding documents for civil works satisfactory to the Bank (para. 6.1 (b)).

4.10 Textbooks. For textbooks where the MOEC owns the copyright for the material (i.e. Foundation 1 and 2 and HIRLAP), procurement will consist of printing and binding and will be awarded under limited international bidding procedures that would be acceptable to the Bank (e.g. a one-step procedure of inviting bids to print books according to technical specifications, with a specified due date).

4.11 For Normative/Enrichment textbooks, publishers will be invited to either modify existing textbooks or develop new texts based on the new curricula. Prior to negotiations, the GOJ determined that there will be more than one title per subject per grade that will be designated for the recommended textbook list (para. 6.1 ((i)). The precise number of the recommended textbooks will be based on the outcome of a two-step selection and procurement process according to limited international competitive bidding procedures which are acceptable to the Bank.

4.12 In the first stage, publishers will be invited to submit materials in the form of either a *publishing proposal* (i.e. a description of the future book, including synopsis and sample chapters, sample pages to show the page design and style of illustrations, team of authors, timetable for development and cost), or *manuscripts* (with a few sample pages to show the proposed appearance of the text), or *existing books* (with indications where revisions would be made, if necessary, to conform to the new curriculum). Proposals would then be evaluated against technical and pedagogical specifications to determine their appropriateness for the new curriculum. For the second step, all responsive bidders would be instructed to quote their prices for various quantity levels (e.g. less than 1,000; 1,000 to 1,999; 2,000 to 2,999 etc.), in order to allow finalizing supply contracts for the quantities that would result from aggregating the teachers' reported preferences among those textbooks selected according to this evaluation method. Evaluation would then be done on the basis of price. In order to provide maximum flexibility and competition, the titles of textbooks of all responsive bidders whose prices are within 10% of the lowest responsive bidder would be selected. Solicitation of teachers' choice of textbook would be done during training, with subsequent aggregation and ordering by the MOEC. The proposed project would also provide technical assistance to the MOEC to design the bid documents and tender evaluation details and to help in the evaluation of the first cycle of textbooks to be tendered (i.e. Grade 7 subjects).

4.13 Finally, packaging and distribution of all books to each project school will be contracted out by local competitive bidding.

4.14 Equipment and furniture for project schools would be grouped in packages estimated to cost the equivalent of US$100,000 or more each and would be procured through international competitive bidding (ICB) procedures, in accordance with Bank guidelines. For purpose of bid evaluation under ICB, manufacturers from CARICOM countries, including Guyana, may be granted a margin of preference in accordance with Bank guidelines. The MOEC will compile and package equipment requests made by project schools by May of each project year. Distribution of equipment for schools will be contracted out locally. Computers grouped in packages estimated to cost less than US$100,000 but more than US$20,000 would be procured following limited international bidding procedures (LIB) among manufacturers who can provide local maintenance and technical assistance services. Contracts for materials (e.g. maps, posters and other educational supplies) would not be appropriate for ICB, and therefore would be procured under local competitive bidding (LCB), subject to the Bank's approval. Packaging and distribution of materials procured through LCB that are intended for project schools should be specified in the tender documents with contract penalties for any delays. Purchase of small items of materials, equipment and furniture to cost less than US$20,000 equivalent, up to an aggregate amount equivalent to US$250,000 during the life of the project would be procured following local shopping procedures, through price quotations obtained from at least three eligible suppliers. Consultants' services required for the project would be hired following the Bank's *Guidelines for the Use of Consultants by World Bank Borrowers and by the World Bank as Executing Agency*, dated August 1981. To help manage the supervision of civil works, which will include 60 separate sites spread geographically, it is more effective (and therefore expected) to use local consultants; the qualifications of the three architectural management firms to be employed under this project will be duly assessed by the Bank (paras. 3.19 and 4.27). For the

Table 4.4: SUMMARY OF PROPOSED PROCUREMENT ARRANGEMENTS
(US$ million equivalent)

	Procurement Method				
Category of Expenditure	ICB	LCB	Other	NBF	TOTAL COST
1. Works	3.9 (3.4)	11.0 (9.6)			14.9 (13.0)
2. Goods					
Furniture	1.8 (1.8)				1.8 (1.8)
Equipment	1.9 (1.9)		0.2[b] (0.2)	0.2[a]	2.3 (2.1)
Vehicles			0.02 (0.02)		0.02 (0.02)
Materials		0.6 (0.6)	0.2 (0.2)		0.8 (0.8)
Textbooks			0.9[b] (0.9)		0.9 (0.9)
3. Technical Assistance			6.7 (6.7)	0.9[a]	7.6 (6.7)
4. Studies, Pilot Program			1.9 (1.9)	0.6[a]	2.5 (1.9)
5. Training, Workshops			4.3 (4.3)	0.2[a]	4.5 (4.3)
6. Operation & Maintenance			2.2 (0.3)	0.2[a]	2.4 (0.3)
7. Incremental Staff			2.0 (0.2)	0.3[a]	2.3 (0.2)
8. Supplies, SLC Field Costs			0.4 (0.05)	0.3[a]	0.7 (0.05)
Total	7.6 (7.1)	11.6 (10.2)	18.8 (14.8)	2.7	40.7 (32.0)

Note: Figures in parentheses are the respective amounts financed by the Bank loan.
NBF: Not Bank-Financed.

a. Co-financed in parallel by the Government of the Netherlands; procured in conformity with World Bank *Guidelines: Procurement under IBRD Loans and IDA Credits* (Washington, D.C., May 1985), and *Guidelines for the Use of Consultants by World Bank Borrowers and by the World Bank as Executing Agency* (August 1981).

b. Limited international bidding (LIB).

purposes of conducting in-service training, a sole source contract (for about US$4 million) will be awarded to the JBTE in its capacity as the agency responsible for overseeing teachers' education (paras. 3.10 and 4.26). The position of a Procurement Officer will be supported by the project in the MOEC's Technical Services Unit.

4.15 Procurement under the Social Policy Analysis Component financed by the Government of the Netherlands will follow Bank guidelines, but will be carried out by the Planning Institute of Jamaica. Procurement consists mainly of technical assistance (consultants hired as indicated above), and minimum equipment (for the Policy Analysis Unit, MLWS, STATIN and the ISER Data Bank), which will be procured by local shopping with contracts awarded on the basis of three price quotations.

4.16 Prior Review. Prior Bank review would be required before bids are invited and before a final decision on contract award is made for the following procurement actions by the borrower: (a) for contracts of civil works valued above US$200,000 equivalent or more; and (b) for contracts for supply of goods valued at US$100,000 or more. This would amount to about 70% of the total estimated value of civil works, furniture, equipment and educational materials. Other contracts would be subject to post review by the Bank after contract award. The table 4.4 summarizes procurement arrangements for the Bank loan.

C. Disbursement

4.17 Disbursement Percentages. The Bank loan would be disbursed for Components 1 and 2 against 100% (excluding taxes) of: furniture, equipment, vehicles, educational materials, textbooks, local training and fellowships abroad, consultants fees and fixed-term salaries (i.e. ROSE National Coordinator, the ROSE Secretariat staff, 1 Building Coordinator, 2 Building Officers, 1 Senior Accountant, 1 Accountant, 1 Procurement Officer, 1 Office Technology Coordinator and 1 Public Relations Officer). For civil works, the Bank loan would be disbursed against 85% of expenditures. Recurrent costs for consumables, training materials and allowances, salaries of additional staff, operation and maintenance would be financed on a declining basis yearly starting in 1993/94 at 50% of incremental recurrent costs up to an aggregate of US$235,800; thereafter 40% of incremental recurrent costs up to an aggregate of US$783,800; and 20% of incremental recurrent costs thereafter up to an aggregate of US$1,598,300 (Annex 12, Table 5).

4.18 Disbursement of the Netherlands grant for the Social Policy Analysis Component (US$2.7 million equivalent) would be at 100% of equipment, studies, local and foreign technical assistance, and training. Recurrent costs for consumable, incremental and contract staff, operation and maintenance of the Policy Unit and the equipment, meetings, production of reports, and the field costs for carrying out the Survey of Living Conditions, would be financed on a declining basis yearly starting in 1993/94 at 100 percent up to an aggregate of US$ 288,200; thereafter 80% up to a total disbursement aggregate of US$552,200; thereafter 50% up to a total disbursement aggregate of US$732,200; thereafter 30% up to a total disbursement aggregate of US$842,200; and 0% thereafter.

4.19 Required Documentation. Disbursements for contracts for goods and services estimated to cost less than US$50,000 and other disbursements against activities not undertaken by contract, will be made on the basis of Statement of Expenditures (SOE) certified by MOEC and PIOJ and representatives authorized by the borrower. Documentation would be retained by MOEC and PIOJ, and would be made available for Bank staff review and the auditors. All other disbursements would be made against fully documented withdrawal applications. Retroactive financing for an amount to cover US$3.0 million for consultants' services and incremental recurrent costs, incurred after March 1, 1993, is provided.

4.20 Disbursement Profile. The proceeds of the loan would be disbursed during a seven and a half year period, based on the standard disbursement profile for education projects in the region. Based on this profile, the project is expected to be completed by June 30, 2000, and the Closing Date would be December 31, 2000. A forecast of disbursements is shown in Annex 12, Table 6. Government has expressed its intention, however, to implement the project over a five year period which coincides with Phase I of a three phase, fifteen year Reform Program.

D. Accounting and Auditing

4.21 Special Accounts. Two Special Accounts would be opened in the Bank of Jamaica: (a) one for the Secondary Reform Support and the Evaluation and Management Strengthening Components managed by MOEC (and financed by proceeds from the World Bank loan), and (b) the other for the Social Policy Analysis managed by PIOJ through the HRDP Secretariat (and financed by proceeds from the Government of the Netherlands Grant). The initial deposit for (a) would be US$2.0 million and, for (b) US$0.5 million, corresponding to about four months of project expenditures.

4.22 The MOEC and the PIOJ would keep separate accounts for project expenditures incurred under components (a) and (b) as in the above paragraph, in accordance with internationally accepted accounting procedures. The project will support positions for a Senior Accountant and an Accountant in the MOEC's Financial Management and Internal Audit Unit. During negotiations, the Government agreed to select independent auditors acceptable to the Bank, to audit project accounts, and provide copies of the audited statements to the Bank within six months of the end of each fiscal year (para. 6.2 (h)). The auditor's report would include an opinion and comments, as necessary, on the project account and on methods employed in compiling the statements of expenditure, their accuracy, the relevance of supporting documents, their eligibility for financing in terms of the project's loan agreement, and the standards of record-keeping and internal controls related to the foregoing.

E. Project Management and Implementation

4.23 Project Readiness for Implementation. The proposed project was identified by Bank staff who visited Jamaica in June 1991. It was prepared by the Government, with the assistance of a Japanese Grant Facility and Bank staff missions in July and November 1991, and July 1992. The project was appraised in October 1992; negotiations were held in Washington in February 1993.

4.24 Project Organization and Management. As detailed in para. 3.29, a Reform Management Team will be established in the newly reorganized MOEC to manage the overall implementation of the reform (Component 1), as well as the rationalization of the exam system, the public awareness campaign and the evaluation of the new curriculum (Component 2). The Social Policy Analysis Unit will form part of the HRDP Secretariat which is located in the Social Planning Division of the PIOJ (see Annex 11 chart). The Director of the Social Planning Division will have overall responsibility for implementation of the third component of the project. The Social Policy Analysis Unit will be responsible for: implementing training programs in the sector ministries; administering technical assistance provided to UWI and the line ministries; disbursing funds for research to be conducted through UWI and for SLC activities; and, coordinating formal linkage mechanisms leading to a program of research in support of HRDP objectives.

4.25 Implementation Arrangements. The implementation of Components 1 and 2 will rest with the Reform Management Team, instead of a PIU. Although the project would support approximately 21 people at headquarters (i.e. excluding incremental teachers and guidance counsellors), the bulk of the reform will be carried out by existing MOEC staff. Given the complexity and magnitude of the first phase of ROSE, the MOEC's existing capacity to carry out all activities will face additional strains. The project has provided extra staff at key managerial levels to help ensure that the work program is coordinated. However, certain sub-components, which require either specialized technical skills or substantial input in terms of manpower and which the MOEC does not posses, will be contracted out. Items to be contracted out include: in-service and pre-service training; the collection of evaluation data; the development of the Grade 9 exam; and, the day-to-day management of civil works execution.

4.26 In-service Training. Training activities under the project will be carried out under the overall direction of the MOEC, however, the Joint Board of Teacher Education (JBTE) will be contracted to conduct the in-service as well as the pre-service training. The advantages of JBTE executing this sub-component are several: (i) assures the involvement of the teachers' colleges and other tertiary institutions; (ii) provides the possibility of linking the in-service training component to the teacher certification process thus giving a strong incentive for teachers to get involved in implementing the new curriculum; (iii) reduces the numbers of activities for which the MOEC is directly responsible for implementing as part of a complex overall reform. Prior to negotiations, the Government confirmed it had sent the World Bank a final copy of the training implementation paper, including details regarding the activities to be carried out by Joint Board of Teachers' Education (JBTE) (para. 6.1(j)). As a condition of loan effectiveness, the Government will confirm that the MOEC has signed an agreement with the JBTE for training activities which the JBTE will carry out (para. 6.3(d)).

4.27 Civil works. Instead of performing design and day-to-day management of civil works within the MOEC, the proposed project would support the utilization of three external design/management firms, with the work divided into geographically appropriate sections of the island. Their terms of reference would include: the preparation of architectural and engineering designs; the preparation of tender documents; the prequalification of contractors; the tendering and the preparation of tender evaluations; the supervision of construction; and final completions of the upgrading and extension components. They would be responsible to the Building Coordinator to be supported by the project. Prior to negotiations, the Government confirmed it had undertaken a prequalification exercise for the selection of three civil works management firms (para. 6.1 (k)).

4.28 The MOEC's Architects Unit will continue to articulate and enforce the qualitative and the quantitative design standards for civil works on behalf of the Ministry. The proposed project will support the position of Technical Services Director, a Building Coordinator and two Building Officers. The Architect's Unit will review the ROSE school designs generated by the outside consultants to ensure conformance to MOEC's standards. These reviews will take place at the end of the Schematic Design, Definitive Design and Tender Document Preparation stages for each school. The Building Coordinator will participate in all ROSE technical reviews and will keep the Technical

Services Director informed of all developments. A complete set of tender documents for each project type will be forwarded to the Bank for review and non-objection prior to its release for tender.

4.29 Monitoring and Evaluation. Implementation working papers have been prepared by the MOEC and the PIOJ for all subcomponents (Annex 14). Included in these papers is a description of the sub-component in terms of implementation activities, indicating both specific actions and physical targets based on an agreed time-line. Each paper also contains a listing of selected performance indicators and, where relevant, terms of reference and lists of goods to be procured. Since the success of the reform depends critically on the synchronization of various sub-components, a list of monitorable indicators (Annex 15) together with a Project Timeline (Annex 16) will provide an effective monitoring instrument. Annex 17 shows an estimated Supervision Plan for the project.

4.30 Given the complexity of both the reform program and the policy analysis agenda, as well as the innovative method of project management, a Mid-term Review would provide the opportunity to introduce flexibility should the need arise. During negotiations, the Government agreed that the MOEC and the PIOJ would conduct, with prior approval of the terms of reference by the Bank, a Mid-term Implementation Review, not later than March 31, 1996 (para. 6.2(i)). Annex 17 lists topics for discussion during the Mid-term Review and at least one output indicator with targets for each project objective, as agreed with the Government during negotiations.

4.31 The National Coordinator of the ROSE would also participate in the HRDP Annual Review which occurs each February with the involvement of key donors to review progress in the social sectors on both project implementation and policy. In addition, the MOEC would collaborate on a monthly basis with the HRDP Secretariat and provide to the Bank a quarterly report on ongoing activities. During negotiations, the Government agreed to carry out annual reviews of the project in conjunction with the HRDP Annual Review exercise (but in any case not later than March 31st), including policy and financial targets as contained in the HRDP Policy Matrix. (para. 6.2(j)). In addition, during negotiations the Government also agreed that not later than March 31, 1994, it would submit to the Bank annual targets for the share of MOEC recurrent expenditures that would be allocated for Grades 7-9 (para. 6.2(k)). A copy of the HRDP Policy Matrix (June 1992) is included in the Project File.

V. PROJECT BENEFITS AND RISKS

A. Benefits

5.1 The proposed project would support the Government in achieving two central education objectives: (a) to improve the quality, efficiency and equity of basic education for all Jamaicans, specifically Grades 7-9; and (b) to strengthen the system's capacity to plan and monitor improvements in the quality of education. The increase in educational expenditures for basic education will help redress imbalances in the allocation of public sector resources among different levels of education, by directing more resources to higher-yielding lower education levels. Improved relevance and quality of basic education would ultimately provide better trained and trainable manpower for the economy. Higher overall levels of achievement and increased resources targeted on the poorest groups of students would enhance efficiency in the use of public sector resources. A rationalized exam system would: reduce the redundancy and cost of exams in the education system, and eventually postpone the selection of students for academic streams until Grade 9; provide students leaving the education system at Grade 9 with school leaving certificates reflecting a recognized level of achievement for potential employers; and provide a reliable measure of learning output for policy analysis. Improved social policy analysis through a relevant research agenda will help the Government to more effectively target scarce resources for social sector programs.

B. Risks

5.2 Principal project risks relate to: (a) budgetary constraints leading to scarcity of both counterpart funds and the release of external resources; (b) potential backlash from those benefitting from the existing elitist system; and, (c) weak implementation capacity, particularly regarding civil works. With regard to (a), the Bank's financing of a high share (79%) of project costs as well as planned cofinancing (6%) would reduce the need for counterpart funding, thus easing the GOJ's fiscal burden. In addition, the Bank will monitor the maintenance of sector priorities in the context of Annual Reviews of progress towards social sector objectives as reflected in the proposed project and the Human Resource Development Program (HRDP), also supported by the Bank. These priorities have recently been reflected consistently in other policy statements issued by the Government (the Public Sector Investment Program (PSIP), the Medium Term Policy Framework and the Letter of Development Policy in the proposed Private Sector Development Adjustment Loan). In regard to (b), the MOEC has already begun a phased public education campaign to be supported by the project which will help to ensure that all of the relevant actors recognize that the benefits of the reform will be to improve the quality of education for all types of secondary schools. Representatives from groups potentially in opposition to the reform have been brought into the development process early in the reform planning stages. Finally, regarding (c), the MOEC has adopted an integrated management approach to the reform rather than a stand-alone PIU which will provide flexibility in managing and implementing the reform program and ensure that the far-reaching aspects of the project are infused in all areas of the Ministry. Components with substantial or specialized manpower requirements, such as the day-to-day management of civil works execution, will be contracted out under the overall supervision of the MOEC Team.

VI. AGREEMENTS REACHED AND RECOMMENDATION

6.1 Prior to negotiations, the Government confirmed it had:

(a) identified the selected schools for year 1 of the project (para. 3.6);

(b) submitted prototypical architectural designs and draft bidding documents for civil works satisfactory to the Bank (para. 3.18 and 4.9);

(c) submitted a detailed implementation plan for the period 1993-98 for the rationalization of the examination system satisfactory to the Bank (para. 3.26);

(d) put in place the new reorganized MOEC structure, established the Reform Management Team and appointed a National Coordinator with qualifications and experience satisfactory to the Bank (para. 3.30);

(e) provided a detailed analysis of the MOEC computer and office retrofitting needs to be financed under ROSE (para. 3.31);

(f) identified five matched comparison sites and received their consent to participate in the evaluation component (para. 3.36);

(g) established a Social Policy Analysis Unit in the PIOJ and appointed its Director with qualifications and experience satisfactory to the Bank (para. 3.40);

(h) determined the scope and finalized cost sharing arrangements with the UWI for the ISER Data Bank (para. 3.42);

(i) decided on the number of titles per subject and per grade for its recommended textbook list (para. 4.11);

(j) sent the World Bank a final copy of the training implementation paper, including details regarding the activities to be carried out by Joint Board of Teachers' Education (JBTE) (para. 4.26); and,

(k) undertaken a prequalification exercise to identify three civil works management firms (para. 4.27).

6.2 <u>During negotiations</u>, the Government:

(a) agreed to submit to the Bank not later than September 15 of each year the specific schools to be selected for the following academic year, based on specific criteria (para. 3.6);

(b) agreed to adopt a policy by August 15, 1993 regarding a comprehensive textbook rental scheme at the lower secondary level, including a mechanism to identify and support those unable to pay (paras. 3.15, 4.8);

(c) provided written guarantee that the proposed project, as well as the three existing World Bank social sectors projects (Social Sectors Development Project (Ln. 3111-JM), the Population and Health Project (Ln. 2851-JM), and the Education Program Preparation and Student Loan Project (Ln. 2899-JM)), be given priority in budgetary and warrant allocations for 1993/94 (para. 4.6 and Annex 13);

(d) agreed to present to the Bank during the HRDP Annual Review (or in any case not later than March 31 of each year), the draft budget submission for the forthcoming year of the project (para. 4.6);

(e) agreed to allocate in its annual budget to be proposed to Parliament the funds, in an amount satisfactory to the Bank, necessary to implement the project in each fiscal year (para. 4.6);

(f) agreed that counterpart financing and external resources, satisfactory to the Bank, would be released to implementing agencies on a timely basis (i.e. notification of quarterly warrants be provided within two weeks of the start of any quarter) (para. 4.6);

(g) provided assurance that the UWI under the Social Policy Analysis component would assume its share of the incremental recurrent costs (para. 4.8 and Annex 13);

(h) agreed to select independent auditors acceptable to the Bank to audit project accounts, and provide copies of the audited statements to the Bank within six months of the end of each fiscal year (para. 4.22);

(i) agreed that the MOEC and the PIOJ would conduct, with prior approval of the terms of reference by the Bank, a Mid-term Implementation Review, not later than March 31, 1996, including the assessment of selected output indicators (para. 4.30);

(j) agreed to carry out annual reviews of the project in conjunction with the HRDP Annual Review exercise (or in any case, not later than March 31st), including policy and financial targets as contained in the HRDP Policy Matrix (para. 4.31) and,

(k) agreed that not later than March 31, 1994, it would submit to the Bank annual targets, satisfactory to the Bank, for the share of the MOEC recurrent expenditures that would be allocated for Grades 7-9 (para. 4.31).

6.3 As conditions of loan effectiveness, the Government will:

(a) complete the appointment of the MOEC's Reform Management Team's Secretariat professional staff and fill 50 percent of the newly created posts in the MOEC to be supported by the project (para. 3.30);

(b) sign an Agreement with the Bank as Administrator for a grant from the Government of the Netherlands for cofinancing the proposed project (para. 4.5);

(c) submit the 1993/94 Parliamentary approved budget for the proposed project as well as three existing World Bank-financed projects in the social sectors, satisfactory to the Bank, which reflect line ministries' submission of realistic implementation schedules (para. 4.6); and,

(d) confirm that the MOEC has signed an agreement with the JBTE for training activities which the JBTE will carry out (para. 4.26).

6.4 As a condition of disbursement for the Survey of Living Conditions sub-component (to be reflected in the Netherlands Grant Agreement), STATIN will have instituted a plan to implement the recommendations forthcoming from the data quality review satisfactory to the Bank for the improvement of data quality (para. 3.43).

6.5 Subject to the above conditions, the proposed project constitutes a suitable basis for a Bank loan of US$32 million equivalent to the Government of Jamaica, repayable in 17 years, including a four-year grace period, at the Bank's standard variable interest rate.

JAMAICA

Reform of Secondary Education Project

ANNEX LIST

ANNEX 13: **<u>Letters of Assurance</u>**
Ministry of Finance
University of West Indies

ANNEX 14: **<u>Selected Documents and Data Available in the Project File</u>**

ANNEX 15: **<u>Implementation Schedule and Periodic Monitoring Indicators</u>**

ANNEX 16: **<u>Timeline</u>**

ANNEX 17: **<u>Supervision Schedule and Mid-Term Review</u>**

JAMAICA
Reform of Secondary Education

Enrollment in Public Sector Educational Institutions, 1987-88

Grades	School Type	Total	Percent female	Percent of grade group	Number of schools	Percent of Total
Infant	Infant	11,158	49.7	60.6	29	
	Primary	4,636	51.4	25.2	51	
	All-Age	2,626	51.3	14.3	37	
	Subtotal	18,420	50.4	100.0	117	3.1
1 - 6	Primary	170,845	50.4	52.5	294	
	All-Age	154,497	48.6	47.5	493	
	Subtotal	325,342	49.5	100.0	787	54.5
7 - 9	All-Age	65,053	49.6	40.6	493	
	New Secondary	54,333	47.2	33.9	64	
	Sec. High	31,321	58.7	19.5	57	
	Tech. High	3,917	51.6	2.4	7	
	Comp. High	5,674	55.1	3.5	6	
	Subtotal	160,298	50.8	100.0	627	26.8
10 - 11	New Secondary	40,451	49.2	57.9	64	
	Sec. High	20,138	58.7	28.8	57	
	Tech. High	4,426	50.1	6.3	7	
	Comp. High	4,046	53.1	5.8	6	
	Voc./Ag. High	447	52.1	0.6	3	
	Subtotal	69,890	52.3	100.0	139	11.7
	Sec. High	3,099	55.2	99.0	26	
12 - 13	Tech. High	3	66.7	0.1	1	
	Comp. High	29	41.4	0.9	1	
	Subtotal	3,131	55.1	100.0	28	0.5
	Comm. College	8,097	39.8	39.8	4	
Tertiary	Teachers' Colleges	2,646	13.0	13.0	8	
	College of Ag.	243	1.2	1.2	1	
	CAST	4,126	20.3	20.3	1	
	UWI	5,235	25.7	25.7	1	
	Subtotal	20,347	100.0	100.0	15	3.4
Total		597,428				100.0

Source: Ministry of Education, Statistics Section (Unit Cost Study)
Notes: Enrollment includes part-time and evening students at CAST, UWI, and the Community Colleges. Some percent components may not add to totals due to rounding. Community College enrollment includes some students not doing tertiary-level work.

JAMAICA
Reform of Secondary Education

Differences in Physical and Educational Resources Among Public Secondary Schools 1990-1991

	All-Age	New Secondary	Secondary High
School Average:			
Age of school (in years)	42	21	67
Number of classes	16	27	34
Number of students (all grades)	686	1148	1236
Number of students (7-9)	165	652	749
Number of classroom blocks	3.3	4.7	5.8
Percentage of Schools with:			
School Library with books	60.2	97.4	93.3
Science Lab with equipment	8.0	68.4	80.0
Subject rooms	19.3	94.7	96.7
Storage facility for books	51.1	92.1	93.3
Staff room	67.1	97.4	96.7
Office for school head	92.1	97.4	100.0
Corrugated iron roofs	63.6	10.5	40.0
Electricity	88.6	100.0	100.0
Piped Water	62.5	89.5	90.0
Flush toilets for students	33.0	89.5	90.0
Housing for principal and teachers	2.3	55.3	60.0
Regular security	23.9	92.1	90.0
Regular maintenance person	35.3	31.8	95.0
School vehicle	0.0	11.5	36.7
File cabinets	61.4	97.4	100.0
Telephone	19.3	63.2	86.7
Typewriter	47.7	100.0	100.0
Television	29.6	44.7	80.0
Computer	1.1	10.5	66.7
Radio	51.1	65.8	73.3
Copying/duplicating machine	45.5	86.8	100.0
Canteen/kitchen	70.5	97.4	100.0
Refrigerator/Freezer	72.7	94.7	96.7
Percentage of Students with:			
Pens/pencils	90.0	87.0	94.0
Paper/notebooks	82.8	87.3	91.2
Complete set of required textbooks	37.7	43.4	66.7
Dictionaries	33.2	36.9	60.7

Source: Jamaica Survey of Living Conditions, Statistical Institute of Jamaica, 1990

JAMAICA
Reform of Secondary Education

MOEC Per Pupil Recurrent Expenditures for Secondary Schools
(in 1987/88 J$)

Expenditure Category	All-Age	New Secondary	Secondary High	Technical High	Comp. High	Voc/Ag. High
Teachers	495	936	1,009	1,234	904	2,006
Other Personnel	-	160	279	512	177	3,267
Non-personnel expenditure	63	106	381	565	206	5,356
Books & Class Materials	8	21	51	105	22	404
Physical Education	n.a.	2	9	41	3	22
Utilities	n.a.	21	52	107	30	506
Total Recurrent Expenditure	558	1,202	1,669	2,311	1,287	10,629

Source: MOEC (from Unit Cost study)
Notes: Because of changes in MOEC funding procedures, the estimates for All-Age Schools may be biased upoward, though probably not by much. Teacher expenditures for all school types include health benefits (NIS and Blue Cross) as well as salaries, but no attempt has been made to estimate the value of teachers' accrued pension rights

Annex 1, Table 4

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MINISTRY OF EDUCATION RECURRENT EXPENDITURES BY PROGRAM, JAMAICA 1981/82 - 1991/92
(in constant 1981 Jamaican $'000)

PROGRAMMES/LEVELS	1981/82		1982/83		1983/84		1984/85		1985/86		1986/87		1987/88		1988/89		1989/90		1990/91		1991/92	
	$	%MOE R.Budg.	$	%MOE R.Budg.	$	%MOE R.Budg.	$	%MOE R.Budg.	$	%MOE R.Budg.	$	%MOE R.Budg.	$	%MOE R.Budg.	$	%MOE R.Budg.	$	%MOE R.Budg.	$	%MOE R.Budg.	$	%MOE R.Budg.
Pre-Primary & Primary Education																						
Pre-primary	3345	1.0	5865	1.7	4882	1.5	4634	1.6	3725	1.6	4080	1.5	6437	2.3	6728	2.1	6637	1.9	8648	2.7	6788	2.7
Primary Education	109695	33.2	112647	33.0	113939	34.2	96861	34.2	79954	33.4	93014	34.0	96781	33.9	106450	33.8	119432	35.1	111258	34.8	87542	34.2
Special Education	3216	1.0	4237	1.2	3565	1.1	3291	1.2	2988	1.2	3459	1.3	3389	1.2	3862	1.2	3994	1.2	3662	1.1	2878	1.1
TOTAL PRIMARY	116455	35.1	122649	35.9	122409	36.8	104787	37.0	86667	36.2	100562	36.7	106608	37.4	117040	37.1	130063	38.2	123565	38.6	97216	38.0
Secondary Education:																						
New Secondary & High Schools	97541	29.4	107038	31.3	108504	32.6	92566	32.7	77885	32.6	92189	33.7	88124	30.9	95569	30.3	101144	29.7	92178	28.8	73668	28.8
Technical and Vocational	13627	4.2	13478	3.9	12416	3.7	10253	3.6	8838	3.7	10110	3.7	10028	3.5	10632	3.4	14851	4.4	14285	4.5	11448	4.5
Financial Assistance	843	0.2	485	0.1	122	0.0	213	0.1	-	0.0	-	0.0	-	0.0		0.0	-	0.0	-	0.0	-	0.0
TOTAL SECONDARY:	112011	33.8	120997	35.4	121042	36.4	103031	36.4	86723	36.3	102299	37.4	98152	34.4	106200	33.7	115996	34.1	106473	33.3	85118	33.3
Tertiary Education:																						
U.W.I. & related Costs	49537	14.9	45638	13.4	43896	13.2	35875	12.7	34305	14.3	32484	11.9	45611	16.0	49922	15.8	52796	15.5	47342	14.8	40033	15.7
College of Arts Science and Technolo	4172	1.3	4318	1.3	4168	1.3	3600	1.3	3339	1.4	4343	1.6	3670	1.3	4481	1.4	4020	1.2	4329	1.4	3878	1.5
Teachers' Colleges and related Costs	17327	5.2	17555	5.1	14870	4.5	12427	4.4	10334	4.3	9824	3.6	9322	3.3	11714	3.7	12665	3.7	11479	3.6	9781	3.8
Community Colleges	2606	0.8	2562	0.8	2569	0.8	2592	0.9	1764	0.7	1986	0.7	1856	0.7	2003	0.6	2194	0.6	2580	0.8	2341	0.9
College of Agriculture	2455	0.7	1169	0.3	1246	0.4	1361	0.5	1222	0.5	1390	0.5	1175	0.4	1325	0.4	1455	0.4	1640	0.5	1091	0.4
Administration and Supervision	94	0.0	101	0.0	119	0.0	137	0.0	95	0.0	90	0.0	74	0.0	113	0.0	129	0.0	120	0.0	209	0.1
TOTAL TERTIARY:	76191	23.0	71560	21.0	67056	20.2	55961	19.8	51060	21.4	50196	18.3	61709	21.6	69559	22.1	73260	21.5	67490	21.1	57283	22.4
Adult and Continuing Education	8880	2.7	7891	2.3	6048	1.8	3440	1.2	1992	0.8	3224	1.2	1416	0.5	1580	0.5	1572	0.5	2537	0.8	2367	0.9
Curriculum Development & related Ser	5350	1.6	4986	1.5	4146	1.2	4525	1.6	4466	1.9	3780	1.4	3549	1.2	4244	1.3	4143	1.2	3730	1.2	2902	1.1
Library Services	2653	0.8	2706	0.8	2320	0.7	2564	0.9	1829	0.8	5580	2.0	6006	2.1	6153	2.0	5862	1.7	6157	1.9	4095	1.6
Central Administration & Support Servi	9716	2.9	10604	3.1	9754	2.9	8563	3.0	6400	2.7	8081	3.0	7872	2.8	10450	3.3	8897	2.6	10073	3.1	6775	2.6
MOE-TOTAL RECURRENT EXPEND.:	331368	100.0	341508	100.0	332778	100.0	282910	100.0	239137	100.0	273712	100.0	285311	100.0	315226	100.0	340563	100.0	320024	100.0	255773	100.0

*Note: In the absence of an appropriate Education Price Index - the CPI (Consumer Price Index) was used as a deflator.

Notes:

1. 1981/82 to 1990/91 - actual expenditure, 1991/92 - revised estimates
2. Primary education includes expenditures on School-feeding and Nutrition products
3. As of 1988/89 Tertiary Education included expenditure on University Council of Jamaica (a new expenditure as of that year)

Source: Jamaica Estimates of Expenditure

JAMAICA

MOEC PER CAPITA EXPENDITURE BY PROGRAM/LEVEL

1981/82 to 1990/91

(Constant 1981 Jamaican $)

PROGRAM/LEVEL	81/82	82/83	83/84	84/85	85/86	86/87	87/88	88/89	89/90	90/91
Primary & All-Age	258	265	272	234	195	228	241	269	306	375
Secondary										
New Secondary	739	754	634	539	448	526	505	624	599	533
Secondary High	745	799	771	663	601	683	633	628	772	703
Comprehensive High	861	802	762	534	436	519	471	523	516	506
Technical/Vocational	1692	1643	1489	1222	1036	1166	1148	900	1023	953
Secondary (weighted average)	810	827	730	616	528	612	580	641	705	642

Source: MOEC, Statistics Section (Unit Cost Study)

JAMAICA
Reform of Secondary Education

Average Private Educational Expenses of Students and their Families
(average J$ spent/pupil)

Expenditures	All-Age	New Sec.	High	Tech.	Comp.	Voc.	Pvt. Sec.	Pvt. Bus.
Transport	128	458	512	332	404	40	622	503
Lunch	287	400	361	205	369	439	485	600
Uniforms	731	692	1,038	977	1.081	872	1,398	768
Supplies	163	398	497	237	221	210	269	127
Tutoring	72	21	49	18	2	0	11	6
(% who get tutored)	(31)	(12)	(17)	(9)	(2)	(0)	(6)	(0)
Books	190	80	353	135	122	440	264	396
(% who buy books)	(43)	(35)	(62)	(100)	(53)	(97)	71	(96)
Total	1,571	2,049	2,810	1,904	2.289	2,001	3,049	2,400
Minimum	342	979	454	1,659	1.832	1,664	200	2,098
Maximum	3,335	2,727	3,444	2,098	2.609	2,250	5,310	3,145

Source: MOEC, Unit Cost Study 1990, Survey Data

Note: All data are estimates by principals of average behaviors in their schools. The expenditure estimates presented above take the principals' cost estimates by category and weight them by student enrollments and by principals' estimates of what percentage of students buy books, pay tuition, etc. With respect to these percentages, it is assumed that those students who do not pay the estimated charges pay nothing. The transportation category includes estimates of field trip expenses as well as commuting costs.

JAMAICA
Reform of Secondary Education

Differences in Teacher Distribution and Qualifications in Public Secondary Schools by Type of School, 1990-1991

	All-Age	New Secondary	Secondary High
Teacher:Pupil ratio	1:33	1:20	1:19
Percent with:			
University degree/Trained	1.9	7.7	19.6
University degree/Untrained	0.1	1.6	11.6
Untrained Teachers	14.6	5.9	5.5
Post secondary degree	18.6	31.9	44.1
Years of secondary teaching experience	5.3	8.3	7.8

Source: Jamaica Survey of Living Conditions, Statistical Institute of Jamaica, 1990.

JAMAICA
Reform of Secondary Education

Enrollment in Secondary and Tertiary Education
by School Type and Population Quintile
(percent)

School Type	Population Quintile				
	Poorest	2	3	4	5
All Age, grades. 7-9	44.6	32.9	26.6	19.7	16.0
New Secondary	33.8	37.1	39.0	25.3	16.8
Comp. High	3.9	6.3	4.6	3	2.5
Technical High	3.2	3.5	3.9	4.0	3.4
Secondary High	10.2	16.1	23.4	41.4	47.1
Voc./Ag. High	3.2	2.1	0.7	2.5	4.2
Post Secondary	1.9	2.1	2.0	4.0	10.1
TOTAL	100	100	100	100	100

Source: Jamaica Survey of Living Conditions, Analytical Review, 1991
Statistical Institute of Jamaica, October 1992.
Note: Percentages do not always add up to 100 due to rounding.

Annex 1, Table 9

JAMAICA
Reform of Secondary Education Project

Investment and Recurrent Budget Allocations
Health and Education Sectors
Selected Years
(in US$ millions and percent)

A. Public Sector Investment Program (PSIP)
(in millions US$ and %)

SECTOR	1992/93	1993/94	1994/95	1992-95
Health	21.7	38.2	29.0	88.9
Education	11.0	21.9	31.2	64.2
TOTAL Health & Education	32.7	60.1	60.2	153.0
TOTAL as % of Total PSIP	13.3	19.2	23.7	19.0

Source: Jamaica, Public Sector Investment Program 1992/93-1994/95, Report No. 10297-JM.

B. Recurrent Budget
(as percent of total GOJ recurrent budget)

SECTOR	1988/89	1989/90	1990/91	1991/92[a/]	1992/93[b/]
Health	8.2	8.4	8.4	8.6	7.5
Education	16.3	17.2	17.3	16.4	16.0

Source: Planning Institute of Jamaica.

a. Data for 1988/89 to 1991/92 based on actual data.
b. Data for 1992/93 are provisional based on First Supplementary Estimates.

JAMAICA
Reform of Secondary Education

National Assessment Program

Description: Jamaica began developing a National Assessment Program (NAP) directed at the primary level of education in 1986 with assistance from the Inter-American Development Bank. It is based on the new primary curriculum, which completed its first cycle for Grades 1-6 in 1988. To date, national administrations have only been carried out for the Grade 6 test and the Grade 1 Readiness Inventory. All other tests are still under development. The Grade 6 test was administered nationally to approximately 45,000 students in 1988, 1989, 1990 and in selected parishes in 1991. Trends in student achievement on the Grade 6 test over the 3 years of national administration show a steady gain. This is thought to be a consequence of the feedback given to the schools on their students' performance. The Grade 1 Readiness Inventory was administered in 1989, and showed that only 50% of the students assessed were performing adequately. However, this may be more of an indication of test design than student capacity.

Goals: The MOEC stated goals of the NAP are as follows:

(a) to assist the teacher in planning and adapting instructional activities for the students, based on information on student educational growth and achievement;

(b) to identify areas of strength and weakness in student achievement and to assist the teacher in planning activities and programs for providing enrichment or remediation as neccssary;

(c) to inform school professionals about areas of strength and weakness in school programs, thus enabling developmental and corrective action to be taken;

(d) to assist the Ministry in formulating policy involving the allocation of resources (financial, material and human);

(e) to provide information indicating the type and extent of in-service education required or the nature of changes needed in teacher preparation;

(f) to provide date for analyses to improve all facets of educational quality and performance;

(g) to ensure that instructional materials and processes utilized reflect the unique nature of Jamaican culture and the environment in which children learn.

Instruments: The NAP consists of a variety of instruments, including:

(a) Grade 1 School Readiness Inventory: to determine which children entering Grade 1 posses the skills and knowledge they need to learn the curriculum and which will need assistance in developing these readiness skills. There is evidence, however, that some teachers are using this and/or other instruments to select children for Grade 1 and that some children are either sent back to basic school or to another "less desirable" primary school;

(b) Grades 1 and 2 checklists; to assist teachers determine if students have mastered the skills taught and assess whether the child is ready to move on to the next topic or should receive additional assistance;

(c) Grade 3 Diagnostic Tests (mathematics and reading performance):

(d) Grade 4 and 5 Achievement Tests (language, mathematics, science and social studies): these tests, which are teacher marked, are used primarily to assist teachers in determining individual student needs;

(e) Grade 6 Achievement Tests (mathematics, reading, science and social studies): these tests, which are centrally marked, are intended to determine what skills and concepts the students have acquired in primary school, and to use the information to make improvements in the primary system.

Issues

Sampling: Collecting and reporting test results for every student in a given primary grade, as is presently the case in Jamaica, is very costly and time consuming. Consequently, sampling students is currently being considered. Sampling has the benefit of providing various groups (eg., policymakers, curriculum directors, school staff, etc.) with useful information for the purpose of gauging learning achievement and for targeting resources. The impact of assessment on instruction is also retained, although perhaps not as forcefully as with individual student scores.

Assessment vs. Selection/Certification: The issue of sampling is directly related to the objectives of a given exam: if selection/certification is the goal, then each student must be tested; if assessing the system's performance in order to inform policy is the goal, then testing samples of students is more cost-effective. In Jamaica, this is particularly relevant at Grade 6, where the Ministry is seeking to improve its selection mechanism (the Common Entrance Exam) with a more curriculum based exam (eg., the NAP), yet also seeks to assess the performance of the primary system. This may have implications for the design of the Grade 6 exam.

Human Resource Capacity: At present, only two people in the MOEC are assigned to managing the entire NAP portfolio. Given the requirements of item writing, test development, administration, scoring, security, and timely reporting, this is clearly insufficient. However, the MOEC is operating in a very scarce resource environment, and must carefully consider which responsibilities must necessarily remain in the Ministry and which might be contracted out.

JAMAICA

Reform of Secondary Education

Donor Activities in the Education Sector

Primary

Donor activity in the education sector is mainly concentrated in the area of primary education. The Inter-American Development Bank's (IDB) recently completed **Primary Education Project I** (1984-1991) sought to improve the quality of primary education by supporting the establishment of the National Assessment Program (NAP), the building and renovation of 54 schools to provide 28,700 new physical places plus some living accommodations. The follow-on **Primary Education Improvement II** (US$30 million), currently under preparation, will support: the continued development of the NAP; the evaluation of the primary program and revision of the curriculum; upgrading and training of primary school teachers; library services; and physical infrastructure improvements.

The USAID **Primary Education Assistance Project (PEAP) II,** (US$5.4 million) is aimed at improving the overall efficiency and effectiveness of the primary education system in Jamaica. Efficiency of the system will be enhanced by assisting the MOEC to decentralize management activities and by training school principals to manage their schools better. Effectiveness of the system will be improved by assisting the MOEC to improve its delivery of relevant mathematics education to students in Grades 1-6. The project will prepare a plan and strategy for correcting shortcomings in the mathematics program at the primary level.

CIDA has just completed the **Primary School Textbook Project II** (C$1.4 million). The project provided the paper needed to produce over 2.5 million primary school textbooks to schools throughout the island.

Secondary

Donor interventions at the secondary level have been mostly small-scale and although none have comprehensively addressed the GOJ's reform of secondary education, several projects have included important elements that would support the reform effort. For example, UNESCO carried out the **School Mapping and Micro-Planning** project (1984-1990) which prepared school maps for each parish in anticipation of rationalizing the secondary school network.

The education component of the IDB's **Rural Township Development Program** (1989-1994) finances predominately civil works to upgrade secondary schools in selected towns damaged by Hurricane Gilbert.

The GOJ is implementing an **Upgrading of New Secondary Schools** (1990-1994) which *inter alia,* includes the introduction of a new academic program into 25 New Secondary Schools which will allow approximately 25 percent of the students to sit examinations set by the Caribbean Examinations

Council (CXC) at Grade 11 and refurbishing schools and equipping schools with the necessary equipment and teaching aids. The MOEC is currently reviewing this project to ensure that it is consistent with the new reform, and in particular the introduction of the common curriculum.

The ODA's **Secondary Schools Textbook Project (SSTP)** for US$9.4 million, supports quality improvements in secondary education through increasing access to teaching and learning materials for students. The project contains three major components: (a) a Textbook Rental Scheme which has been introduced in 180 secondary schools to distribute over one million textbooks in various subject areas; (b) in-service teacher training component for 4,000 teachers annually, including a materials production course; and (c) remedial textbook development which seeks to establish a textbook development program for middle and lower ability students--so-called Foundation 1 and Foundation 2--aimed at approximately 60,000 pupils in secondary schools. CIDA's proposed follow-on **Enhanced Textbooks Project** will continue to support primary school textbook printing, but it will also extend its activities to the lower secondary level (Grades 7-9) with the provision of paper. The tentative cost is C$3-5 million.

Finally, UNDP through its **Tracer Study of Graduates of Secondary Education** (1990-1992) is conducting a survey of 250 graduates of a representative sample of secondary schools to determine the placement and suitability of these graduates for the labor market or tertiary education. Findings of the study will provide useful data and information on the links between educational background and job opportunities, as well as indicate the curricula changes at the upper secondary level (Grades 10-11) which will ensure that secondary students are more suitably prepared for the workplace.

Tertiary

IDB's **University of the West Indies Development Program** is co-financed with the University of the West Indies (UWI) and the Caribbean Development Bank (CDB), for a cost of US$80 million, of which the IDB fund US$56 million; US$24 million will be provided by UWI and the CDB. The program is based on a ten year development plan (1990-2000) prepared by UWI aimed at overall improvement and strengthening of the university system. The project includes: infrastructure, equipment and institutional development components specifically related to the improvement and/or expansion of teaching and research, and a regional component to strengthen outreach services to non-campus countries and off-campus students. The ODA also provides assistance to UWI and CAST.

Management Strengthening

Other donor support in the education sector is aimed improving the management capabilities of the MOEC. UNDP's **Education Sector Management Project (ESMP)** (US$430,000) assists the MOEC's Projects Division to improve the project management capability, and the development of an information system on the physical status of educational institutions, as well as the production of an instrument for school assessment. As a component under **PEAP II**, USAID is supporting the establishment of a comprehensive and computerized Educational Management Information System (EMIS) for the MOEC (US$1.4 million). Technical assistance will be provided to refine the MOEC data systems, establish an EMIS, and carry out policy analysis. The project will also provide hardware for the MIS unit.

JAMAICA
Reform of Secondary Education

Lessons Learned from Previous Bank Projects

1. Adequate planning and preparation are vital for the effective implemenation and achievement of project objectives as originally conceived. For example, in civil works, notable delays and cost overruns in past project were attributable partly to the lack of careful detailed planning during project preparation. Inadequate site and quantity surveys failed to take account of such factors as topography, access and availability of electricity and water leading to unforseen costs of site development during implementation; in some cases, it led to deleting proposed sites from the project.

2. An important element in project design, particularly in the education sector, is the inclusion of evaluation. The ability to evaluate through assessment and testing what the impact of additional inputs is for educational achievement will determine whether such interventions are effective in reaching project objectives and efficiently utilize scarce resources. The results of such an evaluation system, if deemed unsatisfactory, can then be used to modify project design during implementation.

3. Institutional arrangements. Successful project implementation relies heavily on strong institutional and bureaucratic arrangements, which should preferably be in place prior to negotiation. PCRs for the first three education projects noted that the PIUs had no clear lines of responsibility and were also inadequately staffed. Delays and cost overruns in implementing projects through PIUs were attributed to: the lack of detailed project implementation schedules; limited supervision of the construction program and procurement arrangements; and finally, inadequate financial records to perform monitor costs. In the implementation of the Fourth Education Project, there has also been a problem with high staff turnover because salaries, which are tied to government pay scales, are relatively low. A review of government ministries and their personnel structures is being carried out under the government Administrative Review Project (ARP) to ensure that the salaries offered are competitive enough to attract and maintain sufficiently qualified staff.

4. In the area of civil works, implementation problems have been encountered in three out of the four education projects. This is partly due to the weak institutional capacity of a ministry of education to carry out civil works. Because of the low salaries it can offer, the MOEC has been unable to attract technical personnel of a high calibre in the area of civil works management. In an attempt to address this issue, the Fourth Education Project contracted out the management of civil works execution to the Estate Development Company (EDCO). EDCO was responsible for: the preparation of architectural and engineering designs; the preparation of tender documents, the prequalification of contractors; the tendering and the preparation of tender evaluations; the supervision of construction; and final completions of the upgrading and extension components. The performance of EDCO has not been satisfactory, particularly in the areas of prequalifying contractors and supervision of construction activities. If the MOEC intends to continue utilizing an outside design/management firm, more than one firm should be contracted to spread the risk of poor performance and reduce civil works implementation delays.

5. Flexibility in adapting projects during implementation has also shown by experience to be important in order to adjust for unforseen changes in circumstances. This is especially the case where the project design is inherently complex, (e.g. those undertaking major reforms).

6. Financing provision. A major constraint to project implementation in Jamaica has been the lack of local counterpart funds; this was especially the case in the first two education projects. More recently, the release of donor resources (both loan and grant funds) through the GOJ's budgetting and warrant release mechanisms have been a major bottleneck in implementing projects according to design. For example, during 1991/92, the MOEC was allocated only 70% of the budget it requested; of this amount, actual expenditures through the warrant system were slightly less or 67%. This has meant that project managers are unable to rationally anticipate the availability of funds for issuing of major contracts; nor are they able to meet payment schedules.

JAMAICA
Reform of Secondary Education

Selection Criteria for Schools to be included in the Reform of Secondary Education Project:

Before Bank clearance can be secured for tendering, the Government of Jamaica will confirm that property ownership for each site is in the name of the Government of Jamaica, or that each site is leased to the GOJ for a term of not less than 49 years. In addition, schools to be selected for the Project will be chosen from among All-Age and New Secondary Schools and shall meet the following criteria:

1. Conditions favoring equity of access:

   a) Schools located where the population is particularly disadvantaged (e.g. rural areas)
   b) Project ROSE to include a representative geographic sample of schools with an island-wide distribution

2. Conditions justifying long-term investments:

   a) Sites to be adequate to contain the required building expansions
   b) Better than average perceived quality of the school administration and its relationship with the community
   c) Better than average performance and commitment of the school's academic staff
   d) Positive enrollment trends

3. Conditions limiting civil works investment costs:

   a) Physical proximity to converted Technical High Schools and newly refurbished Secondary High Schools
   b) Same schools as targeted under the New Secondary School upgrading
   c) Schools with primary facilities upgrading included in IDB project
   d) Relatively low upgrading needs of the existing facilities

Two additional criteria were used to select Year 1 schools:

4. Size of Year 1 schools to be limited between 1 and 3 streams

5. First year's schools to permit implementation of new curriculum with minimal additional construction (especially workshop and science lab).

JAMAICA
Reform of Secondary Education Project

First Year's Schools

Schools	Parish
All Age Schools	
Cedar Valley	St. Thomas
Avocat	Portland
Mount Herman	Portland
Retreat	St. Mary
Mount Angus	St. Mary
Enfield	St. Mary
Moneague	St. Ann
Bellevue	Trelawny
New Hope	Westmoreland
Hatfield	Manchester
Elderslie	St. Elizabeth
Rest	Clarendon
White Marl	St. Catherine
Constant Spring	St. Andrew
New Secondary Schools	
Edith Dalton James	St. Andrew
Donald Quarrio	St. Andrew
Port Antonio	Portland
Tacky	St. Mary
Maldon	St. James
Green Island	Hanover
Christiana	Manchester
Junction	St. Elizabeth
Claude McKay	Clarendon
Waterford	St. Catherine

JAMAICA
Reform of Secondary Education
Estimated Number of Students Receiving *New Curricula*
By Year By Grade

	Year 1			*Year 2*			*Year 3*			*Year 4*			*Year 5*		
	Grade 7	Grade 8	Grade 9	Grade 7	Grade 8	Grade 9	Grade 7	Grade 8	Grade 9	Grade 7	Grade 8	Grade 9	Grade 7	Grade 8	Grade 9
Pilot Schools															
St Thomas (4)	211	211	211	211	211	211	211	211	211	211	211	211	211	211	211
Addl 6	1481	1481		1481	1481	1481	1481	1481	1481	1481	1481	1481	1481	1481	1481
Year 1 Schools	3555			3555	3555		3555	3555	3555	3555	3555	3555	3555	3555	3555
All-Age	1170			1170	1170		1170	1170	1170	1170	1170	1170	1170	1170	1170
New Secondary	2385			2385	2385		2385	2385	2385	2385	2385	2385	2385	2385	2385
Year 2 Schools				1035			1035	1035		1035	1035	1035	1035	1035	1035
All-Age				720			720	720		720	720	720	720	720	720
New Secondary				315			315	315		315	315	315	315	315	315
Year 3 Schools							2225			2225	2225		2225	2225	2225
All-Age							810			810	810		810	810	810
Small All-Age							200			200	200		200	200	200
New Secondary							1215			1215	1215		1215	1215	1215
Year 4 Schools										1055			1055	1055	
All-Age										315			315	315	
Small All-Age										200			200	200	
New Secondary										540			540	540	
Year 5 Schools													945		
New Secondary													945		
TOTAL															
By Grade	5247	1692	211	6282	5247	1692	8507	6282	5247	9562	8507	6282	10507	9562	8507
All-Age	1170			1890	1170		2900	1890	1170	3415	2900	1890	3415	3415	2900
New Secondary	2385			2700	2385		3915	2700	2385	4455	3915	2700	5400	4455	3915
Pilot	1692	1692	211	1692	1692	1692	1692	1692	1692	1692	1692	1692	1692	1692	1692
By Year			7150			13221			20036			24351			28578

NOTE: Based on 72 schools (20 Small All-Age, 22 New Secondary, 30 Central).
Classroom size All-Age & New Secondary schools = 45 Students.
Classroom size for small All-Age schools = 20 Students.
For Pilots Schools: St. Thomas, Grade 7 cohort = 211; Other Pilot Grade 7 cohort = 1481.

JAMAICA
Reform of Secondary Education Project
Project Schools

PROJECT YEAR	SCHOOLS	1	2	3	4	5	6	7	8	9	TOTAL
		STREAM SIZE									
1	All-Age	4	8	2							14
	New Secondary			3		3	1	1	2		10
	SUB TOTAL	4	8	5		3	1	1	2		24
2	All-Age	2	2	2	1						7
	New Secondary (a)			1	1						2
	SUB TOTAL	2	2	3	2						9
3	All-Age	1		2		1	1				5
	New Secondary (a)				1	1	3				5
	Sm All-Age	10									10
	SUB TOTAL	11		2	1	2	4				20
4	All-Age	2	1	1							4
	New Secondary (a)				1				1		2
	Sm All-Age	10									10
	SUB TOTAL	12	1	1	1				1		16
5	New Secondary (a)				1				1	1	3
	SUB TOTAL				1				1	1	3
TOTAL SCHOOLS		29	11	11	5	5	5	1	4	1	72
	All-Age	9	11	7	1	1	1				30
	New Secondary (a)			4	4	4	4	1	4	1	22
	Sm All-Age	20									20

(a) New Secondary schools in years 2-5 of the project are not scheduled to receive civil works.

JAMAICA
Reform of Secondary Education

Textbook Rental Scheme

1. There are few books of any kind in the All-age schools for grades 7-9. In the other schools for these grades books for Normative and Enriched reading abilities exist through the Secondary Schools Textbook Project which created a book rental scheme. The scheme enabled schools to build up textbook accounts which could be used to buy further books when the books supplied under the SSTP became unusable through age or were damaged, lost or stolen. But there were no books for the students whose reading ability was below the Normative level and these students remain without suitable texts in all the types of secondary school in Jamaica.

2. Under the Secondary Schools Textbook Project the book rental scheme was instituted from 1987-8 in grades 7-12 in all schools except the All-age. Textbooks were supplied to schools and students were invited to rent them at approximately one third of their estimated replacement cost. Book life was assumed to be 3 years and all books supplied were published by UK publishers (although authors were for the most part Caribbean). Each school was responsible for administering the rental scheme and for establishing an exclusive bank account for the rental revenue which could only be used for buying further textbooks. An amount of 10% of the rental was authorized to be used by the school for the administration of the rental, payment of a responsible member of staff and repairs to a book storage area. Schools would convey their textbook needs each year by February to the central administration of the SSTP rental scheme at the MOEC which would inform them of the cost to be met by their rental accounts. When money from the rental accounts was to be paid over for book purchase, the schools had to get the checks countersigned by the ACEO Publications Unit, MOEC. The SSTP administration would then order the books from the UK using the Crown Agents for the procurement and to organize the shipping. Books arriving at Kingston docks were exempted from wharfage and other charges. A local tender was used to buy consolidation services for each school and distribution of the books.

3. The problem experienced by the rental scheme was that a significant number of students did not rent the books. The two reasons for this were that some families could not afford the rental amounts (which varied per book) and some students could not read the books and so did not rent them. The proportion of students in each category is not known and an impact study is proposed by the MOEC for March-May 1993 to investigate this. Schemes have been proposed to counteract the problem, including the payment in installments of one sum for the rental of a set of books (thereby making sure that students have all the books rather than selecting the priority subjects - Language Arts and Math - only to rent), the supply of books as class sets which students would generally not take home and which could be used over several streams of the same grade. Problems also exist regarding the early date needed to collate all the school orders which forces schools to guess their future requirements and the availability of foreign exchange to convert the Jamaica dollars to hard currency. The fundamental problem for the viability of the rental concept was the fall in the value of the Jamaica dollar in 1991 which meant that the rental amounts collected over the supposed 3 year life of the book were no longer sufficient to replace books. Fortunately, two fortuitous buffers alleviated this problem: firstly, too many books were ordered for the Project and the surplus could continue to be distributed free of charge to schools, thus saving the schools'

textbook accounts; and the durability of the textbooks was greater than estimated -four years or more - and the replacement rate was therefore less than expected while the rental revenue continued to be based on a 3-year book life.

4. The MOEC wishes to extend cost recovery for textbooks to all schools with grades 7-9. At present, the only schools which do not participate in the rental scheme are the All-age schools. In the ROSE Project the supply of books to a number of All-age schools will be the occasion to introduce the principle of cost recovery to these schools. The ODA impact study planned for early 1993 will analyze why students do not rent books, either because they cannot afford the fees or that the books provided were too advanced for their reading ability. The ODA study will be used by the MOEC to design a comprehensive book rental/cost recovery scheme for all secondary schools, including an effective mechanism to identify and support those unable to pay the fees.

5. The proposed project will strengthen the SSTP rental administration, which, it is expected, will eventually be subsumed under the Educational Media Unit once the SSTP is completed. Two additional field officers will be necessary to visit the All-age schools entering the ROSE Project, as will local technical assistance to input school data onto the computer and to design the computer control for the entry of all schools into a rental or similar cost recovery system. Administration documents for schools will also be supplied by the Project as will short training for one school principal and one textbook rental administrator per ROSE All-age school.

JAMAICA
Reform of Secondary Education

Examination Rationalization Component

Background. Well designed and administered educational achievement tests are the principal source of information for (a) evaluating the progress of an education system towards achieving its objectives and (b) evaluating the impact of education reforms, such as the ROSE program. In addition, tests typically are used to certify accomplishment and are considered fair and equitable means of allocating scarce places in secondary and higher education. In Jamaica, a wide range of tests are developed and administered annually to students for purposes of monitoring achievement, certification and selection. A recent review of the Jamaican educational testing system (Harris and Ilon, 1992) identified two problems: poor quality tests and inefficient testing programs. As a consequence of these problems, test results have not been used to inform policy decisions within the Ministry. The purpose of this component is to improve the quality of tests, improve the efficiency of testing programs and extend the utility of the tests for evaluation and policy analysis, while keeping within a recognized budget envelope.

Description of the Jamaican Educational Testing System. A plethora of monitoring, certification and selection tests are developed and/or administered annually by or for the Ministry of Education. These can be grouped into four categories: (a) National Assessment Program tests (NAP), (b) high school selection tests, (c) Ministry of Education certification tests and (d) external certification tests. In all, about 170 subject tests (e.g. English, mathematics, electrical installation) are administered to about 162,000 students annually, for an average of about 1000 examinees per subject test.[1] Many subjects are tested in more than one program. Two MOEC certification programs at the secondary level (JSC and SSC) have a 57% overlap in the subjects they test; they also overlap 46% and 55%, respectively, with certification tests developed and administered for the MOEC by an external testing agency, the Caribbean Examinations Council (CXC).

Quality. A high quality test is both valid and reliable; it measures what it is supposed to measure and does so time after time. No empirical evidence is available regarding the reliability or validity of tests developed by and for the MOEC. A review of test development procedures[2], however, suggests that the tests may have shortcomings in both respects. With respect to 15 indicators of test development procedure quality, MOEC high school selection tests averaged 1.3, MOEC certification tests averaged 3.0, the NAP-Grade 6 Test received 6 and the CXC test-development procedures received 13. Test

[1] The National Assessment Program (NAP) includes the Grade 1 Readiness Inventory, Grade 3 Diagnostic Test, Grades 1-6 Checklists of Educational Progress, and Grade 6 Achievement Test (language, mathematics, science and social studies). High school selection tests are the Common Entrance Examination, or CEE-11+ (English, mathematics and "mental ability"), Common Entrance for Secondary Technical Schools, or CEE-13+ (English, mathematics and "mental ability"), and the Grade 9 Achievement Test, or GNAT (English and mathematics). Major MOEC certification tests are the Jamaica School Certificate, or JSC (28 subject tests) and the Secondary School Certificate, or SSC (27 subject tests). External certification examinations include the Caribbean Examinations Council Basic, or CXC-Basic (20 subjects), the CXC General (27 subjects) and tests offered by the Cambridge Examinations Boards.

[2] Indicators are: published syllabus, published blueprint, content specifications, process specifications, statistical specifications, item pretesting, item analysis prior to score reporting, retrospective item analysis, equating, internal reliability, stability, internal validity, external validity, availability of technical data, availability of technical manual.

administration procedures[3] were adequate for all tests, although slightly lower for the NAP tests.

Cost. Testing represents a small item in the MOEC budget. The annual budget for testing in Jamaica was J$7.3 million, including support to the CXC; it does not include the costs to parents and students for test preparation and registration. The MOEC budget for testing is allocated as follows: 40% for high school selection, 33% for MOEC-developed certification and 26% for CXC certification. Costs per student to the MOEC range from less than J$10 to more than J$2000 per subject, depending on the purpose of the test and the number of examinees. All certification programs included low-volume subject tests. For example, registrations for 25 (of 28) JSC subject tests, three (of 27) SSC subject tests, 8 (of 20) CXC-Basic subject tests and 1 (of 28) CXC-General subject tests were lower than 100. Costs per award[4] range from J$150 to J$42,000, depending on the subject and test program. The NAP was supported, 1988-92, by an IDB loan; its costs, therefore, do not appear in the MOEC budget. Most (67%) NAP resources were directed at the development and administration of a curriculum based achievement test for students in Grade 6.

Cost effectiveness. Cost-effectiveness was judged according to relative cost per examinee for the same subjects tested in different programs and examinee cost per unit of quality. With respect to cost per examinee, SSC subject tests were loss costly than either JSC subject tests or CXC subject tests; for similar subjects, JSC and CXC-Basic costs per examinee were 4.5 times and 2.5 times higher than SSC subjects. With respect to the second indicator--average examinee cost per unit of test development quality--all certification tests were more cost-effective than all high school selection tests. The NAP Grade 6 test was six times as cost-effective as the CEE-11+.

Management. The organization of testing activities in the MOEC has also been inefficient, although recent changes in structure may improve this element of inefficiency. Internal testing programs have been carried out in the NAP Unit and the Evaluation Unit (renamed the Student Assessment Unit as of September 1992) staffed by three professional staff (SEO or EO), six semi-professional staff and 53 clerical staff, with many overlapping functional (not program) responsibilities. Much work is completed manually. Data entry and analysis for large volume tests (e.g. the CEE and the Grade 6 NAP) is contracted out to private firms and the MOEC lacks resources necessary to check quality beyond the minimum involved in verification of data entry. Internally, most staff time is employed on administrative tasks associated with test production, administration and scoring; virtually no staff time is directed toward analytic tasks to ensure test reliability and validity, or to policy analysis utilizing the results of testing programs.

Test utility. At present, tests administered to students in Jamaica are used for certification and selection only. The ROSE program, when fully implemented, will enable all children to "free flow" into a junior high school program (i.e., grades 7-9). The use of tests for selection at grade 6, therefore, will be gradually phased out and eventually eliminated. At the same time, the importance of tests for monitoring the effectiveness of the education system as a whole will grow. Valid and reliable tests, and supplementary information, will be needed for rapid policy analysis and decision making.

[3] Indicators are: layout, print quality, efficiency of test production, registration, clear administration directions, standard administration procedures, processing time, score reporting, test security.

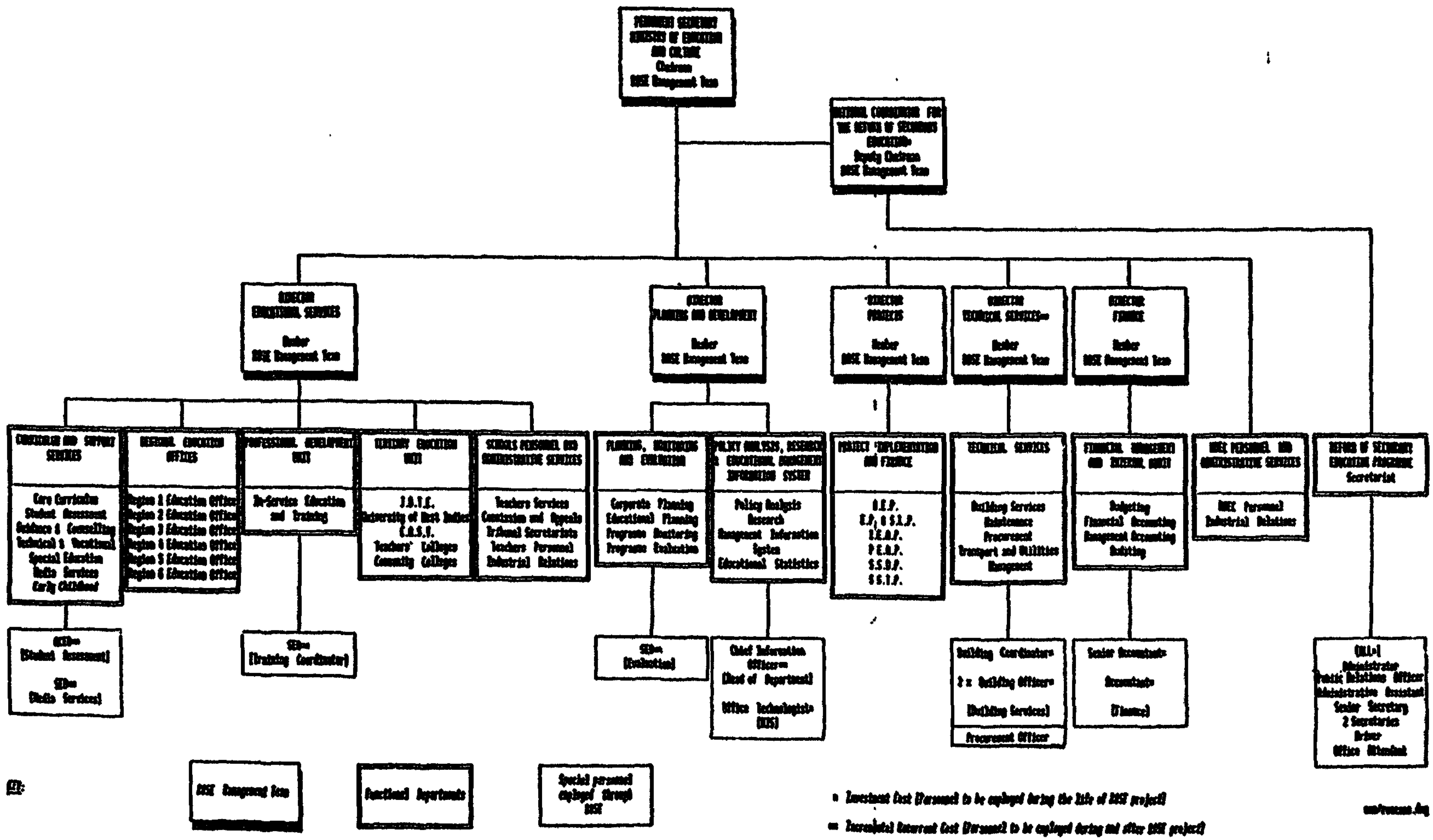
[4] A place in a high school program, or a passing grade on a JSC, SSC or CXC subject test.

Decisions on Rationalization of the Exam System

Exam	Short-term	Medium-term	Long-term
CEE 11+		*Eliminate in 1996 *Replace with New Grade 6 Achievement Test	
CEE Technical		*Phase-out	*Eliminate
New Grade 6 Achievement	*Develop detailed specifications for test development *Public awareness campaign	*Introduce new test in 1995 for selection, placement and monitoring *Design plan to eliminate selection/ placement function of test	*Eliminate selection/ placement function of test
GNAT	*Adapt for ROSE Gr. 9 students for 1994	*Phase out by school beginning in 1995	*Eliminate
New Grade Nine	*Public awareness campaign by 1994 *Develop detailed RFP for test development *Contract test development	*Phase in by school starting in 1995 *Permit out-of-school persons to sit "certifying core" subtests (English, Math) beginning 1995	*In place for all junior high programs completers
JSC	*Public awareness campaign by 1994 *Eliminate low-volume subject tests and subjects tested by HEART	*Eliminate further subjects tested by HEART	*Eliminate
SSC	*Public awareness campaign by 1994 *Eliminate low-volume subjects and subjects tested by HEART	*Eliminate further subjects tested by HEART	*Eliminate all but academic subtests
Vocational/ Technical Exam	*Eliminate subjects tested by HEART	*Eliminate further subjects tested by HEART	*Eliminate entirely
Convert to computerized registration sched. and reporting	*Write RFP for technical assistance required *Devise plan for conversion	*Install new equipment and train personnel on hardware and software	*All registration and reporting done via computer
Integrate NAP and PEAP PIUs into Student Assessment unit	Work with IDB and USAID to find means to integrate NAP, PEAP and Student Assessment		Integrate all testing operations fully

JAMAICA
Reform of Secondary Education Project

Reform Management Team Structure



Annex 8

The Reform of Secondary Education (Project R.O.S.E.) First Phase — Grades 7 - 9

WHAT IS THE REFORM OF SECONDARY EDUCATION?

The Reform is a rationalization that will lead to improvements in secondary education for all students in Grades 7 - 9 (first phase) and in the second phase, for students in grades 10 and 11.

WHY IS THE REFORM NEEDED?

- **Access**
  The Reform is necessary because we need to educate all our children at least to the end of Grade 9.
- **Quality**
  This education must be of higher quality than at present, and it must be delivered in more efficient ways.
- **Equity**
  We must remove those disparities in the system which deprive many of our children of access to quality education.

WHAT FORM WILL IT TAKE?

- Every year a number of schools will be selected for the introduction of the new curriculum. In some cases, new schools will be built: in other cases, after a needs assessment, buildings will be extended and / or re-furbished.

- Additional schools which do not wish to wait to be selected, may opt to become a part of the Reform as **Voluntary Schools.**

- Participating schools which teach the new curriculum will either be Junior High Schools or have junior high departments.

- There will be one **national curriculum** for all students in grades 7 - 9. It will eventually be taught in every kind of secondary school. The core curriculum will consist of six subjects:
  • Language Arts • Mathematics • Science • Social Studies
  with the new subjects: **Career Education** and **Resource & Technology.**

- The content of the curriculum will be the same for all students: the **learning activities**, however, will vary, to suit their differing levels of ability.

- Relevant instructional materials, textbooks and library books will be available for students.

- Teachers will be trained to teach the new curriculum, both in pre-service and in-service courses.

- A new Grade 9 Test will be put in place. It will be based on the new curriculum and will measure students' achievement.

HOW LONG WILL IT TAKE?

The first phase of the reform will run from 1993-1998.

WHAT RESULTS ARE EXPECTED?

- By the end of the first phase 50 All Age schools and 72 Secondary Schools will have benefitted. (This figure will be higher, as schools volunteer to join the reform.)

- 5,400 teachers will have received training.

- 60,000 students will have benefitted from the new programme. They will have experienced the same curriculum and there will be a measurable improvement in literacy, numeracy and other skills.

- The Reform aims to produce school-leavers who can go on to further formal education, or who can be trained or employed.At the end of Grade 9, students will either enter an upper secondary Grade 10-11 programme, leave school and go into a non-formal training programme, find employment or make an opportunity for self-employment.

WHAT OTHER STRATEGIES HAVE BEEN CONSIDERED?

- Make the present system more efficient by paying more attention to supervision. *This would not create more places or reduce inequality.*

- Provide more high school places, by re-classifying more Secondary Schools as Comprehensive High Schools. *This is a part of the present strategy, and will continue — but this alone would still leave almost half of Jamaica's Grades 7 - 9 students in All Age schools. That would not get rid of the inequalities and inefficiencies in the system.*

- Put more High Schools on the shift system / allow larger classes in High Schools. *This solution would also allow more children to have a High School education, but would still leave almost half of Jamaica's Grades 7 - 9 students in All Age schools. That would not get rid of the inequalities and inefficiencies in the system.*

- Improve the All Age Schools. *This would relieve the most disadvantaged group but would not improve quality or efficiency in the other schools.*

- Extend the primary school to Grade 8 or Grade 9. *This would partially address the problem of access.*

- Create a Junior High School or Department in every school which has Grade 7 - 9 students and offers the common core curriculum. *This strategy was selected because it directly addresses all the problems inherent in the system.*

You are invited to send your comments on the proposed reform to —

The Permanent Secretary,
Ministry of Education
2, National Heroes Circle
P.O.Box 498
Kingston

Please mark your letter:

Attention: National Coordinator, Reform of Secondary Education.

JAMAICA

Evaluation of the Reform of Secondary Education

1. The Jamaican Reform of Secondary Education (ROSE) project is a multifaceted and comprehensive program designed to improve the access, equity, and quality of education for all students at grades seven to nine. The ultimate indicators for program success (e.g., student matriculation rates in upper secondary and vocational programs, students' successful performance in those programs, students' success in securing and succeeding in meaningful work placements, etc.), however, cannot be measured for five or more years. In the meantime, key indicators or prerequisites known to be associated with the above outcomes have been identified and can be objectively measured to provide program developers and decision-makers with interim data to guide any needed modifications and future planning for the national implementation strategy. The proposed project therefore includes a subcomponent to carry out an **impact evaluation study** which is designed to provide for the ongoing collection and analysis of objective data, both formative and summative, to determine how well the reform is meeting its goals of improving the access, equity, and quality of educational programs at grades 7-9. The central issue which this study addresses is whether the money and effort expended on the reform significantly improve access, equity, and quality of education for students at grades 7-9, especially those from All Age School populations.

2. Evaluation and monitoring data must be collected on a regular basis at all participating sites during the first five-year phase of the reform. A carefully designed impact evaluation study based on a representative sample of project and comparison schools will also examine the instructional program in greater detail (including, teacher instructional methods, student behaviors and interactions, lesson content). The data will permit documentation of the similarities and differences in outcomes among project, voluntary, and their matched comparison sites. Data collected will include baseline and annual changes measured in school contexts, program inputs, implementation processes, and products (outcomes for students, teachers and community). In addition to quantitative outcomes, qualitative data will also be collected through standardized observations, interviews, and surveys to document the program's impact as perceived by students, teachers, administrators, parents, and community. The impact evaluation data, summarized on an annual basis, will enable program developers, teacher trainers, and policy-makers to review and revise the program components on an objective basis.

3. Evaluation Design. As the curricular reform moves from the pilot stage (World Bank IV) to broader national implementation, a rigorous and structured evaluation design is necessary to provide credible evidence of the program's strengths and weaknesses. The evaluation design can provide both baseline and comparison data that will permit a careful assessment of the overall impact of R.O.S.E. and identify which variables across sites are most frequently or most strongly associated with significant increases in student learning and changes in teacher behaviors.

4. The design requires data collection at project schools and at comparison schools matched to a representative sample of project and voluntary school participants. The data will be collected using four inter-related approaches, which taken together will provide a comprehensive picture of the scope and depth of the program's impact. The four approaches will permit an evaluation that covers the context, inputs, processes, and products of the reform and permits comparison among different school types and to non-project sites over time. The four main data sets are:

(a) Baseline data to document the preproject context at all project and comparison sites, including background data on school trends (3-5 years, where possible) in attendance, percent pass rates on standardized exams, estimated proportions of non-, low, average, and advanced readers, etc.). Baseline data will also be important for matching potential comparison sites to project sites.

(b) Pre- and post-testing of student learning in six content areas. Annual September and May tests at each grade level, 7-9, will be administered using project-developed instruments until new Grade 9 and 6 achievement tests are available.

(c) Structured observations of lessons by a trained independent team of observers using standardized forms will be conducted in a sample of project and comparison sites. Classes will be observed on a pre-project and annual basis. Observations will document 2-3 consecutive lessons in each content area, noting instructional methods and styles, content, teacher-student interactions, student behaviors, etc. Interviews with teachers and principals will also be conducted.

(d) Special studies will be contracted to address special questions or unique situations not fully addressed by the impact study. Over the 5-year duration of the project, issues will also undoubtedly arise in areas not anticipated at this time. A special study component will permit examination of such issues.

5. Selection of Project and Comparison Schools for Evaluation. Although all project schools should be monitored, it is not necessary nor financially prudent to carry out the same level of evaluation at all project sites. For the purposes of this impact evaluation it is desirable to include only project schools from the pilot years and first three project years. The sample should include schools representative of the variety of secondary schools in the country that are expected to use the common core curriculum (i.e., All Age, New Secondary, Comprehensive, and High School). The sample should represent the variety of schools by enrollment size and setting (i.e., urban, rural and remote).

6. The following table shows the planned phase-in of all project and voluntary sites and the impact evaluation sample of project, voluntary, and comparison sites.

	Pilots	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Total Project	11	22	11	10	16	13	83
Voluntary	-	5+	5+	5+	5+	5+	25+
Project Sample	4	5	6	5	-	-	20
Voluntary Sample	-	-	2	1	-	-	3
Comparison	-	5	8	6	-	-	19

7. The participation rates by voluntary schools (assumed to be mostly high schools) are estimated and reflect the lowest conservative projections by the MOEC. There may need to be minor re-adjustments in the final distribution of sites, but the basic framework above reflects the recommended scope for the in-depth impact study.

8. Each year's cohort of project schools is expected to begin the project with different levels of program inputs due to the schedule for the provision of the different levels of textbooks (Foundation Levels 1 and 2 by year 2, and Normative and Enriched Levels by year 3) and completion dates for construction or other building improvements. Thus, it is important to carefully document baseline and annual changes in contexts, inputs, processes, and products. Over the three and four year period of participation (especially for the initial project sites), a successful project should yield consistent trends despite differences among the phase-in of inputs for each successive cohort.

9. Since pilot sites will have been operational for one to two years before the reform, it is too late to identify appropriate comparison sites. Nonetheless, it is recommended that a sample of pilot sites participate in the observations to provide preliminary data on expected and unexpected outcomes and potential barriers to successful implementation.

Special Studies. Special studies will be conducted to address specific emerging issues that may not be fully addressed in the impact study. Some potential topics to be considered include:

- ethnographic case study at two or three schools to more fully document and examine the stages of the new curriculum implementation;
- issues of educational reform in small, isolated All Age schools through distance education;
- program characteristics or strategies that have had positive impact on student attendance;
- relative cost-effectiveness of selected inputs;
- impact of the project for special populations such as special education.

10. Impact Evaluation Instruments. The impact evaluation is designed to measure changes in the context and inputs at schools, growth in student learning, and changes in instructional content and methodology. All three instruments (baseline inventory, pre/post tests and observations) would be administered at project and comparison schools identified in the preceding design. In addition, because of their low cost, relative to the observations, the inventory and pre/post-tests can be collected for all other project sites at least through year four.

A. Baseline Data Inventory

11. Purpose. A standardized inventory checklist serves several purposes: To determine baseline conditions at project and comparison schools; to provide a data base for planning and setting targets or minimum standards; and when re-administered in subsequent years, as a barometer of change. To the extent possible duplication of data collection should be minimized, such that a common data base be established to permit access to the data through an MIS database.

12. Development. Development entails a review of existing forms from various sources (e.g., curriculum departmental surveys, the Survey of Living Conditions, school mapping project). Modification of existing forms, or development of a new composite instrument, should be field tested. The instrument should be objective and allow for eventual MIS data entry. Appropriate items from the educational support materials list developed by a the curriculum unit also need to be incorporated.

13. Administration. For the purposes of the evaluation the inventory should be administered prior to project involvement and again during year 4 of the project. The inventory should not require more than one day on-site to administer by a regional or other educational officer who has been trained on its use. A one-day training session should be conducted once a year prior to January.

B. Pre/Post-Testing

14. The World Bank IV project developed pre/post-tests for the grade seven curriculum in six subject areas (language arts, mathematics, social studies, science, resource & technology, and career education). Pre/post-test instruments for grades 8 and 9 should also be developed as the curriculum for those grades is completed. The "in-house" grade 7 tests clearly vary in psychometric quality and could be improved with some technical assistance. Ultimately, they should be expected to have a fairly high intrinsic level of content validity since will have been developed by the same curriculum officers who are developing the curriculum.

15. The exam rationalization component is developing a new grade 9 exam which should be ready for pilot use during the third or fourth year of the reform. Achievement differences on the new grade 9 tests by project and comparison students will ultimately be an important indicator of the impact of the reform on student learning. In the meantime, it is difficult to justify extensive expenditures on developing new instruments. Therefore, grade-specific pre/post tests developed by the curriculum would be the best interim indicator of student learning. Existing instruments should be reviewed and revised with the assistance of a local consultant who is an experienced psychometrician.

16. Administration. The tests should continue to be administered under the supervision of an education officer at all project and comparison sites each September and May. The evaluation staff will need to inservice regional officers. Students should be randomly assigned to take two of the six subject area tests (only one at schools with more than two streams). At post-test the students should take the same subject area tests that they took for a pre-test.

C. Structured Observations

17. Purpose. To measure instructional and learning environment changes based on objective standardized instruments and procedures. Comparison sites would be evaluated using same the observation instruments and schedules. Observation periods consist of three or at least two consecutive days or presentations of a teacher's lessons in each curricular area. This provides teachers a greater opportunity to demonstrate their breadth and depth of teaching, and their ability to follow-through with lessons. Observations of at least two consecutive lessons also reduces the likelihood of observing only the very best or very worst lessons by teacher. Separate observations are recorded all six main subjects. Career Education is observed and evaluated within the context of each of the other five subjects.

Photographic documentation of the school and classroom context should also be done on a pre-project and annual basis.

18. Development. An external consultant should be contracted to work with R.O.S.E. curriculum staff to develop a standardized objective observation instrument. In order to collect pre-project data at an initial set of 10 sites between March and May 1993, instrument development and training should begin by January 1993.

19. Training. A team of 6-8 observers should be identified and contracted as local consultants by the end of January, 1993. The types of people appropriate for the team include teachers (on leave or retired), staff and/or advanced students at teacher training colleges, graduate students at UWI. These team members would be further supported in training by six curriculum or other education officers. All team members would participate in a one-week training session coordinated by the external consultant. Each observer is responsible either for at least two curriculum areas (excluding career education which should be infused into the other curricular areas) or for one curricular area and for interviewing and recording information on the overall school-wide impact. Each year the training would be repeated. Beginning in 1993-94 three teams of six observers (18 people) will be needed to cover all sites.

20. Administration. A team of trained observers records objective observations of actual lessons (including content, methods, student involvement, student-teacher interaction, etc.); collect information on site conditions and learning environment; and conduct brief interviews with teachers, administrators, and other stakeholders. The observations would repeated annually during the same period. To address issues of reliability of measurement each lesson would be observed by a pair of observers. Thus, 5-6 people would be needed per site. All subject areas may not be taught every day, so separate team member schedules may be needed for each site.

D. Data Analysis and Reporting.

21. The data collected with all three of the above instruments, including attendance data, will need to be entered into a computerized database. Student responses to test items should also be key entered and scored by computer. Descriptive and analytical summaries can be generated. Eventually with a sufficient data base after the first five years, outcome measures can be analyzed as a function of various configurations of school inputs and changes in inputs. Inferential tests of significance should be conducted to measure project-comparison group differences. Reports describing the development, administration, and annual results for each set of instruments will be required on an annual basis. The reports should be prepared by each September and be presented at the annual review conference on the project.

JAMAICA
Reform of Secondary Education Project
Social Policy Analysis Component

1. The Social Policy Analysis Component represents a balanced approach to improve social policy analysis capacity in the HRDP system. The proposal has four places of intervention:

i) it establishes a **Social Policy Analysis Unit** at PIOJ to build institutional linkages, disseminate information, coordinate training, carry out in-house analysis, and contract additional research as needed;

ii) the **line ministries** of Health, Education, and Labour, Welfare and Sport will participate in the definition of a program of social policy research, benefit from policy-maker and staff seminars to upgrade their respective policy analysis skills, and the Ministry of Labour, Welfare and Sport will benefit from an assessment of its social policy analysis capacity and needs and a small additional amount of technical assisstance for capacity upgrading;

iii) at the **University of the West Indies**, faculty-upgrading courses will be offered in policy analysis methods, curriculum will upgraded in similar graduate courses to be taught permanently, fellowships in policy analysis will be offered, and a program of social policy research elaborated jointly between government and the university will be carried out; and a Data Base will be established at the Institute of Social and Economic Research (ISER); and

iv) support for **STATIN's** Survey of Living Conditions program will be included.

2. Issues. Jamaica faces a very sophisticated set of social policy questions. The extensive coverage of its social services means that the agenda has moved on from the analytically simpler problems of building schools and clinics to the analytically more complex issues of how to improve their quality and efficiency in an extremely tight fiscal situation. The government's umbrella social policy vehicle, the Human Resources Development Program (HRDP), includes actions to reform lower secondary education, increase cost recovery in health and education, increase the private sector provision of social services, improve management efficiency, decentralize authority, and improve the targeting of welfare programs. All of these are difficult reforms that should benefit from quantitative assessments of the costs and benefits of different options.

3. The agencies involved in the HRDP social policy reforms have little or no in-house capacity to carry out or manage sound policy studies to inform their decisions. Funds for such studies are found in an ad hoc manner, often from externally financed projects. These are usually tied to large studies defined years in advance and serving only the projects' narrow interests and carried out by consultants (frequently foreign). Specific decisions are informed with the ad hoc studies, but the underlying deficiencies in the capacity to identify, manage or perform policy studies are not remedied and there is little flexibility to respond to new policy priorities. Furthermore, the lack of government input in defining and supervising the studies frequently lowers their relevance, the ministries' stake in them and, consequently, their impact.

4. The HRDP has already benefitted from a significant improvement in the sources of data that should inform social policy decisions. The Survey of Living Conditions, begun under the Social Sector Development Project (Loan 3111-JM) provides information on households' health, education, nutrition, housing and consumption and the ministries have point-of-service statistics from their management information systems collated through the Institution Based Monitoring System (IBMS). Although these data bases are rich, and useful abstracts are now being produced in a reasonably timely fashion, the recourse to the information to answer specific social policy questions has been very limited. Where it has happened, it has rarely been the result of an initiative from the line ministries.

5. How the project addresses the issues. The proposed Social Policy Analysis (SPA) component aims to increase the recourse to sound quantitative policy analysis to guide social policy decisions. The intervention includes coordinated actions among agencies key to the formulation of policy for the HRDP: PIOJ, the line ministries (Ministries of Health, Education, and Labour, Welfare and Sport), UWI, and STATIN. Through these interventions the project will increase government's ability to identify, perform and absorb social policy analysis, improve the skills and increase the numbers of persons engaged in the social policy analysis, and provide a pipeline of funds to carry out social policy analysis.

6. **HRDP Social Policy Analysis Unit.** The project would support a Social Policy Development Unit to be located in the HRDP Secretariat in the Social and Manpower Planning Unit of PIOJ. The unit would perform simple policy analysis in-house and manage a network of activities aimed at increasing the amount and quality of policy analysis done in the line ministries and at UWI. It would have 5 tasks:

i) Coordinate Formal and Informal Institutional Linkage Mechanisms. Each year the Director General of PIOJ in consultation with the Permanent Secretaries of MOE, MOH and MLWS will specify the priority research topics and request the preparation of proposals to address them. Assignment of responsibility for individual research proposals will vary with the topic. THe Unit will chair the Technical Advisory Committee on HRDP Research to be comprised of researchers in the HRDP Social Policy Development Unit, STATIN, MOE, MOH, MLWS, and UWI. It will provide a forum for interaction on technical issues, alleviate professional isolation and stimulate peer review. It will also provide input into the SLC and IBMS--thus eliminating the need for sperate steering committees for them. The Unit will also maintain informal contacts with senior management and researchers to disseminate research findings and increase their feedback into policy decisions.

ii) Information and Dissemination. The Unit will disseminate HRDP relevant information and studies. It will produce an annual review of ongoing and recently completed research linked to the HRDP (both that funded by the project and through other sources) and organize an Annual HRDP Research Symposium to disseminate the same, as well as occasional seminars.

iii) Training. The Unit will assess the training needs of the line ministries with respect to social policy analysis and coordinate training programs to address them, and coordinate the training inputs to UWI.

iv) Research and Analysis. The Unit would perform routine analysis of the IBMS and SLC data, coordinate efforts to enhance their quality and timeliness, identify other data of relevance, including financial data and integrate them with the other sources.

v) Contract Additional Research as Needed. The Unit will work with the line ministries to develop terms of reference for studies to be contracted out, provide counterpart staff to the contractors, and provide counterparts to the UWI-executed agenda of research.

7. **Line Ministries.** The line ministries will participate in the network activities coordinated by the HRDP Social Policy Development Unit. Aside from their voice in setting the agenda of social policy analysis, linkage of technical staff in the line ministries will also benefit from three activities:

i) In-service training in research methodology and social policy analysis for research staff in the respective information or research units of the ministries;

ii) Policy-maker seminars to enhance the capacity of social sector managers to frame policy questions and integrate results of policy analysis into their decision-making;

iii) Technical assistance to MLWS to assess its capacity for policy analysis and to recommend options for how to improve it needs and begin to implement recommendations.

8. **University of the West Indies.** The project will support five activities:

i) Faculty Upgrading. In-country courses will be sponsored in advanced quantitative methods suitable for social policy analysis in order to upgrade faculty skills. The first two of the six identified courses[1] will be taught by local staff. Four courses will be provided by staff of an overseas university under a single technical assistance package.

ii) Curriculum Development. The visiting scholars will assist local faculty in developing new courses or in upgrading existing courses to include the elements taught in the faculty upgrading courses.

iii) Graduate Fellowships. Graduate fellowships will be provided to students with a concentration in research methodology and social policy analysis. The fellowship students will be expected to take the methods courses that will benefit from curriculum development, but will receive degrees from their respective disciplinary programs.

iv) Research. The project will support a pipeline of research on HRDP topics, to be managed by the Social Policy Analysis Unit in PIOJ. Various faculties and the Institute for Social and Economic Research (ISER) will be involved in carrying out the research.

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[1]As presently identified, the six courses are introductory mathematical statistics, computer applications, research design, multivariate techniques, other social policy analysis techniques, and survey design.

v) ISER Data Bank. A Data Bank will be established at ISER for the use of researchers engaged in the HRDP research agenda as well as the faculty and students involved in the first and subsequent offerings of upgraded courses. A network of hardware, supporting software and supplies, and a programmer are to be supported by the project.

9. **Survey of Living Conditions**. Support for STATIN's implementation of the Survey of Living Conditions (SLC) will be provided. A small unit of staff (1 programmer, 2 statisticians, 1 statistical assistant) dedicated to the SLC should alleviate past problems with poor timeliness and imperfections in quality. The bulk of the work will still rely on STATIN's general institutional capacity, but the key management and analysis decisions will be concentrated in a unit responsible only for the SLC. The incremental costs of the survey field work, printing, etc. will be supported.

10. Sustainability. The need for social policy analysis is continual but the project, of course, is for a defined life. It should, however, generate a sustainable impact due to several of its design features. First, the training (faculty seminars, curriculum development, policy-maker seminars, and line ministry staff-upgrading) will build capacity that should have a life after the project. The recurrent costs of the HRDP Social Policy Development Unit in PIOJ and the SLC Unit in STATIN will be absorbed by GOJ gradually over the life of the project so that they can be supported afterwards. The mechanisms for institutional linkage will not require additional financing.

11. Monitorable Indicators. The ultimate goal of the Social Policy Analysis Component is to improve social policy decisions by improving the empirical analysis that informs them. Jamaica's social sector budget runs on the order of US$400 million per year. If the social policy analysis generated under the project can lead to improvements in the efficiency of those funds, it will have been justified. This is, admittedly, an intangible impact that defies measurement. The monitorable indicators shown in Annex 17 are therefore process indicators. They can show whether analysis is generated and courses offered at UWI, but not their quality or impact. The mid-term review will include a qualitative assessment of whether policy-makers have deemed the studies timely and useful and of the studies technical quality.

HRDP SECRETARIAT

Secretariat Director

Analyst/Policy Matrix

Monitoring Unit

- Program Manager
- Financial Manager
- Accountant
- Education Planner
- Health Planner

Policy Analysis Unit

- Policy Development Manager
- Socio-Economic Analyst
- Socio-Economic Analyst
- SLC/IBMS Coordinator
- Programmer

Jamaica
Reform of Secondary Education Project
Project Cost Summary

	JA$ Local	JA$ Foreign	JA$ Total	US$ Local	US$ Foreign	US$ Total	% Foreign Exchange	% Total Base Costs
A . Secondary Reform Support								
1. Common Curiculum	33310.3	8245.2	41555.5	1448.3	358.5	1806.8	19.8	5.5
2. ROSE Training	111527.0	133.7	111660.8	4849.0	5.8	4854.8	0.1	14.8
3. Ed. Support Materials	10121.7	38409.1	48530.8	440.1	1670.0	2110.0	79.1	6.4
4. Textbooks	6742.1	19240.7	25982.7	293.1	836.6	1129.7	74.1	3.5
5. Infrastructure	227822.2	135524.8	363347.0	9905.3	5892.4	15797.7	37.3	48.3
6. Upper Secondary Strategy	25300.0	0.0	25300.0	1100.0	0.0	1100.0	0.0	3.4
Sub-Total	414823.4	201553.4	616376.8	18035.8	8763.2	26799.0	32.7	81.9
B . Eval. & Mgnt. Strengthen.								
1. Exams Rationalization	6076.1	12292.8	18368.9	264.2	534.5	798.6	66.9	2.4
2. ROSE Management	17662.7	6010.6	23673.3	767.9	261.3	1029.3	25.4	3.1
3. Public Awareness Campaign	5514.3	0.0	5514.3	239.8	0.0	239.8	0.0	0.7
4. ROSE Evaluation	8926.3	3361.9	12288.2	388.1	146.2	534.3	27.4	1.6
5. ROSE Phase II Preparation	6900.0	0.0	6900.0	300.0	0.0	300.0	0.0	0.9
Sub-Total	45079.3	21665.3	66744.7	1960.0	942.0	2901.9	32.5	8.9
C . Social Policy Analysis								
1. Policy Analysis Unit	31520.2	4770.2	36290.4	1370.4	207.4	1577.8	13.1	4.8
2. University of West Indies	7040.3	9631.2	16671.5	306.1	418.7	724.8	57.8	2.2
3. Line Ministries Linkage	1659.0	1426.0	3085.0	72.1	62.0	134.1	46.2	0.4
4. STATIN	7898.7	5353.2	13252.0	343.4	232.7	576.2	40.4	1.8
Sub-Total	48118.2	21180.7	69298.9	2092.1	920.9	3013.0	30.6	9.2
Total BASELINE COSTS	508020.9	244399.5	752420.4	22087.9	10626.1	32713.9	32.5	100.0
Physical Contingencies	20262.1	14333.0	34595.1	881.0	623.2	1504.1	41.4	4.6
Price Contingencies	131781.7	18118.7	149900.4	5729.6	787.8	6517.4	12.1	19.9
Total PROJECTS COSTS	660064.6	276851.2	936915.8	28698.5	12037.0	40735.5	29.5	124.5

Values Scaled by 1000.0 - 1/21/1993 17:39

Jamaica
Reform of Secondary Education Project
Projects Components by Year

	Totals Including Contingencies JA$						Totals Including Contingencies US$					
	93/94	94/95	95/96	96/97	97/98	Total	93/94	94/95	95/96	96/97	97/98	Total
A. Secondary Reform Support												
1. Common Curiculum	7125.5	7941.7	15907.2	13066.3	8194.3	52235.0	309.8	345.3	691.6	568.1	356.3	2271.1
2. ROSE Training	35459.8	19071.2	31748.6	28357.0	29737.6	144374.2	1541.7	829.2	1380.4	1232.9	1292.9	6277.1
3. Ed. Support Materials	14959.8	10775.5	15425.3	9039.1	5775.5	55975.2	650.4	468.5	670.7	393.0	251.1	2433.7
4. Textbooks	1436.8	10609.8	7563.3	7883.1	2561.7	30054.7	62.5	461.3	328.8	342.7	111.4	1306.7
5. Infrastructure	117058.2	126342.0	130877.0	65471.6	15879.9	455628.6	5089.5	5493.1	5690.3	2846.6	690.4	19809.9
6. Upper Secondary Strategy	2472.5	2777.2	8946.7	9394.0	9863.8	33454.3	107.5	120.7	389.0	408.4	428.9	1454.5
Sub-Total	178512.6	177517.4	210468.2	133211.1	72012.7	771722.0	7761.4	7718.1	9150.8	5791.8	3131.0	33553.1
B. Eval. & Mgnt. Strengthen.												
1. Exams Rationalization	9309.3	1660.3	2035.3	5406.3	2561.3	20972.7	404.8	72.2	88.5	235.1	111.4	911.9
2. ROSE Management	8231.7	6199.4	4598.3	4826.6	5066.2	28922.1	357.9	269.5	199.9	209.9	220.3	1257.5
3. Public Awareness Campaign	1508.3	946.9	1359.3	1635.3	1540.4	6990.2	65.6	41.2	59.1	71.1	67.0	303.9
4. ROSE Evaluation	2514.8	3049.2	3580.5	3546.3	2561.4	15252.2	109.3	132.6	155.7	154.2	111.4	663.1
5. ROSE Phase II Preparation	0.0	0.0	0.0	4697.0	4931.9	9628.9	0.0	0.0	0.0	204.2	214.4	418.6
Sub-Total	21564.2	11855.8	11573.4	20111.5	16661.2	81766.1	937.6	515.5	503.2	874.4	724.4	3555.0
C. Social Policy Analysis												
1. Policy Analysis Unit	8266.8	9102.6	9037.5	9483.0	9544.3	45434.3	359.4	395.8	392.9	412.3	415.0	1975.4
2. University of West Indies	7856.6	5661.8	1744.0	1692.9	1775.5	18730.8	341.6	246.2	75.8	73.6	77.2	814.4
3. Line Ministries Linkage	1501.0	1125.1	0.0	0.0	878.1	3504.2	65.3	48.9	0.0	0.0	38.2	152.4
4. STATIN	3611.6	4026.7	2691.1	2757.9	2671.1	15758.5	157.0	175.1	117.0	119.9	116.1	685.2
Sub-Total	21236.1	19916.2	13472.6	13933.9	[illegible]869.0	83427.7	923.3	865.9	585.8	605.8	646.5	3627.3
Total PROJECTS COSTS	221313.0	209289.5	235514.1	167256.4	103542.9	936915.8	9622.3	9099.5	10239.7	7272.0	4501.9	40735.5

Values Scaled by 1000.0 1/21/1993 17:39

Jamaica
Reform of Secondary Education Project
Summary Accounts by Year

	Totals Including Contingencies JA$						Totals Including Contingencies US$					
	93/94	94/95	95/96	96/97	97/98	Total	93/94	94/95	95/96	96/97	97/98	Total
I. INVESTMENT COSTS												
A. Training/Workshops												
1. Overseas	2418.0	1171.4	1322.5	702.7	512.0	6126.6	105.1	50.9	57.5	30.6	22.3	266.4
2. Local	8433.3	15694.8	23397.7	24338.3	25370.8	97234.9	366.7	682.4	1017.3	1058.2	1103.1	4227.6
Sub-Total	10851.3	16866.2	24720.2	25041.0	25882.8	103361.5	471.8	733.3	1074.8	1088.7	1125.3	4494.0
B. Furniture	8943.2	9198.7	13300.9	8276.0	842.5	40561.3	388.8	399.9	578.3	359.8	36.6	1763.5
C. Equipment	18678.3	10948.7	12796.5	7267.3	3571.9	53262.8	812.1	476.0	556.4	316.0	155.3	2315.8
D. Vehicles	570.4	0.0	0.0	0.0	0.0	570.4	24.8	0.0	0.0	0.0	0.0	24.8
E. Resource Materials	1898.0	2611.9	5436.8	6435.5	1504.6	17886.8	82.5	113.6	236.4	279.8	65.4	777.7
F. Books	1116.8	4897.3	6571.0	6859.4	1940.1	21384.5	48.6	212.9	285.7	298.2	84.4	929.8
G. Civil Works												
1. New Construc. Ctr. Sch.	0.0	24384.3	64886.8	0.0	0.0	89271.2	0.0	1060.2	2821.2	0.0	0.0	3881.4
2. Exten/Refurb. Ctr. Sch.	83113.6	77731.6	28763.9	32013.2	0.0	221622.3	3613.6	3379.6	1250.6	1391.9	0.0	9635.8
3. Refurbishing Second.Sch.	8984.5	0.0	0.0	0.0	0.0	8984.5	390.6	0.0	0.0	0.0	0.0	390.6
4. Refurb. All Age Schools	0.0	0.0	11153.6	11659.1	0.0	22812.7	0.0	0.0	484.9	506.9	0.0	991.9
5. Physical Upgrade	133.1	0.0	0.0	0.0	0.0	133.1	5.8	0.0	0.0	0.0	0.0	5.8
Sub-Total	92231.2	102116.0	104804.4	43672.3	0.0	342823.9	4010.1	4439.8	4556.7	1898.8	0.0	14905.4
H. Technical Assistance												
1. Local Consultants	52101.1	28922.9	27661.4	17151.5	14930.7	140767.6	2265.3	1257.5	1202.7	745.7	649.2	6120.3
2. Expatriate Consultants	19053.0	7858.5	1058.0	4244.9	1219.0	33433.5	828.4	341.7	46.0	184.6	53.0	1453.6
Sub-Total	71154.2	36781.4	28719.4	21396.4	16149.8	174201.1	3093.7	1599.2	1248.7	930.3	702.2	7574.0
I. Studies	3708.7	5554.5	3459.4	8329.4	8745.9	29797.9	161.2	241.5	150.4	362.1	380.3	1295.6
J. Pilot Program	0.0	0.0	8946.7	9394.0	9863.8	28204.5	0.0	0.0	389.0	408.4	428.9	1226.3
K. Administrative Support	107.5	120.7	129.7	0.0	0.0	357.9	4.7	5.2	5.6	0.0	0.0	15.6
Total INVESTMENT COSTS	209259.6	189095.3	208885.0	136671.4	68501.2	812412.6	9098.2	8221.5	9082.0	5942.2	2978.3	35322.3
II. RECURRENT COSTS												
A. Operation & Maintenance												
1. Equipment	645.9	869.6	983.3	1042.8	1112.1	4653.7	28.1	37.8	42.8	45.3	48.4	202.3
2. Office Supplies/Utilities	2533.0	2817.5	3094.2	2607.4	2047.4	13099.5	110.1	122.5	134.5	113.4	89.0	569.5
3. Buildings	0.0	2999.4	5287.9	8528.3	12544.8	29360.3	0.0	130.4	229.9	370.8	545.4	1276.5
4. Vehicles	119.1	131.9	140.7	147.4	154.5	693.6	5.2	5.7	6.1	6.4	6.7	30.2
Sub-Total	3298.0	6818.3	9506.1	12326.0	15858.7	47807.1	143.4	296.4	413.3	535.9	689.5	2078.6
B. Communications/Transport	890.5	1464.5	2053.5	1940.0	1741.5	8089.9	38.7	63.7	89.3	84.3	75.7	351.7
C. Incremental Staff	5264.5	8098.6	10819.7	11750.6	12512.0	48445.3	228.9	352.1	470.4	510.9	544.0	2106.3
D. Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E. Materials	1313.4	1997.9	2236.6	2422.7	2625.3	10595.8	57.1	86.9	97.2	105.3	114.1	460.7
F. SLC Field Costs	1087.9	1222.0	1312.2	1377.8	1446.7	6446.6	47.3	53.1	57.1	59.9	62.9	280.3
G. Contract Staff	0.0	386.4	487.0	546.0	627.1	2046.5	0.0	16.8	21.2	23.7	27.3	89.0
H. Software Leases	199.1	206.5	214.1	222.0	230.3	1072.0	8.7	9.0	9.3	9.7	10.0	46.6
Total RECURRENT COSTS	12053.4	20194.1	26629.1	30585.0	35041.6	124503.3	524.1	878.0	1157.8	1329.8	1523.5	5413.2
Total PROJECT COSTS	221313.0	209289.5	235514.1	167256.4	103542.9	936915.8	9622.3	9099.5	10239.7	7272.0	4501.9	40735.5

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Jamaica
Reform of Secondary Education Project
Summary Account by Project Component
JA$

	Common Curiculum	ROSE Training	Ed. Support Materials	Textbooks	Infrastructure	Upper Secondary Strategy	Exams Rationalization	ROSE Management	Public Awareness Campaign	ROSE Evaluation	ROSE Phase II Preparation	Policy Analysis Unit	University of West Indies
I. INVESTMENT COSTS													
A. Training/Workshops													
1. Overseas	2599.0	0.0	0.0	14.0	0.0	0.0	0.0	1380.0	0.0	1127.0	0.0	0.0	0.0
2. Local	117.6	65068.2	0.0	89.6	0.0	0.0	0.0	400.0	0.0	1953.8	0.0	1000.0	2526.0
Sub-total	2716.6	65068.2	0.0	103.6	0.0	0.0	0.0	1780.0	0.0	3080.8	0.0	1000.0	2526.0
B. Furniture	0.0	0.0	6050.5	0.0	28892.7	0.0	0.0	125.7	0.0	0.0	0.0	0.0	0.0
C. Equipment	276.0	0.0	39072.3	0.0	0.0	0.0	700.0	3806.6	0.0	0.0	0.0	966.0	1495.0
D. Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	560.0	0.0	0.0	0.0	0.0	0.0
E. Resource Materials	10440.6	535.0	3408.0	0.0	0.0	0.0	0.0	0.0	0.0	34.5	0.0	0.0	0.0
F. Books	0.0	0.0	0.0	19251.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G. Civil Works													
1. New Construc. Ctr. Sch.	0.0	0.0	0.0	0.0	67833.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2. Exten/Refurb. Ctr. Sch.	0.0	0.0	0.0	3750.0	173978.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3. Refurbishing Second.Sch.	0.0	0.0	0.0	0.0	7761.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4. Refurb. All Age Schools	0.0	0.0	0.0	0.0	16676.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. Physical Upgrade	0.0	0.0	0.0	0.0	0.0	0.0	115.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub-total	0.0	0.0	0.0	3750.0	266249.2	0.0	115.0	0.0	0.0	0.0	0.0	0.0	0.0
H. Technical Assistance													
1. Local Consultants	4758.6	45000.0	0.0	310.5	43211.5	0.0	14.0	12836.0	3281.0	4363.1	0.0	550.0	880.0
2. Expatriate Consultants	2760.0	0.0	0.0	0.0	0.0	0.0	10794.8	0.0	0.0	1817.0	0.0	3450.0	7360.0
Sub-total	7518.6	45000.0	0.0	310.5	43211.5	0.0	10808.8	12836.0	3281.0	6180.1	0.0	4000.0	8240.0
I. Studies	1104.0	0.0	0.0	0.0	0.0	4600.0	0.0	0.0	0.0	0.0	6900.0	10350.0	0.0
J. Pilot Program	0.0	0.0	0.0	0.0	0.0	20700.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
K. Administrative Support	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	300.0
Total INVESTMENT COSTS	22055.8	110603.2	48530.8	23415.8	338353.4	25300.0	11623.8	19108.3	3281.0	9295.4	6900.0	16316.0	12561.0
II. RECURRENT COSTS													
A. Operation & Maintenance													
1. Equipment	69.0	10.5	0.0	0.0	0.0	0.0	574.8	1725.0	0.0	0.0	0.0	483.0	747.5
2. Office Supplies/Utilities	0.0	0.0	0.0	11.2	2662.2	0.0	0.0	590.0	0.0	610.6	0.0	5868.5	713.0
3. Buildings	0.0	0.0	0.0	0.0	22331.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4. Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	560.0	0.0	0.0	0.0	0.0	0.0
Sub-total	69.0	10.5	0.0	11.2	24993.6	0.0	574.8	2875.0	0.0	610.6	0.0	6351.5	1460.5
B. Communications/Transport	0.0	0.0	0.0	1188.7	0.0	0.0	1444.0	590.0	2233.3	880.9	0.0	0.0	0.0
C. Incremental Staff	19430.6	1047.0	0.0	1367.0	0.0	0.0	1100.0	1100.0	0.0	1047.0	0.0	7470.4	2075.0
D. Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E. Materials	0.0	0.0	0.0	0.0	0.0	0.0	2090.9	0.0	0.0	454.2	0.0	5750.0	0.0
F. SLC Field Costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G. Contract Staff	0.0	0.0	0.0	0.0	0.0	0.0	1535.3	0.0	0.0	0.0	0.0	0.0	0.0
H. Software Leases	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	402.5	575.0
Total RECURRENT COSTS	19499.6	1057.5	0.0	2566.9	24993.6	0.0	6745.1	4565.0	2233.3	2992.8	0.0	19974.4	4110.5
Total BASELINE COSTS	41555.5	111660.8	48530.8	25982.7	363347.0	25300.0	18368.9	23673.3	5514.3	12288.2	6900.0	36290.4	16671.5
Physical Contingencies	149.6	3253.4	2256.1	380.2	28069.6	0.0	46.5	285.6	0.0	154.0	0.0	0.0	0.0
Price Contingencies	10529.9	29460.0	5188.3	3691.8	64212.0	8154.3	2557.2	4963.2	1475.9	2810.0	2728.9	9143.9	2059.3
Total PROJECT COSTS	52235.0	144374.2	55975.2	30054.7	455628.6	33454.3	20972.7	28922.1	6990.2	15252.2	9628.9	45434.3	18730.8
Taxes	0.0	0.0	4255.9	0.0	0.0	0.0	0.0	470.9	0.0	0.0	0.0	0.0	0.0
Foreign Exchange	8929.7	146.6	43431.1	21243.3	157726.4	0.0	12966.5	6479.4	0.0	3701.1	0.0	5007.8	10010.0

Values Scaled by 1000.0 1/21/1993 17:39

Jamaica
Reform of Secondary Education Project
Summary Account by Project Component
JA$

	Line Ministries Linkage	STATIN	Total	Physical Contingencies %	Physical Contingencies Amount	Price Contingencies %	Price Contingencies Amount
I. INVESTMENT COSTS							
A. Training/Workshops							
1. Overseas	0.0	368.0	5488.0	4.7	256.0	7.0	382.6
2. Local	0.0	0.0	71155.2	4.8	3381.5	31.9	22698.3
Sub-total	0.0	368.0	76643.2	4.7	3637.5	30.1	23080.8
B. Furniture	0.0	0.0	35068.9	5.0	1753.6	10.7	3738.9
C. Equipment	460.0	345.0	47120.9	4.7	2192.7	8.4	3949.2
D. Vehicles	0.0	0.0	560.0	0.0	0.0	1.8	10.4
E. Resource Materials	0.0	0.0	14418.1	0.0	0.0	24.1	3468.7
F. Books	0.0	0.0	19251.7	0.0	0.0	11.1	2132.8
G. Civil Works							
1. New Construc. Ctr. Sch.	0.0	0.0	67833.7	10.0	6783.4	21.6	14654.1
2. Exten/Refurb. Ctr. Sch.	0.0	0.0	177728.5	10.0	17772.8	14.7	26121.0
3. Refurbishing Second.Sch.	0.0	0.0	7761.1	10.0	776.1	5.8	447.3
4. Refurb. All Age Schools	0.0	0.0	16676.0	10.0	1667.6	26.8	4469.1
5. Physical Upgrade	0.0	0.0	115.0	10.0	11.5	5.8	6.6
Sub-total	0.0	0.0	270114.2	10.0	27011.4	16.9	45698.2
H. Technical Assistance							
1. Local Consultants	1590.0	0.0	116794.7	0.0	0.0	20.5	23973.0
2. Expatriate Consultants	1035.0	4669.0	31885.8	0.0	0.0	4.9	1547.7
Sub-total	2625.0	4669.0	148680.5	0.0	0.0	17.2	25520.6
I. Studies	0.0	0.0	22954.0	0.0	0.0	29.8	6843.9
J. Pilot Program	0.0	0.0	20700.0	0.0	0.0	36.3	7504.5
K. Administrative Support	0.0	0.0	300.0	0.0	0.0	19.3	57.9
Total INVESTMENT COSTS	3085.0	5382.0	655811.7	5.3	34595.1	18.6	122005.8
II. RECURRENT COSTS							
A. Operation & Maintenance							
1. Equipment	0.0	115.0	3724.9	0.0	0.0	24.9	928.8
2. Office Supplies/Utilities	0.0	0.0	10455.5	0.0	0.0	25.3	2643.9
3. Buildings	0.0	0.0	22331.4	0.0	0.0	31.5	7028.9
4. Vehicles	0.0	0.0	560.0	0.0	0.0	23.9	133.6
Sub-total	0.0	115.0	37071.8	0.0	0.0	29.0	10735.3
B. Communications/Transport	0.0	0.0	6336.9	0.0	0.0	27.7	1753.1
C. Incremental Staff	0.0	2695.0	37332.0	0.0	0.0	29.8	11113.3
D. Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E. Materials	0.0	0.0	8295.2	0.0	0.0	27.7	2300.6
F. SLC Field Costs	0.0	5060.0	5060.0	0.0	0.0	27.4	1386.6
G. Contract Staff	0.0	0.0	1535.3	0.0	0.0	33.3	511.2
H. Software Leases	0.0	0.0	977.5	0.0	0.0	9.7	94.5
Total RECURRENT COSTS	0.0	7870.0	96608.7	0.0	0.0	28.9	27894.6
Total BASELINE COSTS	3085.0	13252.0	752420.4	4.6	34595.1	19.9	149900.4
Physical Contingencies	0.0	0.0	34595.1				
Price Contingencies	419.2	2506.5	149900.4	3.7	5569.4		
Total PROJECT COSTS	3504.2	15758.5	936915.8	4.3	40164.5	16.0	149900.4
Taxes	0.0	0.0	4726.9	4.7	222.4		
Foreign Exchange	1520.3	5688.9	276851.2	5.5	15303.2		

Values Scaled by 1000.0 1/21/1993 17:39

JAMAICA

Reform of Secondary Education Project

Allocation of Loan Proceeds

Category		Loan Amount (US $ million)	Disbursement %
1.	Civil Works	12.0	85% of expenditures
2.	Equipment, Furniture, Vehicles, Educational Materials, Textbooks	5.3	100% of expenditures
3.	Technical Assistance, Training, Fellowships, Studies, Pilot Programs	11.6	100% of expenditures
4.	Incremental Recurrent Costs	0.5	50% of incremental recurrent costs up to an aggregate of US$235,800; thereafter 40% of incremental recurrent costs up to an aggregate of US$783,800; and 20% of incremental recurrent costs thereafter up to an aggregate of US$1,598,300.
5.	Unallocated	2.6	
	Total	32.0	

JAMAICA

Reform of Secondary Education Project

Estimated Schedule of Disbursements

Bank FY	Disbursements		Accumulated Disbursements		Undisbursed Balance	
Semester Ending	Amount	%	Amount	%	Amount	%
FY94						
December 31	1.0	3	1.0	3	31.0	97
June 30	1.0	3	2.0	6	30.0	94
FY95						
December 31	1.3	4	3.3	10	28.7	90
June 30	1.3	4	4.6	14	27.4	86
FY96						
December 31	3.8	12	8.4	26	23.6	74
June 30	2.6	8	11.0	34	21.0	66
FY97						
December 31	3.8	12	14.8	46	17.2	54
June 30	2.6	8	17.4	54	14.6	46
FY98						
December 31	3.8	12	21.2	66	10.8	34
June 30	2.6	8	23.8	74	8.2	26
FY99						
December 31	2.6	8	26.4	82	5.6	18
June 30	2.6	8	29.0	90	3.0	9
FY00						
December 31	1.3	4	30.3	94	1.7	5
June 30	1.3	4	31.6	98	0.4	1
FY01						
December 31	0.4	1	32.0	100	--	--

Project Completion Date: June 30, 2000
Project Closing Date: December 31, 2000

MINISTRY OF FINANCE AND PLANNING
30 NATIONAL HEROES CIRCLE,
P.O. BOX 512,
KINGSTON,
JAMAICA

ANY REPLY OR SUBSEQUENT REFERENCE SHOULD BE ADDRESSED TO THE FINANCIAL SECRETARY AND THE FOLLOWING REFERENCE NUMBER QUOTED:-

TELEPHONE No. 92-28600-18

February 12, 1993

Ref. No.

Mr. Jacques van der Gaag,
Chief,
Human Resources Division,
Country Department III,
Latin America and the Caribbean Region,
The World Bank,
1818 H Street, N.W.
Washington D.C. 20433

Dear Mr. van der Gaag,

Re: Proposed Loan - Reform of Secondary Education Project

The Government of Jamaica is prepared to identify and list for priority treatment, a number of projects for the forthcoming fiscal year and hereby undertakes to place the Reform of Secondary Education Project on the list. In the Fiscal Year 1992/93, the Government of Jamaica adopted a priority approach similar to what is now proposed and the results in terms of increased allocation of resources and an improved implementation record can be verified.

With specific reference to projects funded by the World Bank, the following three in the social sectors - the Social Sectors Development Project, the Jamaica Population and Health Project and the Education Programme Preparation and Students Loan Project, have all been placed on the priority list. The Reform of Secondary Education (ROSE) Project will be accorded similar treatment. This implies consulting with the Ministry of Education prior to each budget year, and working closely with the project management team and the World Bank, to ensure that the level and timing of Warrant releases are timely and in accordance with the planned implementation path.

Mr. Jacques van der Gagg,
Chief,
Human Resources Division,
Country Department III,
Latin America and the Caribbean Region,
The World Bank,

February 12, 1993

Furthermore, the Government of Jamaica undertakes to present to each HRDP Annual Review, the proposed budgetary allocation for the ROSE Project. However, the Government of Jamaica must place on record that whilst the proposed allocation usually provides an accurate indication of resources which will be approved by Parliament, no legal commitment can be given prior to Budget Debate and the passing of the Estimates of Expenditure.

Yours sincerely,

Shirley Tyndall (Miss)
Financial Secretary.

THE UNIVERSITY OF THE WEST INDIES

From the Vice-Chancellor
The Hon. Sir Alister McIntyre, OM (Hon.), CCH, CD (Hon.)

Mona
Kingston 7, Jamaica

February 1, 1993

Dr. Elsie LeFranc
Director
Institute of Social and Economic Research
University of the West Indies
Mona
Kingston 7

Dear Dr. LeFranc,

I have received your Memorandum of November 18, 1992, concerning your proposal to set up an Electronic Data Bank at the ISER (Mona). I am particularly pleased to see that this is being carried out in collaboration with the Planning Institute of Jamaica and that the World Bank appears willing to give favourable consideration to the support of this pro' .

I am fully in support of the proposal, and write to let you know that the University will undertake the financing of the recurrent costs as detailed in your memorandum to me. The recurrent costs for supplies will be accommodated within the ISER's budget for the new triennium for 1993/96.

With regard to the recurrent costs for personnel, I understand that at a meeting convened by Pro Vice Chancellor Edward Greene, on November 14, 1992, and attended by the University Dean, and the Directors of ISER, it was agreed that this would be an appropriate charge on the income from the Ford Endowment Grant. This support would begin in the Academic year 1993/94.

Yours sincerely

Alister McIntyre

JAMAICA
Reform of Secondary Education

Selected Documents and Data Available in the Project File

Implementation Working Papers

ROSE Curriculum
ROSE Training
Education Materials
Textbooks
Infrastructure
Exam Rationalization
Public Campaign
ROSE Evaluation
Social Policy Analysis

HRDP Policy Matrix (June 1992)

Schematic Drawings: 1-6 Stream Junior High Schools

JAMAICA
Reform of Secondary Education
Implementation Schedule and Periodic Monitoring Indicators

Activities	1993/4	1994/5	1995/6	1996/7	1997/8	Total
Introduce New Curricula						
Grade 7 to new students	4,977	6,282	8,307	9,362	10,507	39,435
Grade 8 to new students	1,692	4,977	6,282	8,307	9,362	30,620
Grade 9 to new students	211	1,692	4,977	6,282	8,307	21,469
Curriculum Development Studies	-	-	1	1	1	3
Training						
Education Officers	12	12	12	12	12	60
School Administrators	110	110	110	110	110	550
School Board Members	456	456	456	456	456	2,280
Teachers						
In-Service						
Orientation Workshops	568	1137	1705	1705	1705	6,820
Methods Course	568	1137	1705	1705	1705	6,820
Pre-Service (3rd yr)	500	500	500	500	500	2,500
Infrastructure						
New Construction (Junior High Schools)	-	1	2	-	-	3
Refurbishing						
All-Age Schools	14	6	3	4	-	27
New Secondary Schools	10	-	-	-	-	10
Small All-Age Schools	-	-	10	10	-	20
Furniture (# All-Age schools)	14	7	15	14	-	50
Supply Educational materials (# schools)	24	9	20	16	3	72
Exam Rationalization						
Introduce new grade 9 test	-	-	1	-	-	1
Introduce new grade 6 achievement test	-	-	1	-	-	1
Convert to computerized registration	-	-	-	-	1	1
ROSE Management						
Annual Review Workshop	1	1	1	1	1	5
Midterm Review Workshop	-	-	1	-	-	1
Evaluation						
Educational Officers trained	18	18	18	18	18	90
Inventory checklists completed (# schools)	27	21	17	16	13	94
Pre/Post tests administered (# schools)	27	21	17	16	13	94
Classrooms observed (# schools)	10	16	12	-	-	38
Textbooks						
Project Schools						
F1/F2 Books	0	3,900	18,500	20,400	7,600	50,400
N/E Textbooks	0	9,500	11,900	13,000	4,400	38,800
HIRLAP	0	15,700	20,700	15,500	8,000	59,900
Non Project Schools						
F1/F2 Books	0	23,600	23,600	23,600	0	70,800
HIRLAP	0	15,700	12,600	11,000	0	39,300

JAMAICA
Reform of Secondary Education
Timeline

	1993			1994				1995				1996				1997				1998			
QUARTERS	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ACTIVITY																							
I. INTRODUCE NEW SCHOOLS																							
YEAR 1																							
Introduce curriculum to:		XXX																					
22 schools; 219 classrooms; 334 teachers;																							
6880 students; g7-4977, g8-1692, g9-211;																							
YEAR 2																							
Select schools for SY1994/95	XXX	XXX																					
Introduce curriculum to:						XXX																	
11 schools; 87 classrooms; 134 teachers;																							
12951 students; g7-6282, g8-4977, g9-1692;																							
YEAR 3																							
Select schools for SY1995/96					XXX	XXX																	
Introduce curriculum to:										XXX													
10 schools; 135 classrooms; 206 teachers;																							
19566 students; g7-8307, g8-6282, g9-4977;																							
YEAR 4																							
Select schools for SY1996/97									XXX	XXX													
Introduce curriculum to:														XXX									
16 schools; 57 [illegible]assrooms; 137 teachers;																							
23951 students; g7-9362, g8-8307, g9-6282;																							
YEAR 5																							
Select schools for SY1997/98													XXX	XXX									
Introduce curriculum to:																		XXX					
13 schools; 93 classrooms; 145 teachers;																							
28176 students; g7-10507, g8-9362, g9-8307;																							
II. CURRICULUM DEVELOPMENT (MOE)																							
1. Curriculum Review			XXX			XXX																	
2. Finalization of Curriculum Guides																							
Revisions		XXX	XXX	XXX		XXX	XXX	XXX															
Publish									XXX	XXX													
3. Teachers Guides																							
Field Test	XXX	XXX	XXX	XXX	XXX																		
Review/Revise		XXX	XXX	XXX	XXX																		
Publish						XXX																	
4. Teachers' Manuals																							
Field test		XXX	XXX	XXX	XXX																		
Review/Revise						XXX	XXX	XXX	XXX														
Publish										XXX													
5. Continuous Assessment																							
Fellowships		XXX	XXX	XXX	XXX																		
Needs identification						XXX																	
Production of teachers' support materials							XXX																
Field testing								XXX	XXX														
Revision										XXX													
Training (teachers in-service)										XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		
6. Conferences	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		
7. Study: Demand for Secondary Teachers								XXX	XXX	XXX	XXX												
III. TRAINING: IN-SERVICE																							
1. Education Officers Training Workshop		XXX			XXX				XXX				XXX				XXX				XXX		
2. School Boards sensitization workshops		XXX			XXX				XXX				XXX				XXX				XXX		
3. School Administrators workshops		XXX			XXX				XXX				XXX				XXX				XXX		
4. Training Teachers		XXX			XXX				XXX				XXX				XXX				XXX		

	1993			1994				1995				1996				1997				1998			
QUARTERS	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
IV. CIVIL WORKS COMPONENT																							
1. 4 Stream School																							
Design (y1;1)			XXX	XXX																			
Construction						XXX	XXX	XXX	XXX														
2. 5 Stream School																							
Design (y2;1)							XXX	XXX															
Construction										XXX	XXX	XXX	XXX										
3. 6 Stream School																							
Design (y2;1)							XXX	XXX															
Construction										XXX	XXX	XXX	XXX										
4. 1 Stream Schools Extension/Refurbishing																							
Design (y1;6,y2;1,y3;2)		XXX	XXX			XXX	XXX			XXX	XXX												
Extension and Refurbishing			XXX	XXX	XXX		XXX	XXX	XXX		XXX	XXX	XXX										
5. 2 Stream Schools Extension/Refurbishing																							
Design (y1;8,y2;2,y3;1)		XXX	XXX			XXX	XXX			XXX	XXX												
Extension and Refurbishing			XXX	XXX	XXX		XXX	XXX	XXC.		XXX	XXX	XXX										
6. 3 Stream Schools Extension/Refurbishing																							
Design (y1;4,y2;2,y3;1)		XXX	XXX			XXX	XXX			XXX	XXX												
Extension and Refurbishing			XXX	XXX	XXX		XXX	XXX	XXX		XXX	XXX	XXX										
7. Extension/Refurbishing of small rural schools																							
Design (y2;10,y3;10)							XXX	XXX			XXX	XXX											
Extension and Refurbishing									XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX							
8. Refurbishing of New Secondary Schools																							
Design (y1;10)	XXX	XXX																					
Extension and Refurbishing		XXX	XXX	XXX																			
V. TEXTBOOK PROGRAM																							
1. SSTP Impact Study	XXX																						
2. Planning Rental Scheme		XXX																					
3. N/E Books																							
Tender for N/E grade 7		XXX	XXX																				
Distribute N/E grade 7						XXX				XXX				XXX				XXX				XXX	
Tender N/E Grade 8						XXX	XXX																
Distribute N/E grade 8										XXX				XXX				XXX				XXX	
Tender N/E Grade 9										XXX	XXX												
Distribute N/E grade 9														XXX				XXX				XXX	
4. N/E Books (existing)																							
Purchase and distribute	XXX	XXX																					
5. F1/F2 Books																							
Tender F1/F2 Grade 7		XXX	XXX																				
Distribute F1/F2 Grade 7						XXX				XXX				XXX				XXX				XXX	
Tender F1/F2 Grade 8						XXX	XXX																
Distribute F1/F2 Grade 8										XXX				XXX				XXX				XXX	
Tender F1/F2 Grade 9										XXX	XXX												
Distribute F1/F2 Grade 9														XXX				XXX				XXX	
6. HIRLAP																							
Tender Hirlap Grade 7	XXX	XXX																					
Distribute HIRLAP Grade 7						XXX				XXX				XXX				XXX				XXX	
Tender Hirlap Grade 8					XXX	XXX																	
Distribute HIRLAP Grade 8						XXX				XXX				XXX				XXX				XXX	
Tender Hirlap Grade 9									XXX	XXX													
Distribute HIRLAP Grade 9										XXX				XXX				XXX				XXX	
VI. TEST RATIONALIZATION																							
1. Develop a new grade 9 test		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX														
2. Administer, score and report new grade 9 test									XXX				XXX				XXX				XXX		
3. Order new equipment			XXX																				
4. Install equipment				XXX																			
5. Train personnel to use new equipment				XXX																			
6. Hire SEO Assessment		XXX																					
7. Monitor rationalization		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		

	1993			1994				1995				1996				1997				1998			
QUARTERS	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
VII. EVALUATION																							
1. Baseline inventory																							
Administer			XXX				XXX				XX				XXX				XXX				
Analysis of data				XXX				XXX				XXX				XXX				XXX			
Set standards/targets for Grades 7-9										XXX													
Prepare annual reports					XXX				XXX				XXX				XXX				XXX		
Distribute annual reports					XXX				XXX				XXX				XXX				XXX		
2. Pre/post tests of student learning																							
Review/revise tests		XXX				XXX																	
Develop Tests (grade 9)		XXX																					
Administer tests	XXX	XXX			XXX	XXX			XXX	XXX			XXX	XXX			XXX	XXX			XXX	XXX	
Score	XXX	XXX			XXX	XXX			XXX	XXX			XXX	XXX			XXX	XXX			XXX	XXX	
Analyze tests		XXX	XXX			XXX	XXX			XXX	XXX			XXX	XXX			XXX	XXX			XXX	XXX
Prepare Annual Reports			XXX				XXX				XXX				XXX				XXX				XXX
Distribute annual reports			XXX				XXX				XXX				XXX				XXX				XXX
3. Structured direct observation of lessons																							
Hire/train observation teams				XXX				XXX				XXX				XXX				XXX			
Conduct/monitor observations					XXX				XXX				XXX				XXX				XXX		
Analyze observations					XXX				XXX				XXX				XXX				XXX	XXX	
Prepare annual reports						XXX				XXX				XXX				XXX				XXX	
Distribute annual reports						XXX				XXX				XXXX				XXX					
4. Evaluation strengthening																							
Fellowships	XXX	XXX	XXX	XXX	XXX				XXX	XXX	XXX	XXX	XXX				XXX	XXX	XXX	XXX	XXX		
Study Tours				XXX								XXX				XXX							
Conferences					XXX				XXX				XXX				XXX				XXX		
Local Workshops		XXX				XXX				XXX				XXX				XXX				XXX	
VIII. PUBLIC AWARENESS CAMPAIGN																							
1. Parish Meetings	XXX	XXX																					
2. Campaign launch		XXX																					
3. Community/PTA meetings	XXX		XXX	XXX	XXX		XXX	XXX	XXX		XXX	XXX	XXX		XXX	XXX	XXX		XXX	XXX	XXX		
4. Ongoing Media Coverage		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		
IX. ROSE MANAGEMENT																							
1. Annual Review Workshop		XXX				XXX				XXX				XXX				XXX				XXX	
2. Mid-term Review Workshop												XXX											
3. World Bank Supervision Mission		XXX		XXX		XXX		XXX		XXX		XXX		XXX		XXX	XXX			XXX		XXX	
4. HRDP Annual Review				XXX				XXX				XXX				XXX				XXX			
X. SOCIAL POLICY ANALYSIS																							
1. HRDP UNIT																							
In-house analysis/dissemination, contract research	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		
2. UWI																							
Faculty upgrading				XXXX	XXX		XXX	XXX	XXX		XXX	XXX	XXX										
Curriculum development							XXX	XXX	XXX		XXX	XX	XXX										
Graduate Fellowships				XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXXX	XXX	XXXX	XXX	XXX	XXX		
Social data base				XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
3. LINE MINISTRIES																							
Staff Upgrading				XXX	XXX			XXX	XXX														
Policy-maker seminar				XXX		XXX		XXX		XXX													
MLWS assessment			XXX																				
4. STATIN																							
Survey of Living Conditions			XXX				XXX				XXX				XXX				XXX				XXX

JAMAICA

Reform of Secondary Education

Supervision Schedule and Mid-Term Review

SUPERVISION SCHEDULE

Semi-annual supervision missions are anticipated for this project, and are likely to take place in December and June each year. The total annual number of staff/consultant weeks required are:

Task Manager	7
Operations	10
Economist (CECPH)	5
Education Specialist (Cons.)	3
Architect (Cons.)	4
Procurement Specialist (Cons.)	1
	30

In addition, the first supervision mission soon after project effectiveness (e.g. June 1993) will be the Project's Launch (1 week). Therefore the staffing for this mission would include:

Task Manager
Operations Assistant
Architect
Disbursement Officer
Procurement Specialist

MID-TERM REVIEW

A Mid-Term Implementation Review will be conducted by the MOEC and the PIOJ no later than March 31, 1996. The Review should comprise a comprehensive assessment of the project as designed and reflected in this Staff Appraisal Report against actual progress to date. It should also take into account issues arising from supervision during the first half of the project. More specific topics and output indicators/targets for review include:

A. Reform of Secondary Education Component:

- effectiveness of the package of inputs delivered through this component to project schools in raising student achievement should be reviewed by using preliminary indications from activities carried out under the evaluation sub-component;

- the overall feasibility/viability of the textbook rental scheme, including the effectiveness of the extension of the scheme to the All-Age schools;

Output Indicators/Targets:

- Based on the pre- and post-test from the evaluation component:
  - there should be a difference of at least 25% (twenty-five percent) between the pre-test and post-test scores within the classroom; and
  - post-test scores for project schools in relation to comparison schools shall be positive and statistically significant.

B. Evaluation and Management Strengthening

- effectiveness of the Reform Management Team approach in project implementation as opposed to a more traditional Project Implementation Unit approach (*inter alia*, does the approach provide enough flexibility to managing a complex reform program?);
- the past performance with respect to actual budgetary expenditures of the MOEC including a breakdown by levels of education and project specific expenditures.

Output Indicators/Targets

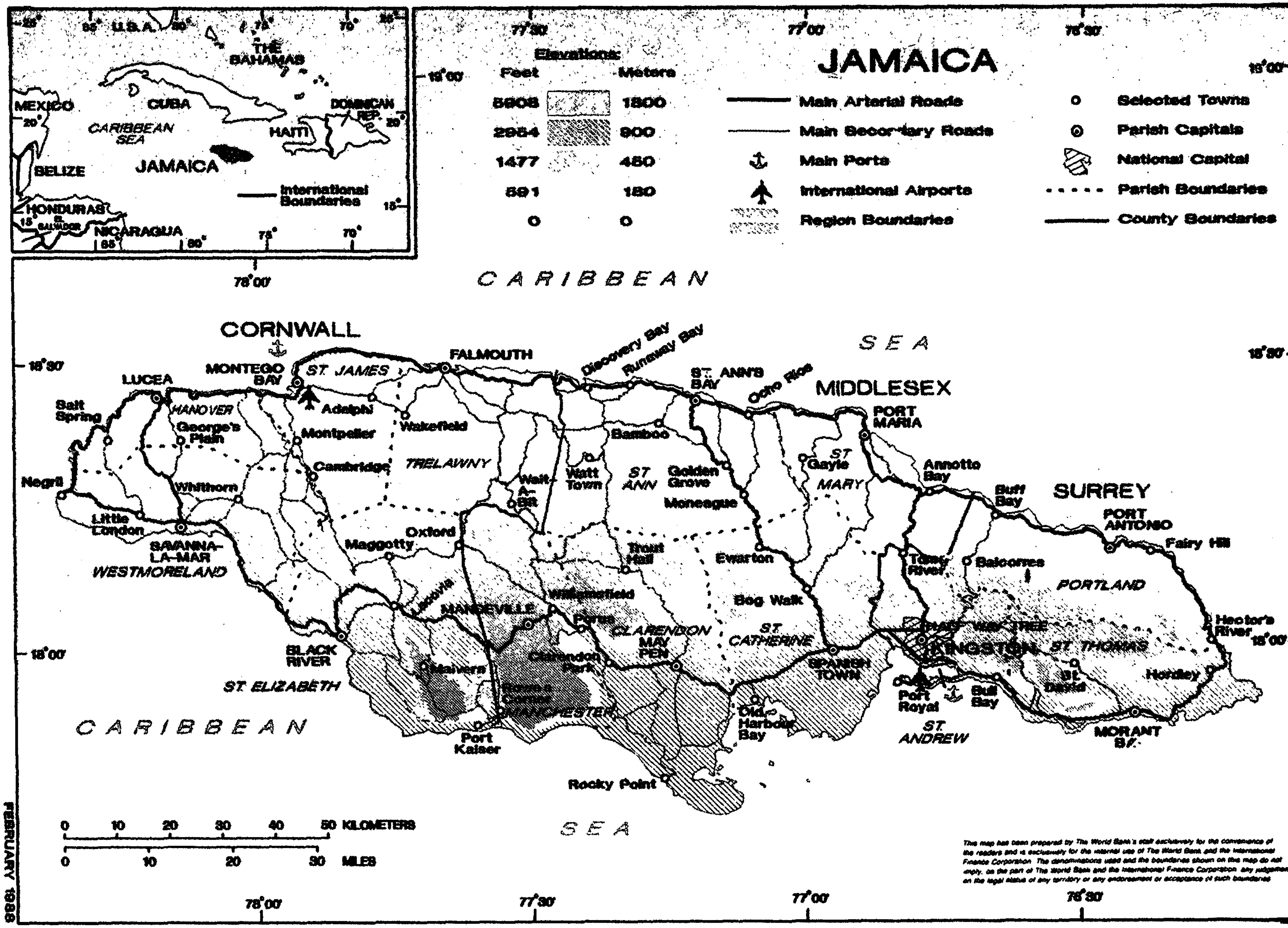
- Introduction of new grade 9 exam by June 1995 and the elimination of the Grade Nine Achievement Test (GNAT).
- In accordance with the exam rationalization plan:
  - eliminate 16 Jamaica School Certificate (JSC) tests and 3 Secondary School Certificate (SSC) tests; and
  - transfer to the HEART Trust, 13 JSC tests and 16 SSC tests.

C. Social Policy Analysis

- effectiveness of the mechanism for setting the research agenda;
- policy relevance, timeliness, and technical quality of the research performed;
- success of the faculty upgrading courses;
- effectiveness of the Technical Advisory Committee;
- effectiveness of the training program for line ministry staff

Output Indicators/Targets

- Offer at UWI at least 3 quantitative methods courses to be developed under the project.
- Prepare 6 working papers with policy relevance for the social sectors of quality commensurate with international academic standards.



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