

Chapter 4 project Evaluation and Recommendation

Chapter 4 Project Evaluation and Recommendation

4-1 Project Effect

(1) Raising the Quality of Teachers

The percentage of untrained teachers in secondary schools has been fluctuating, accounting for 25.1% of teachers in 1992, 26.9% in 1993, 17.5% in 1994, and it was still at a high ratio of 19.4% in 1995. Though the required numbers of teachers are available, there is a shortage of science and mathematics teachers, so teachers of other subjects have had to teach these courses and schools have also had to rely upon foreign teachers. With KSTC being able in the future to produce a yearly maximum of 200 teachers that are specially trained to teach science and mathematics, this will motivate both trained and untrained teachers who are already teaching but do not have the capabilities to conduct experiments and training to realize the necessity of receiving retraining, which will lead to an increase in the quality of teachers overall.

(2) Raising the Quality of Secondary Science and Mathematics Education

With an average enrollment of 200 students at each secondary school, an average of 50 students graduate each year. In the secondary school curriculum, mathematics is a required subject, and in science students can choose 2~3 subjects from biology, physics, chemistry, physical science and biological science. Therefore, by the time these 50 students graduate they will have received some form of science and math education. Once 150 of the new graduates from KSTC are each assigned as new teachers in separate secondary schools, it will make it possible for a yearly maximum of 7,500 secondary students to take science and mathematics classes from capable teachers specially trained in these fields, which will lead to an increase in the quality of secondary science and mathematics education.

(3) Implementing the Retraining of Current Teachers

The Project-Type Technical Cooperation, which targets the retraining of current teachers to strengthen secondary science and mathematics education, is currently being drafted. Because the basic equipment being provided by this project (laboratory tables, laboratory floors, fume chambers, waste water treatment apparatus, etc.) can be utilized without any conflict with the Cooperation plan, the new

equipment can be utilized with the existing improved equipment used for new teacher education to aggressively build up the teacher retraining system, though it will be necessary to devise an effective usage plan for the improved equipment.

4-2 Recommendation

(1) Promote Teacher Retraining

In primary and secondary schools, teachers are divided into the two categories of trained and untrained teachers. Trained teachers include teachers with B.A. degrees who have completed coursework in education, graduates of the teacher college, and certified teachers, but even if a teacher has a B.A. degree, if they have not completed coursework in education they are categorized as untrained teachers. The percentage of untrained teachers at primary schools has been decreasing yearly from 23.2% in 1992 to 9.9% in 1995, but the percentage of untrained teachers at secondary schools has been fluctuating, with 25.1% in 1992, 26.9% in 1993, 17.5% in 1994, and it was still at the high ratio of 19.4% in 1995. Because KSTC in the future will be able to produce teachers in the science and mathematics field with the knowledge and capabilities of a specialist, it is believed that the ratio of untrained teachers will tend to decrease in the future. However, in order to retrain current untrained teachers to make them qualified as trained teachers, and also to retrain even trained teachers who cannot conduct experiments and training in a short period of time, it will be necessary to link with the Japanese Project-Type Technical Cooperation to study how to most effectively utilize the equipment provided by this project in an effort to strengthen KSTC.

(2) Confirm Experiment Techniques

With the equipment at KSTC in its present state, none of the experiments contained in the syllabus can be conducted, but with the equipment upgrades provided by this project, across-the-board expansion of the types of experiments and types of training will become possible. However, though experiment synopses have already been prepared and there are no problems as far as training is concerned, the instructors themselves (lecturers, assistant lecturers, technicians, etc.), who for many years have had to teach without the proper equipment, have not had adequate preparation for experiments, which will necessitate confirming the experiment techniques and methods prior to starting classes.

(3) Securing Funds for Repair and Maintenance Costs

The more the equipment is utilized, the more the expenses for supplies and repairs and maintenance will increase, and because glassware breakage throughout the year will necessitate further expenses to replace the broken items, after the equipment upgrading has been completed it will be necessary to appropriate replacement expenses in advance in the yearly budget.

Appendices

Appendix-1 Member List of the Survey Team

- 1) **Leader**
Mr. Nobuhide SAWAMURA
Senior Program Officer, Second Project Study Division,
Grant Aid Project Study Department
Japan International Cooperation Agency (JICA)

- 2) **Technical Adviser**
Dr. Sanpei KAGBYAMA
Professor, Faculty of School Education, Hiroshima University

- 3) **Chief Consultant & Equipment Planner I**
Mr. Jun IKEDA
UNICO International Corporation

- 4) **Science & Mathematics Educationalist**
Dr. Kazuo TAYA
UNICO International Corporation

- 5) **Equipment Planner II & Cost Estimator**
Dr. Yasuo SHIBATA
UNICO International Corporation

Appendix-2 Survey Schedule

Itinerary					
No.	Date		Mr. Sawamura, Dr. Kageyama	Consultants	
				Mr. Ikeda	Dr. Taya, Mr. Shibata
1	Nov.25	Mon	PM	Lv.Narita to London	
2	26	Tue	PM	Lv.London to Nairobi	
3	27	Wed	AM	Arv. Nairobi	
			PM	Meeting with the Japanese Embassy and JICA Courtesy call on the Ministry of Finance and the Ministry of Education Meeting with the member of Project-Type Technical Cooperation	
4	28	Thu	AM	Meeting with the Ministry of Education	
			PM	Meeting with Kenya Science Teachers College (KSTC) and ODA Visiting Buru Buru Girls School, Pumwani Secondary School	
5	29	Fri	AM	Visiting Komothai Girls Technical High School	
			PM	Visiting Jomo Kenyatta University of Agriculture & Technology Meeting with KSTC	
6	30	Sat		Internal meeting	
7	Dec. 1	Sun		Internal meeting	
8	2	Mon	AM	Meeting with KSTC	
			PM	Meeting with Japan Overseas Cooperation Volunteer (JOCV)	
9	3	Tue	AM	Meeting with KSTC	
			PM	Signing on Minutes of Meeting	
10	4	Wed	PM	Reporting to Japanese Embassy and JICA	
11	5	Thu	PM	Lv. Nairobi to Zurich	
12	6	Fri		Meeting with KSTC	
13	7	Sat		Meeting with KSTC	
14	8	Sun		Internal meeting	
15	9	Mon		Market survey	
16	10	Tue		Meeting with KSTC	
17	11	Wed		Meeting with KSTC	
18	12	Thu		Meeting with KSTC	
19	13	Fri		Internal meeting	
				Reporting to JICA	Meeting with KSTC
				Reporting to the Japanese Embassy	
20	14	Sat		Lv. Nairobi to London	Market survey
21	15	Sun		Market survey	Internal meeting
22	16	Mon		Market survey	Meeting with KSTC
23	17	Tue		Market survey	Lv.Nairobi to London
24	18	Wed		Lv.London to Narita	
25	19	Thu		Arv.Narita	

Appendix-3 List of Party Concerned in the Recipient Country

Ministry of Education

Mr. Simeon Lesrima Permanent Secretary

Ministry of Finance

Mr.D.R.Ongalo Director of External Resouce Division

Mr.T.K.Kanithi Desk Officer

Mr.J.M.Nyanumba Deputy Desk Officer

Kenya Science Teachers College (KSTC)

Mr.Joseph I. Kinyua Principal

Mr. Patrick Kibui Deputy principal

Mrs. Mary C. B. Inuani Head of Department - Biology

Mr. Samuel Kiboi Head of Department - Industrial Education

Mr. Patrick Kanga Head of Department - Physics

Mrs. Alice Masimba Head of Department - English

Mr. J. L. Sigei Head of Department - Chemistry

Mrs. Maureen A. Homem Head of Department - Education

Mr. Stehden N. Iroha Head of Department - Environmental Science

Mr. Jared Ondera Head of Department - Mathematics

Mrs. Grace Wang'ombe Head of Department - Library

Mrs. P. Murungi Head of Department - Physical Eduacation

Mrs. P. J. Tanui Registrar

Overseas Development Administration (ODA)

Dr.M.P.Elliott Senior Education Adviser

Mr.C.D.Kircaldy Education Coordinator

Buru Buru Girls School

Mrs.Helen C.Kemei Principal

Mrs.Kimuya C.M. Dupty Principal

Pumwani Secondary School

Mr.Paul K.Kirui Principal

Komothai Girls Technical High School

Mr. Nugi N. Joseph Dupty Principal

School Equipment Production Unit (SEPU)

Mr. Sospeter Njagi General Manager

Minutes of Discussions
on
the Basic Design Study
on
the Project for Improvement of Equipment
for
Kenya Science Teachers College
in
the Republic of Kenya

In response to a request made by the Government of the Republic of Kenya, the Government of Japan has decided to conduct a Basic Design Study on the Project for the Improvement of Equipment for Kenya Science Teachers College in the Republic of Kenya (hereinafter referred to as "the Project"), and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Kenya a study team headed by Mr. Nobuhide Sawamura, Grant Aid Project Study Department, JICA, and scheduled to stay in the country from 27th November to 17th December 1996.

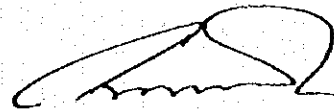
The team has made a series of discussions with the authorities concerned of the Government of the Republic of Kenya and conducted a field survey at the study area.

As a result of the discussions and the field survey, both parties have confirmed the main items described on the attached sheets. The team will proceed to further work and prepare the Basic Design Study report.

Nairobi, 3rd December 1996



Mr. Nobuhide Sawamura
Leader,
Basic Design Study Team, JICA



Mr. Simeon Lesrima
Permanent Secretary
Ministry of Education



Mr. Joseph I. Kinyua
Principal
Kenya Science Teachers College



Mr. Joseph K. Kinyua
Financial Secretary
Ministry of Finance

ATTACHMENT

1. OBJECTIVE OF THE PROJECT

The improvement of science and mathematics education in secondary schools is one of national policies in the Republic of Kenya. Kenya Science Teachers College (KSTC) has made a great impact on the provision of competent science teachers for secondary schools in the country. It is expected that KSTC will continue to play an important role in the development of science and mathematics education at the secondary level.

The objective of the Project is to help the strengthening of pre-service teacher education and further to assist the promotion of in-service education through the improvement of essential equipment for KSTC, by focusing on effective education of science and mathematics in secondary schools.

2. PROJECT SITE

Kenya Science Teachers College in Nairobi

3. RESPONSIBLE MINISTRY AND EXECUTING AGENCY

- 1) Responsible Ministry : Ministry of Education
- 2) Executing Agency : Kenya Science Teachers College

4. ITEMS REQUESTED BY THE GOVERNMENT OF THE REPUBLIC OF KENYA

After the discussions with the Basic Design Study Team, the following items with certain priority described in Annex I are finally requested by the Kenyan side. The quantity of each item shall be further examined by the team.

Both sides have agreed, however, that the final components of the Project will be decided by the Basic Design Study Team after further studies in Japan on the basis of the scope of the Project as well as the scheme of Japan's Grant Aid Program.

5. COMMENTS BY THE JAPANESE SIDE ON THE ITEMS IN 4 ABOVE

(1) Priority of departments

- 1) The first priority is placed on the Departments of Biology, Physics, Chemistry and Mathematics.

2) The second priority is placed on the Department of Library, the administration, the Departments of Education, Environment Science and Language Laboratory, particularly paying attention to how frequently and effectively the equipment requested is utilized so as to benefit overall activities of KSTC.

(2) Priority of equipment

The equipment with higher priority given in the Project is :

- 1) the equipment to be replaced with the existing proper equipment which has already been deteriorated or outdated,
- 2) the equipment to be added to the existing one which is short of quantity in consideration of the laboratory experiments or classes,
- 3) the equipment indispensable to practical education,
- 4) the equipment relevant to secondary school curriculum.

While, the equipment with lower priority given in the Project is :

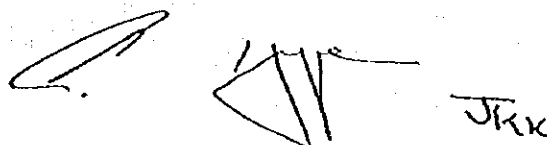
- 1) the advanced equipment to be utilized only for research purposes,
- 2) the equipment with some difficulties on installation and infrastructure conditions,
- 3) the costly equipment less utilized because of less frequent experiments,
- 4) the equipment with financial and marketing difficulties on the procurement of consumables and spare parts etc. and
- 5) the expensive equipment in its operation and maintenance.

6. JAPAN'S GRANT AID PROGRAM

- (1) The Government of the Republic of Kenya has understood the system of Japanese Grant Aid explained by the team (see Annex-II).
- (2) The Government of the Republic of Kenya will take necessary measures described in Annex-III for smooth implementation of the Project on condition that the Grant Aid assistance by the Government of Japan is extended to the Project.

7. SCHEDULE OF THE STUDY

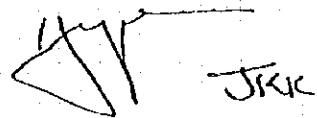

- (1) The consultants will proceed to further studies in Kenya until 17th December 1996.
- (2) JICA will complete the Basic Design Study report and send it to the Government of the Republic of Kenya by the end of May 1997.



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8. OTHER RELEVANT ISSUES

- (1) The Kenyan side will submit the answers to the questionnaire to the Study Team one by one as soon as possible, at the latest by 11th December 1996.
- (2) In case the Japanese side decides to implement the Project, the Kenyan side shall promptly appoint a steering committee. All communications with the Japanese side for implementation of the Project will be made through the committee.

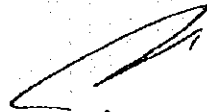
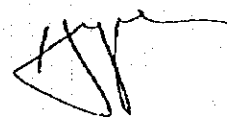


1. LIBRARY DEPARTMENT

Code No.	Name of Equipment	Quantity	Priority
1-1.	Books	1	A +
1-2.	Photocopier	1	A +
1-3.	Wall Charts	1	A +
1-4.	Home Video Set	1	B +
1-5.	Typewriter	1	B +
1-6.	Headphones (Stereo)	1	B +
1-7.	Overhead Projector	1	A -
1-8.	Film Projector (35mm)	1	B +
1-9.	Display Screen	1	B +
1-10.	Slide Projector	1	B +
1-11.	Rotor Screen	1	B +

2. ADMINISTRATION

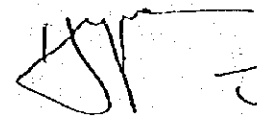
2-1.	Electric Type Writers	2	A -
2-2.	Duplicating Machines	1	B +
2-3.	Stencil Cutters	2	B +
2-4.	Offset Machine	1	C -
2-5.	Transparency Machine	2	B +
2-6.	Collector Machine	1	B +
2-7.	Photocopier	3	A -
2-8.	Computer	1	A -
2-9.	Software for Computer	1	A -
2-10.	Vehicles	1	B -

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3. EDUCATION DEPARTMENT

3-1.	Home Video System	1	B +
3-2.	Television Set	2	B +
3-3.	Projector 16 mm	2	B -
3-4.	Portable Screen	2	B +
3-5.	Overhead Projector	2	B +
3-6.	Cinema Scope Lens	1	B +
3-7.	Slide Projector	1	A +
3-8.	Trolley	1	A +
3-9.	Computer	1	C -
3-10.	Type Writers (Manual)	40	B +
3-11.	Electric Typewriter	1	B -
3-12.	Cassette Dubbing Machine	1	B +
3-13.	Radio Cassette	1	B -
3-14.	Photocopier	1	C -
3-15.	Spirit duplicator	1	B +
3-16.	Stencil Duplicator	1	A +
3-17.	Public Address System	2	B +
3-18.	Synchronising Unit with Accessories	1	B +
3-19.	VHS Movie System	1	B +
3-20.	Portable Power Generator	1	C +
3-21.	Paper Cutter	1	A +



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4. ENVIRONMENTAL SCIENCE DEPARTMENT

4-1.	Water Quality Test Kit	20	A -
4-2.	Air Quality Test Kit	20	A -
4-3.	Sound Intensity Measuring Meter	20	A -
4-4.	pH Meter	20	A -
4-5.	Light Intensity Meter	20	A -
4-6.	Dissolved Oxygen Meters	20	A -
4-7.	Home Video Set	1	B -
4-8.	16mm film Projector	1	A -
4-9.	Slide Projector	1	B -
4-10.	Camera 35mm	1	B +
4-11.	De-Ioniser	1	A -
4-12.	Thermometer	40	A -
4-13.	Thermograph	20	A -
4-14.	Barometers	20	A -
4-15.	Barograph	20	A -
4-16.	Anemometer	20	A -
4-17.	Tractor	1	C -
4-18.	Electricity Generator	1	B +
4-19.	Binocular	10	A -
4-20.	Microscope	10	A -
4-21.	Video Camera	1	A -
4-22.	Sleeping Bag	50	A -
4-23.	Tent	20	A -
4-24.	Cooking Stove	10	A -
4-25.	Altimeters	40	A -
4-26.	Overhead Projector	1	B -
4-27.	Irrigation Pump with motor	1	B +
4-28.	Computer	1	B -
4-29.	Typewriter	1	B -
4-30.	Calculator	10	B -
4-31.	Secondary School Equipment	1	A +
4-32.	Fundamental Facilities	1	B +

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5. BIOLOGY DEPARTMENT

5-1.	Rotatory Microtome	2	A -
5-2.	Automatic Tissue Processor	2	A -
5-3.	Eleetric Centrifuges	4	A -
5-4.	Slide Projector	2	B -
5-5.	Slide Viewer	15	B -
5-6.	Autoclave	2	A -
5-7.	Haemacytometer	2	A -
5-8.	Stereoscopic Binocular Microscope	2	A -
5-9.	Incubator	2	A -
5-10.	Incubator (Bacteria)	1	A -
5-11.	Precision Balance	6	A -
5-12.	Stopwatch	15	B -
5-13.	Distiller	3	A -
5-14.	Film Projector	1	B -
5-15.	Water Bath	4	A -
5-16.	Heating Plates	3	A -
5-17.	Stethoscope	2	A -
5-18.	Compound Binocular Microscope	20	A -
5-19.	Magnetic Stirrer	2	A -
5-20.	pH Meter	2	A -
5-21.	Bomb Calorimeter	2	A -
5-22.	Sand Bath	3	A -
5-23.	Sound Level Meter	2	A -
5-24.	Deioniser	1	A -
5-25.	Binocular	1	A -
5-26.	Spring Balance	10	A -
5-27.	Transparency Stencil Cutter	10	B -
5-28.	Refrigerator	2	B -
5-29.	Overhead Projector	1	B -
5-30.	Drying Oven	2	B -
5-31.	DNA Molecule Kit	2	A -
5-32.	RNA Protein Synthesis kit	1	A -
5-33.	Models Showing Mitosis & Meiosis	1	A -
5-34.	Episcope Projector	5	A -
5-35.	Spectrometer	2	A -
5-36.	Maguifier	2	A -
5-37.	Transformer	4	C -
5-38.	Desktop Publishing Unit	1	C -
5-39.	Electric Typewriter	1	B -
5-40.	35mm Camera	1	B -
5-41.	Secondary School Equipment	1	A -
5-42.	Fundamental Facilities	1	A -



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6. PHYSICS DEPARTMENT

6-1.	Cavendish's Torsion Balance	1	C +
6-2.	Stop Watch	20	A +
6-3.	Electronic Balance	2	A +
6-4.	Digital Micrometer	6	A +
6-5.	Digital Vernier Caliper	6	A -
6-6.	Student Oscilloscope	10	A +
6-7.	AC/DC Voltmeter	20	A -
6-8.	AC/DC Ammeter	20	A -
6-9.	Multimeter	10	A -
6-10.	Travelling Microscope	6	A -
6-11.	Power Pack (240/30V)	10	A -
6-12.	HT Supply	2	A -
6-13.	Piezo electric EHT Generator	1	C +
6-14.	Rheostats	10	A -
6-15.	Capacitor	10	A -
6-16.	Transformer	6	A +
6-17.	AF Signal Generator	4	B +
6-18.	AF Audio Amplifier	10	A -
6-19.	Joule Meter	2	A +
6-20.	Immersion Heater	10	A -
6-21.	Conductivity apparatus	6	A -
6-22.	Spring Balance	20	A +
6-23.	Thermo Couple	3	A +
6-24.	Electric Oven	1	A -
6-25.	Discharge Lamps Plus Accessories	4	B -
6-26.	UV Lamp & Accessories	2	B -
6-27.	Vacuum Tube	2	B -
6-28.	Logic Circuit Experiment Apparatus	10	B -
6-29.	Demonstration Engine Model	3	B -
6-30.	Spectrometer	4	A -
6-31.	Diffraction Gratings	1	B -
6-32.	Geissler's Tube	2	B -
6-33.	3cm Wave Generator	1	B -
6-34.	G-M Tubes & Scalers or Digicounter	2	B +
6-35.	Electronic Calculator	16	B +
6-36.	Capacitance Merter	2	B +
6-37.	Secondary School Equipment	1	A +
6-38.	Fundamental Facilities	1	B +

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7. CHEMISTRY DEPARTMENT


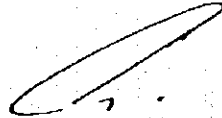
7-1.	Infra-red Spectrophotometer	1	B +
7-2.	UV/Visible Spectrophotometer	1	C -
7-3.	UV/Visible Spectrophotometer	2	B +
7-4.	UV/Visible Spectrophotometer	1	C -
7-5.	Vacuum Pump	2	B +
7-6.	Vacuum Pump	1	C -
7-7.	Electronic Balance	2	A +
7-8.	Electronic Balance	4	C -
7-9.	Electronic Balance	2	C -
7-10.	Electronic Balance	2	A +
7-11.	Power Supply	5	B +
7-12.	High Tension Power supply	2	B -
7-13.	Waterbath	2	A +
7-14.	Waterbath	2	C -
7-15.	Water Still	2	A +
7-16.	Magnetic Stirrer	3	A +
7-17.	Centrifuge	2	A -
7-18.	Drying Oven	1	A +
7-19.	Ice-maker	1	A +
7-20.	Heating Mantle	10	A +
7-21.	Hot Plate	10	A +
7-22.	Gas Liquid Chromatograph	1	C +
7-23.	Chart Recorder	2	C +
7-24.	Abbe refractometer	1	A +
7-25.	Colorimeter	5	A +
7-26.	Digital pH Meter	2	A +
7-27.	Polarimeter	3	A +
7-28.	Conductance Meter	5	A -
7-29.	Conductivity Cell	5	B +
7-30.	Potentiometer & Null Detector for Potentiometer	5	B -
7-31.	Weston Standard Cell	5	C +
7-32.	Melting Point Apparatus	5	A +
7-33.	Digital Thermometer	5	A +
7-34.	Student Calorimeter	10	B +
7-35.	Atomic Absorption Spectrophotometer	1	C -
7-36.	Scalamp Galvanometer	3	B +
7-37.	Potentiostat/Galvanostat Caluanustat	1	C +
7-38.	Glass ware	1	B -
7-39.	Electric Typewriter	2	B -
7-40.	OHP	1	A -
7-41.	Computer	1	C -
7-42.	Secondary School Equipment	1	A +
7-43.	Fundamental Facilities	1	B +

8. LANGUAGE LABORATORY DEPARTMENT

8-1.	LL Equipment for Teacher	1	A +
8-2.	LL Equipment for Students	24	A +
8-3.	Fundamental Facilities	1	B +

9. MATHEMATICS DEPARTMENT

9-1.	Computer	34	A -
9-2.	Calculator	30	A -
9-3.	Typewriter with Memory	1	B +
9-4.	Overhead Projector	4	A -
9-5.	File Cabinet	5	A +
9-6.	Spiral Binder	1	A -
9-7.	Mobil Writing Board	3	A +
9-8.	Geometrical Set	3	A +
9-9.	Secondary School Equipment	1	A +
9-10.	Fundamental Facilities	1	B +



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Japan's Grant Aid Scheme

1. Grant Aid Procedures

(1) Grant Aid Procedures

1) Japan's Grant Aid program is executed through the following procedures.

Application	(Request made by a recipient country)
Study	(Basic Design Study conducted by JICA)
Appraisal & Approval	(Appraisal by the Government of Japan and Approval by the Cabinet)
Determination of Implementation	(The Notes exchanged between the Governments of Japan and the recipient country)

2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firm (s).

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid program, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourth, the project, once approved by the Cabinet, becomes official with Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the Implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

(2) Basic Design Study

1) Contents of the Study

The aim of the Basic Design Study (hereinafter referred to as "the Study"), conducted by JICA on a requested project (hereinafter referred to as "the Project") is to provide basic document necessary for the appraisal of the Project by the Japanese Government. The contents of the Study are as follows:

- a) Confirmation of the background, objectives, and benefits of the requested project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation,
- b) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid scheme from a technical, social and economic point of view,
- c) Confirmation of items agreed on by both parties concerning the basic concept of the Project,
- d) Preparation of a basic design of the Project,
- e) Estimation of costs of the Project.

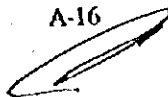
The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

2) Selection of Consultants

For the smooth implementation of the Study, JICA uses (a) registered

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consultant firm(s). JICA selects (a) firm(s) based on proposal submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report based upon terms of reference made by JICA

The consulting firm(s) used for the Study is (are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency and also to avoid any undue delay in implementation should the selection process be repeated.

(3) Japan's Grant Aid Scheme

1) What is Grant Aid?

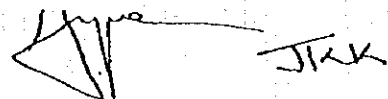
The Grant Aid program provides the recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under the principles and in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

3) "The period of the Grant Aid" means the one fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and the final payment to them must be completed.

However in case of delay in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.



- 4) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

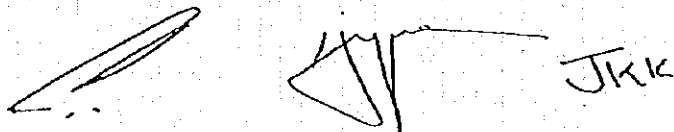
However the prime contractors, namely, consulting, constructing and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

- 5) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

- 6) Undertakings required of the Government of the Recipient Country

In the implementation of the Grant Aid project, the recipient country is required to undertake such necessary measures as follows :

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- a) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction.
- b) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
- c) To secure buildings prior to the procurement in case of the installation of the equipment.
- d) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.
- e) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.
- f) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

7) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

8) "Re-export"

The products purchased under the Grant Aid should not be re-exported from the recipient country.

9) Banking Arrangement (B/A)

- a) The government of the recipient country or its designated authority should open an account in the name of the government of the recipient country in

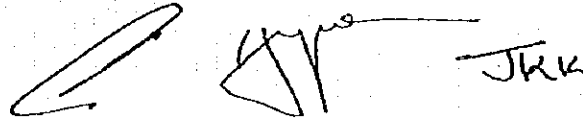
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an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the government of the recipient country or its designated authority under the Verified Contracts.

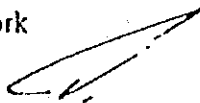
- b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the government of the recipient country or its designated authority.

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NECESSARY MEASURES TO BE TAKEN BY KENYAN SIDE

The following necessary measures shall be taken by the Government of Kenya in case Japan's Grant Aid is extended.

1. To undertake the renovation work for the Project
 - 1) Foundation work
 - 2) Electric work for receiving, transforming and distribution of electric power
 - 3) Electric lighting work
 - 4) Air conditioning work, if necessary
 - 5) Telephone and communication facility work
 - 6) General furniture such as curtain, tables, chairs and others
 - 7) Interior work
 - 8) Relocation of the existing equipment and facilities for new equipment
2. To ensure prompt unloading, exempt taxes, and take necessary measures for custom's clearance at port of disembarkation and inland transportation in Kenya of the equipment provided under the Grant Aid, and bear all expenses for going through formalities
3. To exempt Japanese nationals (physical and juridical) from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts
4. To provide necessary permissions, licenses and other authorization for execution of the Project.
5. To bear commissions to the Japanese foreign exchange bank for the banking services based upon the Banking Arrangement
6. To accord Japanese nationals whose services may be required in connection with the supply of products and services under the verified contract such facilities as may be necessary for their entry into Kenya and stay therein for the performance of their work

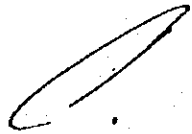


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7. To maintain and use properly the equipment provided under the Grant Aid
8. To bear all the expenses other than those to be borne by the Grant Aid, necessary for the execution of the Project



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