

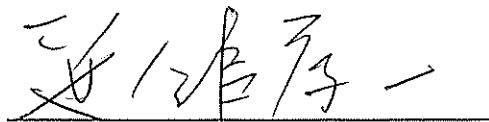
**RECORD OF DISCUSSIONS BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY AND
AUTHORITIES CONCERNED OF THE GOVERNMENT OF
THE REPUBLIC OF NIGER
ON JAPANESE TECHNICAL COOPERATION FOR
THE PROJECT ON STRENGTHENING OF MATHEMATICS AND SCIENCE
IN SECONDARY EDUCATION IN NIGER
(SMASSE - NIGER)**

The Japan International Cooperation Agency (hereinafter referred to as "JICA") through its Resident Representative of JICA Niger office exchanged views and had a series of discussion with the Nigerien authorities for the purpose of working out the detail of the Japanese Technical Cooperation for the Project on Strengthening of Mathematics and Science in Secondary Education in Niger. The both sides also discussed desirable measures to be taken by JICA and the Nigerien authorities for the successful implementation of the above-mentioned Project.


As a result of the discussions, Resident Representative of JICA Niger office and the Secretary General of Ministry of Secondary and Higher Education, Research and Technology, the Republic of Niger agreed on the matters referred to in the document attached hereto.

This Record of Discussion has been prepared in French and English languages, each text being equally authentic. In case of any divergence in interpretation, the English text shall prevail.

Niamey, October 25, 2006



Mr. Koichi SASADATE
Resident Representative
JICA Niger
Japan International Cooperation Agency
Japan



Mr. MAIGA Younoussa Tondy
Secretary General
Ministry of Secondary and Higher
Education, Research and Technology
Republic of Niger

THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN JICA AND THE GOVERNMENT OF THE REPUBLIC OF NIGER

1. The Government of the Republic of Niger will implement the Project on Strengthening of Mathematics and Science in Secondary Education in Niger (hereinafter referred to as “the Project”) in cooperation with JICA.
2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

II. MEASURES TO BE TAKEN BY JICA

In accordance with the laws and regulations in force in Japan, JICA will take, at its own expense, the following measures according to the normal procedures under the Technical Cooperation Scheme of Japan.

1. DISPATCH OF JAPANESE AND THIRD COUNTRY EXPERTS

JICA will provide the services of the Japanese and third country experts as listed in Annex II.

2. PROVISION OF MACHINERY AND EQUIPMENT

JICA will provide such machinery, equipment and other materials (hereinafter referred to as “the Equipment”) necessary for the implementation of the Project as listed in Annex III. The Equipment will become the property of the Government of Niger upon being delivered C.I.F. (cost, insurance and freight) to the Nigerien authorities concerned at the ports and/or airports of disembarkation.

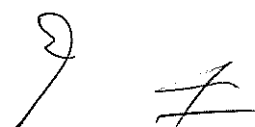
3. TRAINING OF NIGERIEN PERSONNEL IN JAPAN OR THIRD COUNTRIES



JICA will receive the Nigerien personnel connected with the Project for technical training in Japan or third countries.

III. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE REPUBLIC OF NIGER

1. The Government of the Republic of Niger will take necessary measures to ensure that the self-reliant operation of the Project will be sustained during and after the period of Japanese technical cooperation, through full and active involvement in the Project by all related authorities, beneficiary groups and institutions.
2. The Government of the Republic of Niger will ensure that the technologies and knowledge acquired by the Nigerien nationals as a result of Japanese technical cooperation will contribute to the economic and social development of the Republic of Niger.
3. The Government of Republic of Niger will grant, in the Republic of Niger, privileges, exemptions and benefits as listed in Annex IV and will grant privileges, exemptions and benefits no less favorable than those granted to experts of third countries or international organizations performing similar missions to the Japanese and third country experts referred to in II-1 above and their families.
4. The Government of the Republic of Niger will ensure that the Equipment referred to in II-2 above will be utilized effectively for the implementation of the Project in consultation with the Japanese and third country experts referred to in Annex II.
5. The Government of the Republic of Niger will take necessary measures to ensure that the knowledge and experience acquired by the Nigerien personnel from technical training in Japan or third countries will be utilized effectively in

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the implementation of the Project.

6. In accordance with the laws and regulations in force in the Republic of Niger, the Government of the Republic of Niger will take necessary measures to provide at its own expense:

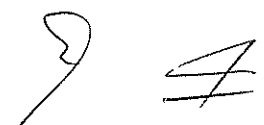
- (1) Services of the Nigerien counterpart personnel and administrative personnel as listed in Annex V;
- (2) Land, buildings and facilities as listed in Annex VI; and
- (3) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the Equipment provided by JICA under II-2.

7. In accordance with the laws and regulations in force in the Republic of Niger, the Government of the Republic of Niger will take necessary measures to meet:

- (1) Expenses necessary for transportation within the Republic of Niger of the Equipment referred to in II-2 above as well as for the installation, operation and maintenance thereof;
- (2) Customs duties, internal taxes and any other charges, imposed in the Republic of Niger on the Equipment referred to in II-2 above ; and
- (3) Running expenses necessary for the implementation of the Project.

IV. ADMINISTRATION OF THE PROJECT

1. The Secretary General, Ministry of Secondary and Higher Education, Research

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and Technology (hereinafter referred to as “MESS/R/T), as the Project Manager, will bear overall responsibility for the administration and implementation of the Project.

2. The National Coordinator, appointed from MESS/R/T, will be responsible for the managerial and technical matters of the Project.
3. The Japanese Expert will provide necessary recommendations and advice to the Project Manager and the National Coordinator on any matters pertaining to the implementation of the Project.
4. The Japanese and third country experts will give necessary technical guidance and advice to the Nigerien counterpart personnel on technical matters pertaining to the implementation of the Project.
5. For the effective and successful implementation of technical cooperation for the Project, a Joint Coordinating Committee will be established whose functions and composition are described in Annex VII.

V. JOINT EVALUATION

Evaluation of the Project will be conducted jointly by JICA and Nigerien authorities concerned, at the middle and during the last six months of the cooperation term in order to examine the level of achievement.

VI. CLAIMS AGAINST JAPANESE AND THIRD COUNTRY EXPERTS

The Government of the Republic of Niger undertakes to bear claims, if any arises, against the Japanese and third country experts engaged in technical cooperation for the Project resulting from, occurring in the course of, or otherwise connected with the discharge of their official functions in the Republic of Niger except for those arising from the willful misconduct or gross negligence of the Japanese and third

country experts.

VII. MUTUAL CONSULTATION

There will be mutual consultation between JICA and the Republic of Niger Government on any major issues arising from, or in connection with this Attached Document.

VIII. MEASURES TO PROMOTE UNDERSTANDING OF AND SUPPORT FOR THE PROJECT

For the purpose of promoting support for the Project among the people of the Republic of Niger, the Government of the Republic of Niger will take appropriate measures to make the Project widely known to the people of the Republic of Niger.

IX. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be three years from October 25th 2006.

ANNEX I	MASTER PLAN
ANNEX II	LIST OF JAPANESE AND THIRD COUNTRY EXPERTS
ANNEX III	LIST OF MACHINERY AND EQUIPMENT
ANNEX IV	PRIVILEGES, EXEMPTIONS AND BENEFITS FOR JAPANESE AND THIRD COUNTRY EXPERTS
ANNEX V	LIST OF NIGERIEN COUNTERPART AND ADMINISTRATIVE PERSONNEL
ANNEX VI	LIST OF LAND, BUILDINGS AND FACILITIES
ANNEX VII	ROLE OF BODIES FOR THE PROJECT

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ANNEX I MASTER PLAN

1. Objectives of the Project

(1) Overall Goal

The ability of Mathematics and Science of Junior High school students is improved.

(2) Project Purpose

Teaching ability of Mathematics and Science teachers is strengthened through the In-Service Education and Training (INSET).

2. Outputs of the Project

(1) The National and Regional Teams for INSET are established.

(2) Teachers' teaching skills on Mathematics and Science are improved.

(3) Supporting system for the INSET project is established.

3. Activities of the Project

1-1 to conduct baseline survey on Mathematics and Science education

1-2 to identify National Trainers

1-3 to undergo training in SMASSE Kenya

1-4 to develop curriculum and training materials for the National and Regional training.

1-5 to identify Regional Trainers

1-6 to conduct training for Regional Trainers in Niamey

1-7 to monitor and evaluate the quality of INSET

2-1 to identify INSET clusters in each region

2-2 to identify the venue for the training

2-3 to train teachers within the INSET clusters

2-4 to monitor and evaluate the quality of INSET

2-5 to monitor and evaluate the impact of INSET in the classrooms

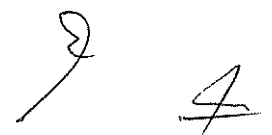
3-1 to hold a stakeholders workshop (Pedagogic Inspectors, Pedagogic Advisors, Qualified Teachers, School Principals, representative of COGES and development partners)

3-2 to train the School Principals in Monitoring and Evaluation of impact of INSET in the classroom

3-3 to train stakeholders on INSET according to the needs

3-4 to monitor and evaluate the quality of training

3-5 to monitor and evaluate the impact of training on stakeholders



ANNEX II LIST OF JAPANESE AND THIRD COUNTRY EXPERTS

1. Long-term Expert

- (1) One expert on INSET Management December 2006 ~ October 2009

2. Short-term Experts

- (1) Expert(s) on Mathematics and Science Education
- (2) Expert(s) on INSET management
- (3) Expert(s) on Education Evaluation
- (4) Expert(s) on INSET Support Sensitization

Numbers of experts and the period of dispatch will be determined later.

Note: Other expert(s) may be dispatched according to the needs for smoother implementation of the Project.



ANNEX III LIST OF MACHINERY AND EQUIPMENT

JICA will provide the following equipment necessary for the implementation of the Project:

1. Computers
2. Printers
3. Copier
4. Risograph
5. Scanner
6. Video Projectors
7. Screens
8. Vehicle for monitoring
9. Equipments and materials necessary to conduct INSET

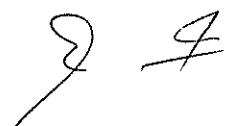
Note: The contents, specifications, and quantity of the equipment above to be provided are to be determined between the Japanese experts and the Nigerien counterpart personnel based on the Annual work plan of the Project, within the limit of the allocated budget.



ANNEX IV

PRIVILEGES, EXEMPTIONS, AND BENEFITS FOR JAPANESE AND THIRD COUNTRY EXPERTS

1. To exempt from income tax and other charges of any kind imposed on or in connection with the living allowances remitted from abroad for the Japanese and third country experts.
2. To exempt from income tax, import duties, and any other charges imposed on personal household effects of the Japanese and third country experts and their families, including one motor vehicle per expert.
3. To use all its available means to provide medical and other necessary assistance to the Japanese and third country experts and their families
4. To issue, upon application, entry visas for the Japanese and third country experts and their families free of charge
5. To issue identification cards to the Japanese and third country experts and their families to secure the cooperation of all governmental organisation necessary for the performance of the duties of the experts
6. To exempt from customs duties for import and export for machinery and equipment by the Japanese and third country experts in connection with the Project activities.




ANNEX V LIST OF THE NIGERIEN COUNTERPART
AND ADMINISTRATIVE PERSONNEL

- (1) Secretary General, Ministry of Secondary and Higher Education, Research and Technology (MESS/R/T)
- (2) General Director of Education, MESS/R/T
- (3) Director of Base II and Middle Cycles Education
- (4) Director of Planning and Programming
- (5) National Coordinator
- (6) One Pedagogic Inspector for Mathematics
- (7) One Pedagogic Inspector for Natural Science
- (8) One Pedagogic Inspector for Physics-Chemistry
- (9) One Pedagogic Advisor for material maintenance
- (10) One Inspector for Administration
- (11) Pedagogic Advisor for English
- (12) Assistant Staff
- (13) Other counterpart personnel will be assigned when necessary for smooth implementation of the project

ANNEX VI LIST OF LAND, BUILDINGS, AND FACILITIES

1. Land, buildings, and facilities necessary for the Project.
2. Rooms and facilities necessary for installation and storage of equipment
3. Offices and facilities necessary for the Project
4. Other facilities mutually agreed upon as necessary for implementation of the Project

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ANNEX VII ROLES OF VARIOUS BODIES FOR THE PROJECT

I. Joint Coordinating Committee (JCC)

The Joint Coordinating Committee will be established for the effective and smooth implementation of the Project.

1. Functions

- (1) to provide overall management and administration of the project
- (2) to finalise the Annual Plan of Operations based on the progress and financial reports submitted by the National Coordinator
- (3) to evaluate the overall progress of the project
- (4) to exchange views on any major issues arising from or in connection with the implementation of the project

2. Composition

(1) Chairperson

Secretary General, Ministry of Secondary and High Education, Research, and Technology (MESS/R/T)

(2) Members

- 1) General Director of Education, MESS/R/T
- 2) Director of Planning and Programming, MESS/R/T
- 3) Director of Base II and Middle Cycles Education, MESS/R/T
- 4) National Coordinator of the Project
- 5) Resident Representative of JICA Niger
- 6) Long-term Expert
- 7) Coordinator of Japanese Volunteers
- 8) Members of JICA study team

II. National Project Team

The National Project Team will be established for smooth implementation of the Project on daily basis. The National Project Team will work with the National Trainers.

1. Functions

- (1) to take daily administrative responsibility of the Project
- (2) to monitor the progress of the Project activities
- (3) to develop training curriculum at all level of INSET
- (4) to develop training materials for all level of INSET
- (5) to select Regional Trainers
- (6) to sensitize stakeholders to gain support on INSET

- (7) to develop monitoring and evaluation tools for INSET
- (8) to implement every measure to improve the smooth operation of the Project
- (9) to award certificates to the participants of INSET at all level

2. Composition

(1) Chairperson

National Coordinator of the Project

(2) Members

- 1) Pedagogic Inspector for Mathematics
- 2) Pedagogic Inspector for Natural Science
- 3) Pedagogic Inspector for Physics-Chemistry
- 4) Pedagogic Advisor for material maintenance
- 5) Administrative Inspector
- 6) Pedagogic Advisor for English
- 7) Assistant Staff
- 8) Long-term Expert
- 9) Short-term Experts

III. Regional Project Team

The Regional Project Team will be established for smooth implementation of INSET at the teachers' level with close cooperation with the National Project Team.

1. Function

- (1) Assure daily Administrative responsibility at regional levels
- (2) monitor the progress of project activities in the region
- (3) to implement any measure to improve the smooth operation of the Project at the regional level

2. Composition

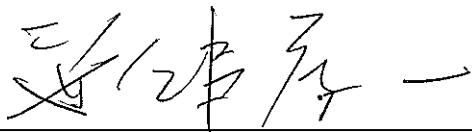
- (1) Regional Director of Secondary and Higher Education
- (2) A representative of Regional Trainers
- (3) The School principals of the school where the Regional Training will be conducted

MINUTES OF MEETING
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
THE REPUBLIC OF NIGER
ON
JAPANESE TECHNICAL COOPERATION
FOR
THE PROJECT ON STRENGTHENING OF MATHEMATICS AND SCIENCE
IN SECONDARY EDUCATION IN NIGER
(SMASSE-NIGER)

Resident Representative of Japan International Cooperation Agency (hereinafter referred to as “JICA”) Niger Office had a series of discussions with the Nigerien authorities concerned about the formation of the Project on Strengthening of Mathematics and Science in Secondary Education in Niger (hereinafter referred to as “the Project”).

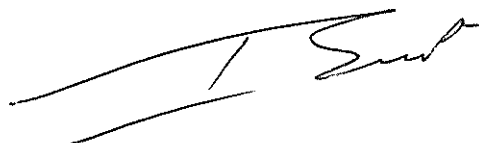
As a result of the discussions, both sides agreed to summarize the matters referred to in the document attached hereto as a supplement to the Record of Discussions.

Niamey, October 25, 2006



Mr. Koichi SASADATE
Resident Representative
JICA Niger
Japan International Cooperation Agency
Japan

Mr. MAIGA Younoussa Tondy
Secretary General
Ministry of Secondary and Higher Education,
Research and Technology
The Republic of Niger



ATTACHED DOCUMENT

The discussions were held at Niamey with the participants listed below:

The Nigerien side

Mr. MAIGA Younoussa Tondy, Secretary General, Ministry of Secondary and High Education, Research and Technology (MESS/R/T)

Mr. DAOUDA Boureima, Director of Base II and Middle Cycles Education, MESSR/T

Ms. ABDOULAYE Ramatou, Assistant Director of Base II and Middle Cycles Education, MESS/R/T

Mr. Alhousseini MAMANE, National Pedagogic Inspector of Mathematics, the National Pedagogic Inspections (IPN), MESS/R/T

Mr. Amadou Garba SAMAKE, National Pedagogic Inspector of Biology (Natural Science), IPN, MESS/R/T

Mr. Souleymane Arouna ALLI, National Pedagogic Inspector of Physics-Chemistry, IPN, MESS/R/T

Mr. Amadou MAMOUDOU, National Pedagogic Inspector of Mathematics, IPN, MESS/R/T

Mr. Sitou MAMAN, Head, National Center of Maintenance (CNM), MESS/R/T

Mr. Ousseini HASSANE, Inspector/Administration of Physics-Chemistry, IES, MESS/R/T

Mr. Aboubacar IBRAHIM, Direction of Planning and Program (DEP), MESS/R/T

Ms. OUATARA Mariama, National Pedagogic Inspector of Mathematics, IPN, MESS/R/T

Mr. Djigo SALEY, National Pedagogic Inspector of Biology (Natural Science), IPN

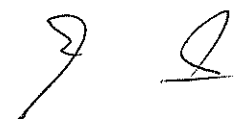
Mr. Hassane HAROUNA, Advisor of English, IPN

JICA Niger Office side

Mr. Koichi Sasadate, Resident Representative

Mr. Toru Ide, Expert in Projects Planning and Coordination (Education, and Rural development)

Mr. Abdou MOUSSA, Assistant in Projects Planning and Coordination



I. PROJECT TITLE

The Project for Strengthening Mathematics and Science at Secondary Education in Niger (SMASSE-NIGER).

II. SCOPE OF TECHNICAL COOPERATION

The Project Document is shown in the ANNEX and explains the detail of the Project background, the design, the administration and the pre-evaluation of the Project.

III. COST SHARING OF THE BUDGET

Both Japanese and Nigerien sides have jointly elaborated the details on cost sharing for the implementation of the Project through the Japanese Preparatory Study Team dispatched in June 2006 and further updated them through the discussion on the Record of Discussions. The latest details of the cost sharing are shown in the Project Document, which are not the commitment, but the guideline for both sides. Both Japanese and Nigerien sides should make joint efforts to secure the necessary budget allocation and its disbursement. Moreover, detail budget will be consulted among both parties each year according to the progress of the project.

IV. PROJECT DESIGN MATRIX

The Project will be implemented within the framework of the Project Design Matrix (PDM) shown in APPENDIX of the Project Document. PDM is an effective tool for managing and implementing projects/programs. PDM is characterized by the following:

- (1) PDM is a logically designed matrix which defines the initial understanding of the framework for the Project and indicates the logical steps towards the achievement of the Project Purpose.
- (2) PDM is to be flexibly developed according to the progress and achievement of the Project, upon agreement between the Nigerien and Japanese sides.
- (3) It is also used as a reference for monitoring and evaluating the projects.

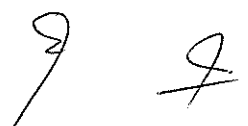
V. PLAN OF OPERATION

The Plan of Operation is shown in APPENDIX of the Project Document. It is to be drafted by the Nigerien counterparts and the Japanese side jointly and is to be submitted to the Joint Coordination Committee. The activities are subject to change within the scope of the Record of Discussions, if necessity arises in the course of the Project implementation.

VI. ADMINISTRATION OF THE PROJECT

The organization chart of the Project is shown in APPENDIX of the Project Document.

ANNEX : Project Document

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**REPUBLIC OF NIGER
MINISTRY OF SECONDARY AND
HIGHER EDUCATION,
RESEARCH AND TECHNOLOGY**

ANNEX

Project Document

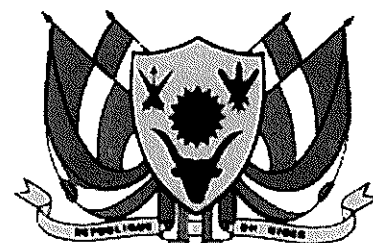
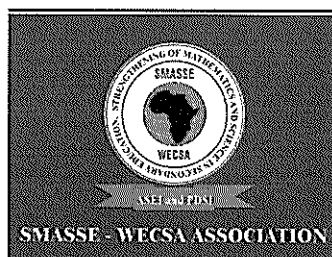
***For Strengthening Mathematics and Science in
Secondary Education in Niger (SMASSE - NIGER)***

Prepared by:

The Ministry of Secondary and Higher Education, Research and Technology (MESS/R/T)
of Republic of Niger

Japan International Cooperation Agency (JICA)

SMASSE-WECSA Association



October 25, 2006

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1. Executive Summary

Project Title: Strengthening Mathematics and Science in Secondary Education in Niger (SMASSE-Niger)
Country: The Republic of Niger
Overall Goal: The ability of mathematics and science of junior high school students is improved
Project Purpose: Teaching ability of mathematics and science teachers is strengthened through In Service Education and Training
Pilot Zone: Dosso, Niamey and Tillaberi regions
Duration: 3 years (October 2006 – August 2009)
Target Groups: Target Group at National Level: Pedagogic Inspectors and Advisors, Qualified Teachers, and School Principals. Target Group at Regional Level: All teachers of Mathematics and Science in Pilot regions.
Outputs: <ol style="list-style-type: none">1. National and Regional team for INSET is established.2. Teachers' teaching skills in mathematics and science are improved.3. Supporting system for INSET project is established.
Activities: Output 1: The National and Regional teams for INSET are established. <ol style="list-style-type: none">1.1. To Conduct a baseline survey on teaching and learning of mathematics and science.1.2. To Identify National Trainers.1.3. To undergo training in SMASSE Kenya1.4. To Develop a curriculum and training materials for training at national and regional level.1.5. To Identify Regional Trainers (RTs).1.6. To Conduct training for regional trainers in Niamey.1.7. To Monitor and evaluate the quality of INSET. Output 2: Teachers' teaching skills in mathematics and science is improved. <ol style="list-style-type: none">2.1. To Identify INSET clusters in the regions.2.2. To identify the venue of the training2.3. To Train teachers within the clusters2.4. To Monitor and evaluate the quality INSET2.5. To Monitor and evaluate impact of INSET in the classroom Output 3: Supporting system for INSET project is established. <ol style="list-style-type: none">3.1. To hold a stakeholders workshop (Pedagogic Inspectors and Advisors, qualified teachers, school Principals, representative of COGES and development partners).3.2. To train school principals in monitoring and evaluation of impact of INSET in the classroom.3.3. To train stakeholders on INSET according to the needs.3.4. To monitor the quality of the training3.4. To monitor and evaluate the impact of the training of stakeholders

Bodies: The project is to be implemented by the Ministry of Secondary and Higher Education, Research and Technology (MESS/R/T).

1. Joint Coordinating Committee (JCC)

The Joint Coordinating Committee will be established for effective and smooth implementation of the project.

Functions:

1. To provide overall management and administration of the project
2. To finalise the Annual Plan of Operations based on the progress and financial reports submitted by the National Coordinator
3. To evaluate the overall progress of the project
4. To exchange views on any major issues arising from or in connection with the implementation of the project

Composition :

Chairperson

Secretary General, Ministry of Secondary and Higher Education, Research, and Technology (MESS/R/T)

Members

1. General Director of Education, MESS/R/T
2. Director of Planning and Program, MESS/R/T
3. Director of Base II and Middle Cycles Education, MESS/R/T
4. National Coordinator of the Project
5. Resident Representative of JICA Niger
6. Long-term Expert
7. Coordinator of Japanese Volunteers
8. Members of JICA study team

2. National Project Team

The Project Team will be established for the smooth implementation of the Project on daily basis.

Functions :

1. To take daily administrative responsibility of the project
2. To monitor the progress of project activities
3. To develop training curriculum for all levels of INSET
4. To develop training materials for all levels of INSET
5. To select regional trainers
6. To sensitize stakeholders to gain support on INSET
7. To develop monitoring and evaluation tools for INSET
8. To implement every measure to improve the smooth operation of the project
9. To award certificates at all levels

Composition:		
On Niger side	On Japan side	
Chairperson : National Coordinator	Long Term Expert	
5 National Trainers: One Pedagogic Inspector of Mathematics; One Pedagogic Inspector of Physics and Chemistry; One Pedagogic Inspector of Natural Science; One Pedagogic Advisor of Maintenance; One Administrative Inspector.		
One Pedagogic Advisor for English.		Short Term Expert
Supportive Staff		

3. Regional Project Team

The regional project team will be established for smooth implementation of INSET for teachers at regional level with close cooperation with national project team.

Functions:

1. to assure daily administrative responsibility at regional level
2. To monitor the progress of project activities in the region
3. To implement any measure to improve the smooth operation of the project

Composition:

1. Regional Director of Secondary and Higher Education
2. A representative of the regional trainers
3. School Principals of the schools where the regional training will be conducted

Project Feasibility:

1. Relevance:

There is critical need for training in the area of Mathematics and Science at Secondary level in order to achieve the national goals of the Poverty Reduction Strategy (PRS), and the Nigerien Educational System Orientation Law (LOSEN). We must emphasise that poor performance of Mathematics and Science teachers is a major obstacle to quality teaching. In addition, the improvement of Nigerien youth capacities in Mathematics and Science is an important factor for the socio-economic development of Niger.

2. Effectiveness:

The main purpose of the project is to improve classroom practices of Mathematics and Science teachers. This is the most important and most desirable element in the area of In Service Training. It will be a question of creating a conducive environment for the improvement of the teaching of Mathematics and Science. In addition, support from Principals and the community will enhance improvement of teaching and learning of Mathematics and Science. Institutionalisation of INSET should be focused on sustainability after the project period.

3. Efficiency:

A transparent mechanism is defined for funds management. Verifiable indicators are defined

for project evaluation. The project will utilize existing facilities and local materials in order to minimize the costs.

4. Impact:

INSET will improve the pedagogical skills of teachers enabling them to teach effectively in the classroom. Impact of INSET will be felt in the classroom where an appropriate learning environment will be created for the students. Thus the attitudes of learners toward Mathematics and Science will change positively and the school results will be improved.

5. Project Sustainability:

The Government of Niger Republic shall provide for the salaries of National and Regional Trainers who will assure the training and monitoring of classroom teachers. The Government will also put at the disposal of the project facilities necessary to its implementation. Sensitisation sessions regarding COGES should at the end mobilize students' parents for their support in project activities. The various partners will assure the project sustainability by respecting their commitment.

2. INTRODUCTION

The population of Niger is estimated at 11.8 million inhabitants in 2004. School enrolment rate is one of the lowest in the world (52 % for primary school) in 2005. In Base 2 Cycle, the Gross School Enrolment Rate increased from 12.9% in 2001 – 2002 to 14.9% in 2004-05. Yet secondary school level is the minimum level for a student to actively take part in the economic development of his country.

Today, the General Secondary Education has 28 Inspectors of Secondary Education (IES), including 5 Inspectors of French-Arabic Education. For the academic year 2005 – 2006, the General Secondary Education has 375 public schools distributed as follows:

313 Junior Secondary Schools (CEG) (Form 1 to Form 4);

16 Senior Secondary Schools (Form 1 to Form 3);

46 Secondary School Complexes (JSS 1 to SSS 3).

5,934 teachers of which 1,582 Mathematics and Science teachers (physics, chemistry, Natural Science) teach in Public Secondary Schools. A great part of the teaching staff is composed of "National Civil Service Conscripts" and Contract-based teachers. Majority of these two categories of teachers have not undergone pedagogical pre service training. In mathematics and science field, Niger has never succeeded in meeting its needs for teachers. This often led to existing teachers being overloaded. The government has often called upon teachers whose profiles do not always match the needs.

16 Educational Inspectors (among which 11 Mathematics and Sciences Inspectors) and 223 Educational Advisors (among which 93 Mathematics and Science Advisors) assure the pedagogic supervision of teachers.

For years a shift system has been used (two groups of students alternating in the same classroom with the same teacher) to cope with the increasing of students number in primary school. Moreover, since October 2003, the Ten-Year Education Development Programme (PDDE) was launched. Through this programme, Niger intends to reach its



targets of Education For All by the year 2015. Therefore, it is expected that there will be a significant increase flow of students from primary school to secondary school - which will induce an increase of the needs in infrastructure, equipment and training in secondary education.

Both internal and external yields of the Niger education system are very low. Mathematics and Science teaching is very theoretical in Niger. The main causes of these being shortage of teaching materials, the weakness of the pre-service and in service training and poor pedagogic supervision.

As the other developing countries, Niger needs executives mastering Science and technology, for its economic take-off. Hence, Mathematics and Science strengthening has become a surety for a successful training of such executives. This is why, Niger teachers and instructors set up the association for the promotion of Mathematics and Science; which allowed Niger to become a member of SMASSE - WECSA (Strengthening of Mathematics and Science in Secondary Education in Western, Eastern, Central and Southern Africa). Niger has hopes of developing sub-regional cooperation in the field of Mathematics and Science.

Considering the above, the Department of Basic Cycles II and Intermediate Grade (BECB2/M) - under the Ministry of Secondary and Higher Education - Research and Technology (MESS/R/T) initiated this project to support the quality component of Ten-Year Education Development Programme (PDDE); actually, PDDE plans:

- (1) The reform on curricula (PDDE options, page 8); such activity is the responsibility of the National Inspectors of Education (see page 11 of PDDE)
- (2) The improvement of teachers' initial training (target objectives, page 62 of PDDE document);
- (3) The improvement of teachers' performances (target objective, page 70 of PDDE);
- (4) The set up of a division in charge of initial and continuous training within the Department of Basic Cycles II and Intermediate Grade (see page 72 of PDDE);
- (5) The structure of Educational Units (UP) (see page 72 of PDDE);
- (6) The provision of booklets, teaching manuals, guides and other teaching materials to students and teachers (see page 90 of PDDE);

This project could also be a way to reach the goals set up in the letter of understanding signed between SMASSE-WECSA and NEPAD (the New Partnership for Africa's Development). This letter is an agreement for the promotion of Mathematics and Science.

3. BACKGROUND of The Project

3-1. Overview of Education Sector:

In 1998 the Orientation Law of the Educative System (LOSEN) was promulgated. Education system of Niger attributes to this law.

- (1) Informal education: (knowledge acquisition, the aptitudes and the attitudes by the daily experience and the relations with the environment);
- (2) Non formal education :(acquisition of education and professional education in a non school design: schooling, confessional schools...)
- (3) Formal education: (Education in school design) this formal school consists of:
 - (4) Basic education (pre-school, Bases I and Bases II);
 - (5) Middle education
 - (6) Higher education.

The school period is as follows:

Various Cycles		Duration of Academic Cycles	Main Diplomas
Basic cycle	Pre- school	3 years	
	Base cycle I	6 years	CFEPD (Certificate of end of the first degree)
	Base cycle II	4 years	BEPC (Certificate of end of second degree)
Middle		3 years	Baccalaureate
Superior		2 to 7 years	University diplomas

3-1-1 Primary Education

In October 2003, Niger started its ten years Education Development Program. Through this program, Niger would like to reach the goals of Education for All by the year 2015. Thus there will be a significant number of students graduating from primary school. This will increase the secondary education's needs in terms of infrastructure, equipment and training.

3-1-2 Secondary Education

In Niger the secondary education is divided in two, the Bases II and Middle education cycles. It is further subdivided into technical secondary education, Arabic - French education and general secondary education. In the academic year 2005-2006 the general secondary education has 28 school inspections 5 of which belong to Arabic – French education. The school inspections are composed of 313 modern public secondary schools (from first to fourth year in secondary school level); 16 high schools and 46 secondary education complexes (schools of both secondary & high schools). According to the annual statistic for the year 2001 general secondary education has 102,145 pupils including 16,817 high-school students.

Courses are ensured by 5934 teachers among them 1582 in mathematics and science. Teachers are classified into teachers with tenure, contractual teachers, and those on national youth service. Usually the last two groups never have initial nor in service pedagogic training. For the entire country the pedagogic training is ensured by 223 pedagogic advisors (93 in mathematics and science). The number of school inspectors is 16 (11 in mathematics and science)

BASE II AND MIDDLE CYCLE EDUCATION (DECB2/M) DIRECTION' S ROLE

The DECB2/M is responsible for the definition, elaboration and implementation of the general policy and national strategies concerning Base II and Middle cycles education; It also defines enrolment conditions and ensures their strict respect;

It controls students' schooling (enrolment, transfers, admission to superior level, failure, and exclusion);

The DECB2/M has under many divisions under its authority. National Pedagogic Inspection (IPN) is one of them.

The National Pedagogic Inspection (IPN)

The National Pedagogic Inspection proposes pedagogic innovations to improve teaching in the Base II and Middle cycles, takes part in the elaboration of the curriculum and official instructions, ensures curriculum and teachers evaluation, participates in choosing didactic material. It also ensures the pedagogic advisors and teachers with in-service training.

The National Maintenance Centre (CNM)

The CNM is in charge of the didactic material production and maintenance of materials, as well as the in-service training of laboratory assistants and management of laboratories.

3-2. Challenges Existing in Secondary Mathematics and Science Education

There is a lack of large scale statistics on the results of the examinations in mathematics and sciences. That is why we present some studies made about small sample data. These statistics shows that the performance in mathematics and science have been poor.

2004 BEPC RESULTS

Subject	Registered Candidates	Candidates Average	above	Percentage
Mathematics	2,112	134		6,34%
Physics & Chemistry	2,112	531		25,14%
Natural Sciences	2,846	1,465		51,47%

A. LEVEL RESULTS

Sections	Registered	Average in maths	%	Average in P.C	%	Average in L.E.S	%
C	18	09	50	06	30	05	27,7
D	195	15	07,69	15	07,69	47	24,1

Sections	Registered	Pass	%	Average in Maths	%	Average in PC	%	Average in L.E.S	%
C	18	15	83,33	12	80	10	66,66	05	33,33
D	195	38	19,48	25	65,78	34	89,47	34	89,47

A similar situation was reported in other African countries during SMASSE-WECSA conferences. The reasons for the poor performance could be attributed to the following factors in mathematics and science teaching.

Programme

The secondary school curricula in African countries are very wide. In addition to the overloaded curricula, contents of the curricula in secondary schools especially in mathematics and science are developed without thinking of local application.

Teaching methods

In many African countries, the teaching methods used are poor. Usually they are not student-centred. Student activities, experiments, and improvisation are not planned in lessons. Thus "Chalk and Talk" method is in practice in most of African countries.

Little or no attention is paid to gender issues, individual differences, teaching methods, evaluation or classroom management in most countries.

Except for some few countries where enough qualified teachers are available most countries deal with unqualified and under-qualified teachers who not only apply wrong teaching methods but at times lack content mastery.

Concerning teaching methods in Niger, the Orientation Law asked:

- (1) to privilege observation's spirit, analysis and synthesis;
- (2) to combine theory with practice;
- (3) to create and stimulate creativity, initiative and so on.

Also the orientation of the education system encourages the acquisition of the scientific step (observation, identification of a problem, experimentation on examples, to connect result, to build an argumentation, to formulate solution, to control the results obtained and to evaluate their relevance according to the studied problem). However, in practice, magisterial teaching is used the most. The principal reasons of this kind of teaching are: little training of the teachers and lack of didactic materials. The teachers also talk about the plethora of students and lack of time.

Teaching/learning materials

In Africa, it is reported that teaching/learning resources are inadequate and at times not available. Many countries have similar problems with textbooks, laboratories and equipments/ chemicals. However, the problem is that there is no experiment / practice due to teachers' negative attitudes although materials are available.

In Niger, there are about 81 laboratories according to the statistics of 2004. However, this number is very insufficient taking school population into account. Very often these laboratories lack materials and equipment. To solve this problem NATIONAL CENTER OF MAINTENANCE was created in Niamey to provide some the materials to schools.

In mathematics, the books used are those of collection CIAM (a product of the Harmonization of the Programmes of Mathematics in the French-speaking countries of Africa, of the Indian Ocean and the Caribbean). These books deal widely with Niger program. For the few chapters which miss, cards were elaborate. The experiment of the cards is also carried out in physical sciences. In all the subjects, number of books is

insufficient (1 book for 10 or 15 pupils according to localities').

This centre helps to provide didactic materials in physics and natural sciences. The aim of this centre is to test created materials and also to repair the existing materials in case of failure.

In physics the books are: Euringie and Tomasino collection for high school. Durandeau and some cards in secondary school (third & fourth class)

In Natural Science, the books used are: Biology Tavenier Bordas (form 1, 2 &3) for high school.

For secondary school: Collection Savane et forêt and Biologie R . Djakou

Teachers

The common problem, which Niger and neighbouring countries face, is lack of qualified teachers, especially in mathematics and sciences. Moreover, there are very few mathematics and science female teachers in all countries. Negative attitude towards mathematics and science by teachers eventually gets to the learners.

Learners

Many students dislike mathematics and sciences. Some display negative attitude in learning and attending school. Poverty and family misunderstanding affect teaching and learning in many countries.

Administration

The administrative processes of provision and maintenance of physical facilities, curriculum instruction, staff development and financial management are poor.

Urgent Problems to Solve Teaching of Mathematics and Sciences in Niger

The urgent problems to solve are:

- (1) lack of qualified teachers; how to bring the contractual teachers and those of national youth service to become more qualified teachers;
- (2) to change programs into curriculum;
- (3) lack of references for teachers;
- (4) to provide enough books for pupils;
- (5) to build and equip the laboratories;
- (6) to take account the evolution of sciences (for examples to take account of the contribution of new the information technology and the communication for teaching);
- (7) construction of classes in order to improve the overloaded classrooms;
- (8) insufficient number of pedagogical supervisors;
- (9) equipment for school inspections with materials and logistics means for monitoring.

3-3. Government Policy in the area of Mathematics and Science Teaching

Niger opted for a scientific and technological education. To achieve this objective,



several strategies and actions are defined.

3.3.1 Legal Texts:

Orientation Law

The Law N°28-12 of 1st June 1998 relating to Niger Educational System orientation, stipulates in its Title II, section III: (Contents and methods)

Article 15: The Educational System aims at,

On the level of Contents,

- (1) Providing a training focussed on the objective realities of the environment while taking into account the economic, technological, social, and cultural evolution of the world;
- (2) Value scientific and technological education;
- (3) Providing education on environmental protection and preservation;

on the level of methods:

- (1) prioritising observation, analysis, and synthesis spirit;
- (2) combining theory and practice;
- (3) creating and stimulating creativity, initiative and entrepreneurship.

Decree N°2003-244 B /PRN/MESS/R/T of 30th September, 2003, fixing the modalities of scholarship granting and regulation:

This Decree, in its Articles 17 and 18, gives the advantages to students in scientific specialization: a student in Science who passed the A Level (Baccalaureate) Exam in first group with an average grade of 10/20 can claim a full scholarship while the requirement for Art for the same is at least a grade of 12/20.

Teaching Programs

Development of consistent programs which give an importance place to the scientific approach;

Programs recommending the use of available technological means in teaching (scientific and programmable calculators, computer, video-projector, overhead projector...).

Soon, in the PDDE (Ten-year Education Development Program) framework, curricula will be developed with an option "based on skills".

3.3.2. Production and Acquisition of Educational Materials

In this area, several activities are in progress/planned:

- (1) Construction and equipment of laboratories;
- (2) Conduct workshops on educational material development and maintenance;
- (3) Encouraging improvisation;
- (4) Design of school textbooks;
- (5) Establishment of computer classrooms;
- (6) Establishment of resource centres (Libraries, scientific activity centre (CAS) video- library).

3.3.3 Training

Several types of training have been planned and conducted:

- (1) Pedagogic Inspector and Advisor training (227 Secondary Education Advisors,

- and 54 Secondary Education Inspectors – for all subjects);
- (2) Laboratory Technician training;
- (3) Teacher training (the PDDE plans to train 1800 Junior Secondary School teachers (for all subjects) over the period 2003 – 2007);
- (4) Pre Service training (for all subjects) for 2163 National Civil Conscripts (ASCN) and contract-based teachers;
- (5) Retraining of Pedagogic Inspectors and Advisors;
- (6) Retraining of 926 teachers for experimental sciences.

3.3.4 Research in the area of teaching materials of Mathematics and Science

In this area, following attempts are planned;

- (1) Establishment of pedagogic vitalization and reflection centre ;
- (2) Establishment of Internet sites;
- (3) Establishment of a Newsletter of Mathematics and Science teachers;
- (4) Cooperation with other countries and other institutions.

3.3.5 Other Activities

In promoting the teaching of Mathematics and Sciences, the following actions were carried out:

- (1) Olympiads, Rallies and Mathematics Games;
- (2) Participation in Mathematics and Science Excellence Camp;
- (3) Support to Mathematics and Science Associations.

3.3.6 Institutional System

For the success of the above-mentioned actions, it is anticipated the restructuring and stimulation of training and supervision system (National Pedagogic Inspectorate (IPN), Pedagogic Units (UP), Secondary School Inspectorate (IES), College of Education (ENS), National Maintenance Centre(CNM), Scientific Activity Centre(CAS). In addition there is a plan to establish Regional Pedagogic Inspectorates (IPR) and School Management Committees for Secondary Schools (COGES).

The achievement of the actions above-defined will enable the transformation of usual theoretical teaching of Sciences into an experimental teaching focused on the student activity.

3.4 Education Projects undertaken by the Government, Doners, NGOS

3.4.1 African Development Fund (ADF)

The actions achieved or planned by ADF Education Projects:

- (1) Training of Laboratory Assistants and Pedagogic Inspectors;
- (2) Retraining of 926 teachers for Experimental Sciences;
- (3) Support to the CNM for the production of educational materials;
- (4) Rehabilitation, construction and equipment of laboratories;
- (5) Training to project establishment concept;
- (6) Training in gender issues;
- (7) Support to young girls' education.

3.4.2 Canadian Support to Basic Education

At the secondary level, following were realized by Canadian cooperation:

- (1) Provision of a vehicle;
- (2) Organization of training sessions for Pedagogic Advisers;
- (3) Development of a curriculum.

3.4.3 Actions achieved or planned by other partners

- (1) Mathematics Rally in collaboration with Champagne Ardennes (France);
- (2) Pedagogic reflection and vitalization centre is planned to be established with the project "Support to Researches, Contextualization and Harmonization of Secondary Education (ARCHES).
- (3) Support to young girls' education by NGOs:

4. The Project Design Matrix

4.1 Overall Goal

Ability of mathematics and science of Junior High school students is improved

4.2 Project Purpose

Teaching ability of mathematics and science teachers is strengthened through In Service Education and Training (INSET).

4.3 Coverage and Duration

The project will be implemented in Niamey, Dosso and Tillabéri regions on pilot regions. The criteria for selection of the pilot regions was based on performance in mathematics and science and accessibility. Three Years from September 2006 to August 2009

4.4 Target Group

The project will target the following categories of beneficiaries:

- (1) Over 954 Junior high school mathematics and science teachers in pilot regions
- (2) All Pedagogical inspectors and Pedagogical advisors
- (3) All Junior High school principals, Stakeholders and COGES in pilot regions

4.5 Outputs

The project will have three outputs:

- (1) National and Regional teams for INSET are established.
- (2) Teachers' teaching skills in mathematics and science are improved.
- (3) Supporting system for INSET project is established

4.6 Activities

To achieve the outputs, major activities are planned as follows:

Output 1: The National and Regional teams for INSET are established

- (1) Conduct a baseline survey on teaching and learning of mathematics and science.
- (2) Identify National Trainers.
- (3) Conduct training for national trainers in Kenya.
- (4) Develop a curriculum and training materials for training at national and regional level.
- (5) Identify Regional Trainers (RTs).

- (6) Conduct training for regional trainers in Niamey.
- (7) Monitor and evaluate the quality of INSET.

Output 2: Teachers` teaching skills in mathematics and science is improved.

- (1) Identify INSET clusters in the regions.
- (2) Identify training Centres.
- (3) Train teachers within the clusters
- (4) Monitor and evaluate the quality INSET
- (5) Monitor and evaluate impact of INSET in the classroom

Output 3: Supporting system for INSET project is established

- (1) To hold a stakeholders workshop (Pedagogic Inspectors and Advisors, qualified teachers, school Principals, representative of COGES and development partners).
- (2) To train school principals in monitoring and evaluation of impact of INSET.
- (3) To train stakeholders on INSET according to the needs.

4.7 Inputs

To implement the planned activities, the Government of Niger and JICA will provide the following inputs.

(1) Government of Niger

Counterparts

- (1) National Coordinator
- (2) Pedagogic Inspector for Mathematics
- (3) Pedagogic Inspector for Natural Science
- (4) Pedagogic Inspector for Physics/Chemistry
- (5) Pedagogic Inspector for material maintenance (CNM)
- (6) Administrative Inspector
- (7) Pedagogic Advisor in English
- (8) Assistant Staff
- (9) Office space and facilities necessary for the project
- (10) Local expenses necessary for the project such as utility (Electricity, Gas, Water etc.)

(2) Japan

- (1) Long term expert
- (2) Short-term experts from SMASSE – Kenya
- (3) Training of counterparts in Kenya and Japan
- (4) Equipments necessary for the project
- (5) Local costs for the project

4.8 Important Assumptions

- (1) Academic activities in the school are not interrupted
- (2) During the project period the trained stakeholders remain in their post
- (3) Working conditions of teachers, inspectors and advisors do not worsen
- (4) The national and regional trainers and trained teachers remain in those positions during the project

4.9 Pre Conditions

- (1) Populations in concerned regions, ANPEMS and teachers` unions are not against the project
- (2) Niger Government policy towards promotion of mathematics and science teaching and learning does not change

5. Administration

The project will be implemented by the Ministry of Secondary and Higher Education, Research and Technology

5.1 Joint Coordinating Committee (JCC)

The Joint Coordinating Committee will be established for the effective and smooth implementation of the Project.

Functions :

- (1) To provide overall management and administration of the project
- (2) To finalise the Annual Plan of Operations based on the progress and financial reports submitted by the National Coordinator
- (3) To evaluate the overall progress of the project
- (4) To exchange views on any major issues arising from or in connection with the implementation of the project

Composition:

On Niger side	On Japan side
SG/MESS/R/T (Secretary General, Ministry of Secondary and Higher Education, Research and Technology).	JICA Resident Representative
DGE/MESS/R/T(Director General of Education, Ministry of Secondary and Higher Education, Research and Technology	Long Term Expert
DEP/MESS/R/T (Director of Planning and Programming, Ministry of Secondary and Higher Education, Research and Technology)	JOCV Coordinator
DECBI/M/MESS/R/T (Director of Base II and Middle Cycles Education, Ministry of Secondary and Higher Education, Research and Technology)	Members of JICA study team
Project National Coordinator (PNC)	

5.2 National Project Team

The Project Team will be established for the smooth implementation of the Project on daily basis.

Functions :

- (1) To take daily administrative responsibility of the project
- (2) To monitor the progress of project activities
- (3) To develop training curriculum for all levels of INSET
- (4) To develop training materials for all levels of INSET

- (5) To select regional trainers
- (6) To sensitize stakeholders to gain support on INSET
- (7) To develop monitoring and evaluation tools for INSET
- (8) To implement every measure to improve the smooth operation of the project
- (9) To award certificates at all levels

Composition:

On Niger side	On Japan side	
National Coordinator	Long Term Expert	
5 National Trainers: One Pedagogic Inspector of Mathematics; One Pedagogic Inspector of Physics and Chemistry; One Pedagogic Inspector of Natural Science; One Pedagogic Advisor of Maintenance; One Administrative Inspector.		
One Pedagogic Advisor of English.		Short Term Expert
Assistant Staff		

5.3 National Coordinator

Profile :

- (1) Pedagogic Inspector for Mathematics or Science (Physics & Chemistry, Natural Science) with at least 5 years of experience in the position.
- (2) Be an active member of ANPEMS.
- (3) Have a large experience in the activities of SMASSE – WECSA (Strengthening of Mathematics and Science in Secondary Education for Western, Eastern, Central and Southern Africa).
- (4) Have large capacity in working in team.
- (5) Have a good knowledge of computer.
- (6) Have a good capacity in the area Human Resource Management.
- (7) The knowledge of English Language is an asset.

Roles

- (1) Coordinate planning, organisation, administration, monitoring and Monitoring of the project activities at all levels (both national and regional) ;
- (2) Initiate any measure likely to improve the smooth operation of the project;
- (3) Coordinate funding of all the project activities at all levels ;
- (4) Coordinate the preparation and dissemination of project activity publications;
- (5) Coordinate the issuing of participation certifications in training sessions at all levels.

5.4 Long Term Expert

The Japanese Long Term Expert dispatched by JICA will be the coordinator for the project. The role of the coordinator will be:

- (1) to advise counterparts on implementation and management of the project
- (2) to assist counterparts in developing annual work plans

5.5 National Trainers

There are 25 in number, in addition to the National Coordinator; they form 4 groups of 6 persons each:

5.5.1 The Mathematics Group

It comprises 2 Pedagogic Inspectors, 2 Pedagogic Advisors, and 2 Mathematics teachers.

5.5.2 The Natural Science Group

It comprises 2 Pedagogic Inspectors, 2 Pedagogic Advisors, and 2 Natural Science teachers.

5.5.3 The Physics and Chemistry Group

It comprises 2 Pedagogic Inspectors, 2 Pedagogic Advisors, and 2 Physics and Chemistry teachers.

5.5.4 The stakeholders Group

It includes 1 Administrative Inspector, 2 School Headmasters, 3 representatives of Mathematics, Physics and Chemistry, and Natural Science subjects.

These groups design the training modules at national level, and train the School Headmasters and regional trainers (Pedagogic Advisors and qualified teachers). They also participate in the evaluations the regional training sessions

Profile:

Have one of the following functions:

- (1) Pedagogic Inspector for Mathematics or Science (Physics & Chemistry, Natural Science).
- (2) Pedagogic Advisor for Mathematics or Science (Physics & Chemistry, Natural Science) or for material Maintenance.
- (3) Teachers of Mathematics or Science (Physics & Chemistry, Natural Science).
- (4) Administrative Inspector.
- (5) School Principal.

* Have at least 3 years of experience in the position.

* Be motivated for the Promotion of Mathematics and Science (member of ANPEMS).

Roles

The roles and responsibilities of the National Trainers shall be:

- (1) Develop curriculum for INSET at all levels in consultation with the National Project Team.
- (2) Develop national training modules for INSET at all levels in consultation with the National Project Team.
- (3) Conduct training sessions at national level.
- (4) Conduct sensitisation actions toward the Educational System stakeholders.

- (5) Implement any measure aiming at the improvement of the smooth operation of the project.

5.6 Regional Project Team

The regional project team will be established for smooth implementation of INSET for teachers at regional level with close cooperation with national project team

Functions:

- (1) To assure daily administrative responsibility at regional level
- (2) To monitor the progress of project activities in the region
- (3) To implement any measure to improve the smooth operation of the project

Composition:

- (1) Regional Director of Secondary and Higher Education
- (2) A representative of the regional trainers
- (3) School Principals of the schools where the regional training will be conducted

5.7 Regional Trainers (RTs)

Regional Trainers will be identified from qualified Junior High school teachers and pedagogical advisors to train teachers on part-time basis.

Profile :

* Have one of the following functions:

- (1) Pedagogic Advisor for Mathematics or Science (Physics & Chemistry, Natural Science) or for material Maintenance.
- (2) Teachers of Mathematics or Science (Physics & Chemistry, Natural Science).

** Have at least 3 years of experience in the position.

* Be motivated for the Promotion of Mathematics and Science (member of ANPEMS).

Roles

- (1) Conduct training sessions at regional level.
- (2) Conduct sensitisation actions toward the Educational System stakeholders at regional level.
- (3) Implement any measure aiming at the improvement of the smooth operation of the project.

5.8. National and Regional INSET Centres

The National INSET centre will be CNM. This will be the training venue for regional trainers, pedagogical advisors and School Principals. Sensitization workshops for stakeholders and COGES of pilot regions will also be conducted at CNM. Schools will be identified in the pilot regions and be designated as regional INSET centres. Regional training will be conducted in these centres.

5.9 Monitoring and Evaluation

The National Coordinator, the Japanese expert, Pedagogic inspectors and advisors, the national trainers, the DEP and the DEB2/M will be responsible for monitoring and evaluation of the project. The national team along with national trainers will design tools for monitoring and evaluation of project activities at all levels. Monitoring and evaluation will be conducted during every training session by the national trainers. In

the regions, pedagogic advisors will carry out regular monitoring of the practice of ASEI/PDSI in the classroom. School principals will also monitor the impact of INSET at classroom level. National trainers will be responsible for monitoring and evaluation of project activities at all levels. About funds, a regular balance sheet of expenses will be drawn up at national level and will be forwarded to Nigerien and Japanese authorities.

5.10 Budget

Niger government and JICA discussed on cost sharing as bellow. Budget shown in the table are guideline for both sides. Niger and Japanese side will make joint efforts to secure the necessary budget for the project. Moreover, detail budget will be consulted among both parties each year according to the progress of project.

	Year 1	Year 2	Year 3	Year 4	Total
JICA	42,011,474	220,604,500	118,098,720	35,082,200	415,796,894
MESS/R/T	8,960,000	34,268,000	21,064,000	3,275,000	67,567,000
Total	50,971,474	254,872,500	139,162,720	38,357,200	483,363,894
JICA %	82.4	86.5	84.8	91.4	86
MESS/R/T%	17.6	13.5	15.2	8.6	14

NB: in the table, the currency unit is CFA

6. Feasibility of the Project

6.1 Relevance

There is critical need for training in the area of Mathematics and Science at Secondary level in order to achieve the national goals of the Poverty Reduction Strategy (PRS), and the Nigerien Educational System Orientation Law (LOSEN). We must emphasise that poor performance of Mathematics and Science teachers is a major obstacle to quality teaching. In addition, the improvement of Nigerien youth capacities in Mathematics and Science is an important factor for the socio-economic development of Niger.

6.2 Effectiveness

The main purpose of the project is to improve classroom practices of Mathematics and Science teachers. This is the most important and most desirable element in the area of In Service Training. It will be a question of creating a conducive environment for the improvement of the teaching of Mathematics and Science. In addition, support from Principals and the Community will enhance improvement of teaching and learning of Mathematics and Science. Institutionalisation of INSET should be focused on sustainability after the project period.

6.3 Efficiency

A transparent mechanism is defined for funds management. Verifiable indicators are defined for project evaluation. The project will utilize existing facilities and local materials in order to minimize the costs.

6.4 Impact

INSET will improve the pedagogical skills of teachers enabling them to teach effectively in the classroom. Impact of INSET will be felt in the classroom where an appropriate learning environment will be created for the students. Thus the attitudes of learners toward Mathematics and Science will change positively and the school results will be improved.

6.5 Project Sustainability

The Government of Niger Republic shall provide for the salaries of National and Regional Trainers who will assure the training and monitoring of classroom teachers. The Government will also put at the disposal of the project facilities necessary to its implementation. Sensitisation sessions regarding COGES should at the end mobilize students' parents for their support in project activities. The various partners will assure the project sustainability by respecting their commitment.


7. Conclusion

The diagnosis of the Nigerien Educational system reveals too many deficiencies. All the issues should be treated fully; however, special attention should be made for mathematics and science teaching. Therefore this project is planned to improve this situation.

Teachers are categorised: qualified teachers (teachers with Pre-Service Training in teaching field), and others. Some qualified teachers constitute with the Pedagogic Inspectors and Advisors the trainer group. These teachers teach in classes, but with a reduced time load. The project plans to use the INSET approach in order to achieve its goals. Teachers will be exposed to the ASEI/PDSI methods of teaching during the training. It must be noted that this approach showed its effectiveness in Kenya.

In Niger, Pedagogic Inspectors and Advisors are responsible for teachers In-service Training. To achieve the project goals, a cascade system will be initiated: National Trainers (25 in number) will be trained in Kenya. On their return, they will train 147 Regional Trainers, 155 school principals and sensitize all stakeholders in the pilot regions. The Regional Trainers will train 954 teachers in the field.

Pre-Service Training is assured by Ecole Normale Supérieure of Niamey (College of Education), which has already signed an Agreement with Kenya CEMESTEA in order to develop the ASEI/PDSI Approach. A representative of the Ecole Normale Supérieure of Niamey participated in all the project preparation works. Thus, those who provide the Pre-Service Training are informed of the pedagogical progress made at secondary level so as to take them in account in the teachers Pre-Service Training.



Appendix

Appendix 1 PDM

Appendix 2 PO

Appendix 3 Organization Chart

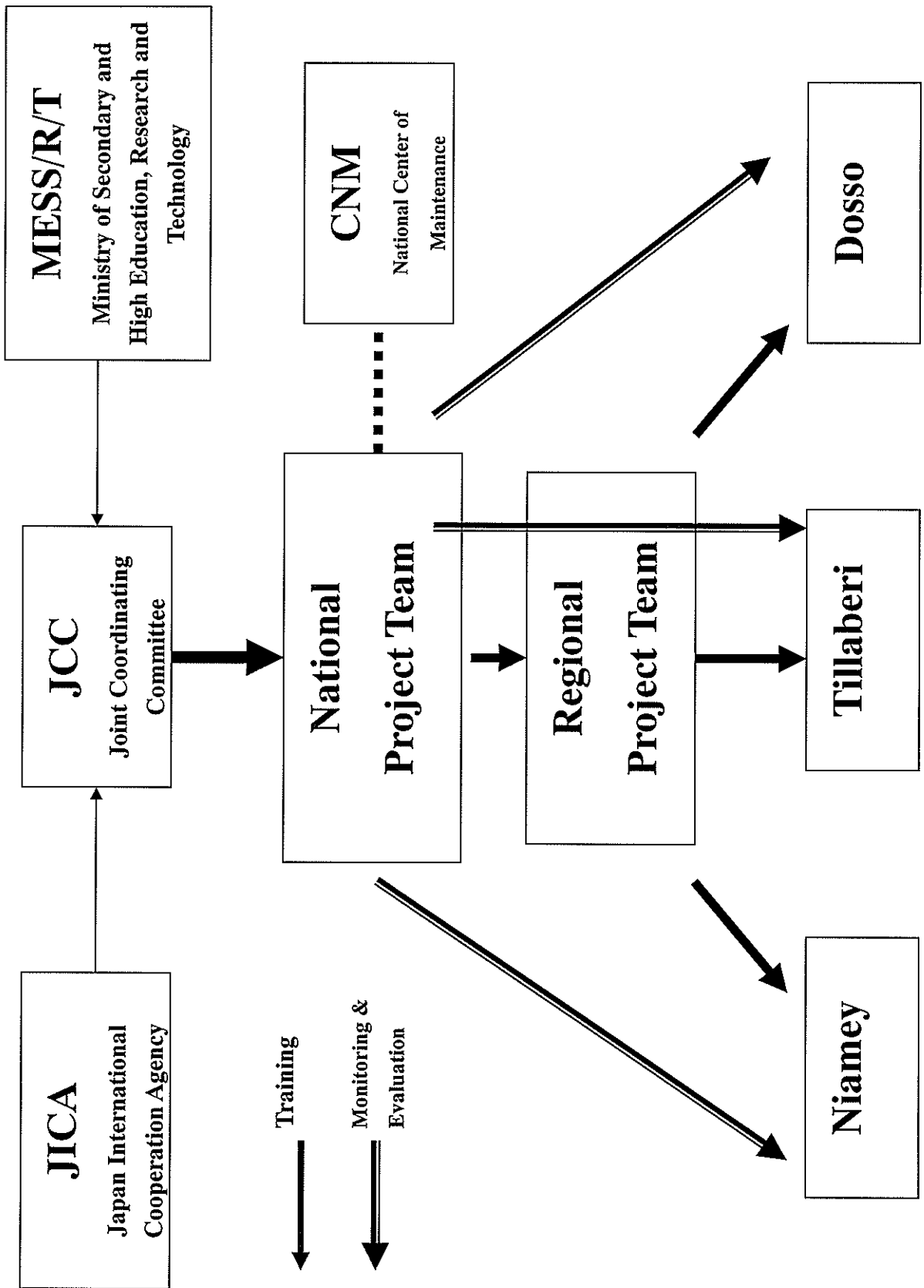


Appendix 1. Project Design Matrix (PDM vol.0)

Project Design Matrix for SMASSE-NIGER			
<p>Title of the project: Strengthening of Mathematics and Science in Secondary Education in Niger (SMASSE-NIGER) Executing body: Ministry of Secondary and High Education, Research and Technology (MESS/R/T) and Japan International Cooperation Agency (JICA) Target Level: Junior High school level (including complex schools) Pilot Regions: Niamey, Dosso, and Tillaberi Target Group: <National level training> Pedagogic Inspectors, Pedagogic Advisors, Qualified Teachers, and School Principals <Regional level training> All the Mathematics and Science teachers in the pilot regions Duration: 3 years</p>			
Narrative summary	Objectively verifiable indicators	Means of verification	Important Assumptions
<p>Overall goal The ability of Mathematics and Science of Junior High school students is improved.</p>	<p>Performance of the End of Year Exams in the pilot regions improves Performance of students according to the Project is improved in M&E the pilot regions</p>	<p>Result of End of Year Exams Monitoring and Evaluation Reports</p>	
<p>Project Purpose Teaching ability of Mathematics and Science teachers is strengthened through the In-Service Education and Training (INSET.)</p>	<ul style="list-style-type: none"> Over ****% of mathematics and science Teachers in the pilot regions practice ASEI-PDSI method of teaching in the classroom Student attitude towards mathematics and science lessons improve (enrolment in mathematics and science, student involvement in Teaching and Learning activities etc.) Students participation in class has improved based on project M & E tools. 	<p>Project Monitoring and Evaluation Reports</p>	<p>The trained teachers will continue practicing the skills through the training in the class rooms. The National and Regional Trainers of the Project and trained teachers remain in those position during the project. The treatment of teachers will not get worse.</p>

<p>Outputs</p> <p>1 The National and Regional Teams for INSET are established.</p>	<p>1(a) National Project Team counterparts are assigned and working for the Project 1(b) Over 20 National Trainers are recruited and trained by SMASSE Kenya 1(c) Over 120 Regional trainers are trained in Niamey 1(d) BY the end of the Project ****sets of training materials are developed and produced. 1(e) Based on the Project M & E tool, the quality of INSET training for the National and Regional Trainers is rated more than **** points.</p>	<p>Project Monitoring and Evaluation Reports</p>	<p>Academic activities in schools are not interrupted. During the project period, the trained stakeholders remain in their post. Working condition of teachers, inspectors and advisors do not worsen.</p>
<p>2 Teachers' teaching skills on Mathematics and Science are improved.</p>	<p>2(a) More than 600 teachers received training at least twice during the project. 2(b) Teachers attitude and practice of ASEI-PDSI obtain a mean of **** based on the Project M & E.</p>	<p>Project Monitoring and Evaluation Report</p>	
<p>3 Supporting system for the INSET project is established.</p>	<p>3 By the end of the project, (a) All the activities planned in the INSET plan is conducted properly without delay (b) Over 60% of stakeholders(especially School Principals, and representative of COGES) undergo sensitization workshop (c) Over 100 school Principals undergo training.</p>	<p>Project Monitoring and Evaluation Report</p>	

<p>Activities</p> <p>Output 1: The National and Regional team for INSET is established.</p> <p>1-1 to conduct baseline survey on Mathematics and Science education</p> <p>1-2 to identify National Trainers</p> <p>1-3 to undergo training in SMASSE Kenya</p> <p>1-4 to develop curriculum and training materials for the National and Regional training.</p> <p>1-5 to identify Regional Trainers</p> <p>1-6 to conduct training for Regional Trainers in Niamey</p> <p>1-7 to monitor and evaluate the quality of INSET.</p> <p>Output 2: Teachers' teaching skills on Mathematics and Science are improved..</p> <p>2-1 to identify INSET clusters in each region</p> <p>2-2 to identify the venue for the training</p> <p>2-3 to train teachers within the INSET clusters</p> <p>2-4 to monitor and evaluate the quality of INSET.</p> <p>2-5 to monitor and evaluate the impact of INSET in the classrooms.</p> <p>Output 3: Supporting system for the INSET project is established.</p> <p>3-1 to hold a stakeholders workshop (Pedagogic Inspectors, Pedagogic Advisors, Qualified Teachers, School Principals, representative of COGES and the development partners)</p> <p>3-2 to train the School Principals in Monitoring and Evaluation of impact of INSET in the classrooms.</p> <p>3-3 to train stakeholders on INSET according to the needs.</p> <p>3-4 to monitor and evaluate the quality of training</p> <p>3-5 to monitor and evaluate the impact of the training on stakeholders</p>	<p>Inputs</p> <p>Japan</p> <ul style="list-style-type: none"> • Long-term expert • Short-term experts • Training of counterparts in Kenya and Japan • Equipments necessary for the Project • Cost for the Project 	<p>Niger</p> <ul style="list-style-type: none"> • Counterparts 1. National Coordinator 2. Pedagogic Inspector for Mathematics 3. Pedagogic Inspector for Natural Science 4. Pedagogic Inspector for Physics-Chemistry 5. Pedagogic Advisor for material maintenance(CN M) 6. Administrative Inspector 7. Pedagogic Advisor in English 8. Assistant Staff • Building and Facilities • Cost for the Project 	<p>Precondition</p> <p>Population in concerned regions, ANPEMS and teachers' union are not against the project.</p> <p>Niger government policy towards promotion of mathematics and science teaching and learning does not change.</p>
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