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DEVELOPMENT OF HUMAN RESOURCES IN BURUNDI

IDENTIFICATION OF TRAINING NEEDS

PROVISIONAL REPORT N° 1

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The CURDES team who completed this study was composed as follows :

- Zacharie NTAMBWIRIZA : - Doctor of Law  
- Professor of the Department of Law of  
the University of Burundi.
- Joseph AKILIMALI : - Bachelor of Economics  
- Assistant of the Department of  
Economics and Administrative Sciences  
of the University of Burundi
- Anastase MAFARANGA : - Bachelor of Law
- Juvenal MANIRAMBONA : - Bachelor of Economics
- Magnus NTAKIRUTIMANA : - Bachelor of Education
- Oda SINDAYIHERUKA : - Bachelor of Economics.

## LIST OF ABBREVIATIONS

A.C.A.	:	Math Workshop (Atelier de Calcul)
A.E.F.	:	Domestic Economy Workshop (Atelier d'Economie Familiale)
A.E.M.	:	Workshop for Study of Environment (Atelier d'Etude du Milieu)
A.F.C.	:	Workshop for Continuing Training (Atelier de formation Continue)
A.F.I.	:	Workshop for Initial Training (Atelier de formation Initiale)
A.KI	:	Workshop for Kirundi (Atelier de Kirundi)
A.FR	:	Workshop for French (Atelier de Français)
A.T.P.A.	:	Workshop for Practical Agricultural Works (Atelier de Travaux Pratiques Agricoles)
Auxil. Infirm.	:	Nursing aids (Auxiliaires infirmières)
B.E.E.T.	:	Office of Studies of Technical Training (Bureau d'Etudes de l'Enseignement Technique)
B.E.P.E.S.	:	Office of Studies of Secondary Education (Bureau d'Etudes de l'Enseignement Secondaire)
B.E.R.	:	Office of Rural Education (Bureau d'Education Rurale)
B.I.T. (I.L.O.)	:	International Labor Organization (Bureau International du Travail)
CA.F.R.A.D.	:	African Center for Administrative Research for Development (Centre Africain de recherche Administrative pour le Développement)
CE.FO.COOP.	:	Center of Cooperative Training (Centre de Formation Coopérative)
C.F.U.A.	:	Center of Training for Agricultural Extension Workers (Centre de Formation des Vulgarisateurs Agricoles)
C.H.U.K.	:	The University-Hospital Center of Kamenge (Centre Hospitalo-Universitaire de Kamenge)
C.P.F.	:	Center for Improvement and In-Service Training (Centre de Perfectionnement et de Formation en Cours d'Emploi)
C.P.L.R.	:	Prince Louis Rwagasore Clinic (Clinique Prince Louis Rwagasore)

C.S. : Health Center (Centre de Santé)  
 D.H.E.R. : Department of Water and Rural Electrification  
 (Département de l'Hydraulique et de l'Electrification  
 Rurales)  
 D.U.T. : University Diploma of technology (Diplôme  
 Universitaire de Technologie)  
 ECO.SO. : Homemaking School (Ecole Sociale)  
 ECO.JO. : Journalism School (Ecole de Journalisme)  
 E.N.E.FA. : Normal School of Familial Economy (Ecole Normale  
 d'Economie Familiale)  
 E.P.J. : Judiciary Police School (Ecole de Police Judiciaire)  
 E.S.CO. : Advanced School of Commerce (Ecole Supérieure de  
 Commerce)  
 E.S.T.A. : Secondary School of Administrative Techniques (Ecole  
 Secondaire des Techniques Administratives)  
 E.T.A.S. : School of Specialized Agricultural Technique (Ecole  
 Technique Agricole Spécialisée)  
 E.T.G. : Technical School of Management (Ecole Technique de  
 Gestion)  
 E.T.M. : Intermediate Technical School (Ecole Technique  
 Moyenne)  
 E.T.M.M. : School for Intermediate Technique of Trades (Ecole  
 Technique Moyenne des Métiers)  
 E.T.P. : Professional Technical School (Ecole Technique  
 Professionnelle)  
 E.T.P. : School of Public Works (Ecole des Travaux Publics)  
 E.T.S. : Secondary Technical School (Ecole Technique  
 Secondaire)  
 E.T.S.A. : Secondary Technical Art School (Ecole Technique  
 Secondaire d'Arts)  
 FACAGRO : Department of Agronomy (Faculté d'Agronomie)  
 F.P. : Civil Service (Fonction Publique)  
 F.S. : Department of Sciences (Faculté des Sciences)  
 H.P.R.C. : Prince Regent Charles Hospital (Hôpital Prince Regent  
 Charles)  
 I.D.E. : Economic Development Institute (Institut de  
 Développement Economique)

I.E.P.S.	:	Institute of Physical Education and Sport (Institut de l'Education Physique et Sport)
I.I.A.P.	:	International Institute of Public Administration (Institut International d'Administration Publique)
I.I.S.A.	:	International Institute of Administration (Institut International des Sciences Administratives)
I.P.	:	Pedagogical Institute (Institut Pedagogique)
I.P.D.	:	Pan-African Institute for Development (Institut Panafricain pour le Développement)
I.S.A.	:	Advanced Institute of Agriculture (Institut Supérieur d'Agriculture)
I.S.A.BU	:	The Institute of Agronomic Sciences of Burundi (Institut des Sciences Agronomiques du Burundi)
I.T.A.B.	:	Institute of Agricultural Techniques of Burundi (Institut des Techniques Agricoles du Burundi)
I.T.S.	:	Advanced Technical Institute (Institut Technique Supérieur)
LAPHAVET	:	Veterinary Pharmaceutical Laboratory (Laboratoire Pharmaceutique Vétérinaire)
L.S.H.	:	Letters and Humanities (Lettres et Sciences Humaines)
Med. Gener. Nat.	:	National General Practitioners (Medecins Généralistes Nationaux)
M.F.P.	:	Civil Service Mutual Insurance Company (Mutuelle de la Fonction Publique)
Nb, Nbre	:	Number (Nombre)
O.C.I.BU.	:	Office of Burundi Coffee (Office des Cafés du Burundi)
O.M.S. (W.H.O.)	:	World Health Organization (Organisation Mondiale de la Santé)
O.NA.MA.	:	National Office of Agricultural Mechanization (Office National de Mécanisation Agricole)
O.R.L.	:	Otho-Rhino-Laryngology (Otho-Rhino-Laryngologie)
O.T.B.	:	Office of Burundi Tea (Office du Thé du Burundi)
P.M.I./P.F./E.S.	:	Maternal and Infant Protection, Family Planning and Health Education (Protection Maternelle et Infantile, Planification Familiale et Education Sanitaire)
P.N.U.D. (UNDP)	:	United Nations Development Program (Programme des Nations Unies pour le Développement)
P.S.E.	:	Psychology and Education (Psychologie et Sciences de l'Education)

P.T.	:	Full time (Plein temps)
S.A.R.O.	:	Action and Operational Research Sector (Secteur d'Action et de Recherche Opérationnelle)
Sc.	:	Science (Sciences)
S/D	:	Sub-Department
S.E.A.	:	Economics and Administrative Sciences Department (Sciences Economiques et Administratives)
S.P.T./2000	:	Health for all by the year 2000 (Santé pour tous en l'an 2000)
S.R.D.	:	Regional Society for Development (Société Régionale de Développement)
Techn. Med	:	Medical Technicians (Techniciens Médicaux)
T.P.	:	Part time (temps partiel)
T.P.	:	Public Works (Travaux Publics)
U.S.A.I.D.	:	United States Agency for International Development (Agence Américaine pour le Développement International)
U.	:	Visitor.

## INTRODUCTION

### 1. Problem and Methodology

In the last few years a certain number of studies have been completed concerning the development of Human Resources in Burundi.

The State has demonstrated a growing interest in this question through its action in development planning.

This is the reason why a major effort is currently being undertaken by the Ministry of National Education. Sectoral studies are also being undertaken by the Ministries of Planning, Labor and Professional Training, Agriculture and Livestock, Civil Service, etc.

However, certain aid or development finance institutions still find these studies too general to guide their actions. This is the case of U.S.A.I.D. which has financed this research.

A need has been particularly identified : that of training personnel. It was necessary for someone to take the initiative to follow up research by contacting the administrative services best placed to know their own needs. In effect, both the countries and the international organizations which cooperate with Burundi want to be aware of the training needs for advanced and intermediate personnel in order to participate more effectively in satisfying those needs.

While waiting for the accomplishment of all these initiatives, several aid organizations wanted to have a working document to guide their actions as soon as possible.

This is the goal which the current study tries to fulfill.

It seemed wise, however, in this first phase, at least, to limit the range of the survey to several choices. This is the reason that the current study includes only seven ministries. These are :

- The Ministry of National Education, with special attention to the trainers of trainers ;
- The Ministry of Agriculture and Livestock ;
- The Ministry of Rural Development ;
- The Ministry of Civil Service, with particular attention to the possibilities of strengthening the action of the Center for Improvement and In-Service Training (C.P.F.);
- The Ministry of Public Health ;
- The Ministry of Social Affairs;
- The Ministry of the Feminine Condition.

This choice was not preferential. The survey will eventually include all the Services of the State.

This study is consciously operational. It should result in the elaboration of a directly usable document, which can be used to clarify decision-making by those authorities responsible for coordinating aid actions concerning personnel training. This objective turned out to be difficult to attain in a single attempt, at least for certain sectors. We will come back

to this in the general conclusion, but what we can indicate already is that the data gathered have no definitive character. In effect, they are subject to revision by the services which formulated their needs, either because these services are confronted by unforeseeable events, or simply because the authorities can be led to readjust their choices in terms of their own hierarchy of priorities.

In terms of the methodology used, it is linked easily through the basic plan adopted for each of the sectors studied.

For each of the sectors, a researcher studied the objectives decided by the highest authorities of the State in each ministry ; from this description, the rate of the personnel coverage in the services was studied and then the objectives that each service decided both in the medium and long term. On this subject, we noted with pleasure that most of the sectors of the Administration are beginning to take the year 2000 as the horizon for their long-terms programs.

As a result of planned actions, each service establishes a projection for their personnel needs to accomplish the determined program. When the figures have been gathered, all that is left to do is to enumerate the personnel already working, and those whose training appears to be assured as a result of the capacity of the existing training institutions in the country or those in the process of being created.

Parallel to the analysis of available documentation in the surveyed ministries, the researchers and their advisors exchanged views with administrators at different levels concerning the policy recommended by the sector involved.

Finally, and at the same time, a member of the team completed an analysis of works already written in the area of Human Resources in Burundi.

## 2. THE PLANNING OF HUMAN RESOURCES IN BURUNDI

The planning of human resources in Burundi emanates primarily from the Ministries of Labor and Professional Training, National Education, Planning,

and Civil Service. The process of planning is based on data from statistical surveys, the population census and other available information on the subjects of population, employment, and training.

### 2.1. Objective

The principal concerns are the qualitative and quantitative aspects of human resource planning.

On the quantitative level, human resource planning tries to establish a balance between the size of the active population and the number of employment positions available. It aims at the adjustment of the capacity of the training system to the rhythm of economic and social development. Thus, the balance between the present and future supply and demand for labor constitutes the main concern for the planner of human resources.

On the qualitative level, one aims at the creation of necessary trained personnel for development ; these advanced, intermediate, and technical personnel are classified according to their level of training. The Economic Classification of Burundi (CEB) distinguishes among five categories of training personnel. These are :

1. Advanced trained personnel with general competence : this includes those who have received diplomas from the Departments of :

Law ;

Economics (long cycle) ;

History - Geography ;

Letters (African, English, and French);

Psychology.

2. Advanced trained personnel with technical competence : this includes those who have completed the Departments of :

Agronomy ;

Polytechnics ;

Chemistry - Biology ;

Mathematics - Physics ;  
Medecine ;  
ISTAU (Advanced Institute of Urban Planning);  
ISA (Advanced Institute of Agriculture);  
ITS (Institute of Advanced Techniques).

3. Intermediate trained personnel with general competence. They are from the following Schools and Institutes :

Economics Department (short cycle) ;  
Advanced School of Commerce ;  
Secondary School of Administrative Techniques (long cycle) (following options) ;  
Pedagogical Institutes (French - Kirundi);  
Technical Scholl of Management at Mutumba;  
The Homemaking at Gitega.

4. Intermediate trained personnel with technical competence. They are the graduates of the following schools :

ETS at Kamenge (Secondary School Technical);  
School of Telecommunication (long cycle);  
School of Public Works and Civil Engineering ;  
Institute of Specialized Agricultural Technique (ITAS);  
Nursing Schools;  
School of hygiene technicians;  
Pedagogical institutes - Mathematics-Physics;  
- Biology-Agriculture;  
Secondary School of Administrative Techniques (ESTA following options).

5. Qualified labor which includes those from :

ETS at Kamenge (short cycle) (Secondary Technical School);  
Centers of Training for Agricultural Extension Workers;  
School for medical auxiliaries (nurses aids);  
School for hygiene assistants;  
School for Intermediate Technique of Trades;  
etc.

## 2.2. Results

The planning of Human Resources in Burundi is oriented around three essential points :

- prediction of needs
- prediction of graduates
- the adequacy of employment-training.

### 2.2.1. The prediction of needs

To predict the needs for labor (skilled and unskilled), the planning of human resources takes account of the following elements :

1. The investment program retained within the framework of development plans : at the end of each cycle of planning (usually after five years), the government adopts a new program including the group of projects which could be completed during the period indicated. The accomplishment of these projects will lead to growth in national production. One concludes, thus, that the level of employment will grow proportionately with production ; this indicates that the number of employment positions should correlate with the economic growth of the country. The investment plan thus influences the rate of growth. As a result, the investment program provides the basis for planners on which they can decide the dispositions to take concerning personnel training. Currently the IVth Five-Year Plan of Economic and Social Development gives priority to personnel working in the rural world, those working in teaching and in health. The rates of increase in these sectors are respectively 3.8 %, 2.7 % and 2.9 % while the increase for other sectors is at a rate of 1.7 %.

1.1. The immediate needs required to fulfill planned positions in existing services and businesses.

1.2. The needs of replacement or renewal of personnel due to attrition.

1.2.1. The needs coming from the Burundization of trained personnel. One must note that the appearance of Burundization must be compatible with the training period necessary.

### 2.2.2. The prediction of graduates

The prediction of graduates is in fact the corollary to predictions for qualified personnel in the short, medium, and long term. These allow, in effect, to determine the types of training to privilege as well as the appropriate programs to follow.

The projections of graduates are based on the following data :

- the structure of instruction (all levels);
- the number of participants by type of training;
- the rates of promotion, drop-out, and repeating;
- the options of the government in the training of certain key disciplines.

### 2.2.3. The adequacy of employment-training

The balance between employment and training is particularly important for the planners of human resources in Burundi. The balance implies, in effect, an adaptation of the training system to the rhythm of the number of graduates. It should be underlined that this desired balance runs into a certain number of constraints which can result in incorrect predictions. In the first place, there is a lack of sufficient basic data. In effect, the absence of an exhaustive inventory of positions makes every effort to estimate the number of participants to train difficult. This difficulty can even lead to erroneous conclusions based on the comparison of the participants to train and the needs of the labor market. This is the reason that the search for concrete indicators and figures on which to base predictions for qualified personnel in the short, medium and long term remains a major preoccupation of the human resource planner in Burundi. In order to obtain these indications, permanent cooperation is required from all employers of qualified labor.

The second constraint is linked to the difficulty of controlling events that can intervene in the future and modify expected results.

The third constraint, not the least important, is that of relative financial resources. It should be noted that even if the needs are well

planned, the employment positions to furnish with employees must not be in excess of the budgetary possibilities of the country.

Thus, to obtain the level of the employment-training balance, predictions are made concerning the needs for qualified personnel and the graduates of the school system. Analyses made of the rates of coverage of needs related to the number of school-leavers indicate that there will be an over-production at the levels of advanced personnel with technical competence, of intermediate personnel with administrative competence, and of skilled labor (for the period from 1981 to 2000).

In conclusion, it should be emphasized that planning of human resources in Burundi is an important element in economic planning in general. In effect, the introduction of the variable of "population" in the overall process of economic and social development is indispensable because the population is an important resource for the country.

The planning has been improved more and more, but one must recognize that there are still some difficulties. The principal lack concerns the reliability of the numerical results which are reached. In this case, it must first be noted that the statistical data which provide the basis for these predictions are, above all, incomplete.

The prediction of needs is a function of agreed annual growth rates, which do not always occur as predicted due to a certain number of unpredictable events.

Finally, the predictions of school-leavers can also be considered doubtful from the quantitative point of view because those numbers are difficult to adjust in the short term according to the variations in the labor market (There is a difficulty to slow down the school system once it is already in process.).

The second lack is that human resource planning in Burundi is particularly concerned with the employment-planning balance (the quantitative aspect) to the detriment of the qualitative aspect concerning the further training of existing personnel. Thus, the programming of retraining in certain key disciplines pertaining to the country's priorities has not yet been accomplished.

MINISTRY OF NATIONAL EDUCATION

## INTRODUCTION

According to the Acts of the First Congress of the UPRONA Party, education constitutes the fundamental element in the building of society.

That is the reason why unifying training and education, linking school and life, and allying teaching and productive work must be the basic principles of an education oriented toward the promotion of society.

Education thus cannot be dissociated from the socio-political and economic life of the country.

As a result, one must assure the continuity of the development process already undertaken by the orientation of youth education.

The project to create a just and prosperous society, as is strongly recommended by the Second Republic, must be the essence of the organization of the educational system.

ORGANIGRAM

MINISTER  
MINISTER'S CABINET

UNIVERSITY  
FRAMEWORK OF UNIVERSITY OPERATIONS  
ESCO  
B.P.E.  
General Inspection of Education  
Planning Office  
R.P.P.  
Office of Scholarships for Study  
and Training Programs  
SP/C.N.U.

General Direction of  
Basic Education

General Direction of  
Secondary and Techni-  
cal Education

General Direction of  
Higher Education and  
Scientific Research

Department of  
Primary Education

Departement of  
Secondary Education

Department of Para-  
scholastic Education

Department of Techni-  
cal Education

Department of Higher  
Education

B.E.R.

B.E.P.E.S.  
B.E.E.T.

Department of  
Scientific Research.

## 1. UNIVERSITY HIGHER EDUCATION

### 1.1. Mission

The mission of Higher Education (1) is to satisfy the needs of the country in qualified personnel at the advanced level by providing scientific and technical knowledge of the highest level.

It should play an innovating role in the economic and cultural sector and promote scientific, literary, pedagogical, and artistic research.

Higher education should, in addition, promote the professional improvement and the socio-economic development of the country, and take part in the civic training of citizens.

In order to fulfill this mission, the new policy of education has reaffirmed the following objectives :

- to continue the action of completing departments and opening other departments at the University of Burundi;
- to reinforce the training of national professors;
- to operate a selection upon the entry in to higher education and an effective orientation, taking into account the needs of the country and the intellectual capacity of the candidates;
- to reinforce research for better participation in the socio-economic development of the country;
- to create an office in charge of the management and loans of scholarships in order to face the growing demands of the development of higher education; and
- to reinforce university cooperation.

Before treating the training needs within Higher Education, it is useful to make a relative analysis of :

- the teaching staff of the University of Burundi, and
- the students being trained abroad.

### 1.2. The teaching staff

With the diversification of types of training within the University of Burundi, it is completely normal that there is a growth in the number of professors in the same way that there is an increase in the number of students. An essential point attracts our attention at this point : the problem of the Burundization of positions.

Table # 1 : Professorial Staff by degree, sex, and department

Degree	Doctorate of State		Doctorate of 3rd Cycle		Masters		Engineer		Masters (Maîtrise)		B.A.		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Law			9										15	0
Economics and Administration	4		12	2	3		3		2		11	1	35	3
L.S.H.	11	1	25	3	5	3			2		14	2	57	9
Science	9		34	2		1					8	3	51	6
Agronomic Sc.			14				7	1					21	1
Medicine	37		2				1						41	0
P.S.E.			4						2				4	10
Applied Sc.	4		3				13	1					20	1
I.T.S.							11						11	0
I.E.P.S.				1								7	0	8
I.P.			2				2		2	1	16	3	22	4
Total	65	1	105	8	8	4	37	2	8	1	60	16	223	32

(\* ) A French professor in the SEA Département is not counted because the degree is not included in the table. The professor has a degree in Urban Planning and Demography.

Source : University of Burundi - Academic Administration, May 1986.

From this table, one can see that of a total of 315 professors, there are

- 66 Doctorates of State (Doctorats d'Etats)
- 113 Doctorates of 3rd Cycle (Doctorats de 3e Cycle)
- 12 Masters (master's)
- 39 Engineers (ingéniorats)
- 9 Masters (Maîtrises) and
- 76 Bachelor Degrees.

These data show that the University of Burundi has a rather large number of professors with a doctorate : 179 ou 56.8 % of the teaching staff.

In the second place, the level of Bachelor Degree represents 22.22 % of the teaching staff.

As a result of these considerations, the question arises as to whether or not this division of qualifications is satisfactory. It is thus as a result of the current situation that one can predict a certain number of professors of such and such a qualification to recruit and others to train.

From this table one can see the following :

- Currently the number of national professors does not reach half the total number at the University of Burundi
- There are 142 (45 %) Barundi out of 315 teachers
- Among them, 55 doctors teach full time and 8 part time. This figure represents 35.16 % of the teaching doctors at the University of Burundi. The same reasoning applied to other levels of degrees leads to the following conclusions :

<u>Total number</u>	<u>Barundi</u>
179 doctorates	63 (35.16 %)
39 engineers	17 (43.58 %)
12 masters (master's)	7 (58.33 %)
9 masters (maîtrises)	2 (22.22 %)
76 bachelor degrees	53 (75.71 %)

By these figures, one can realise that the level of Bachelor degree includes the largest number of Barundi.

The problem of Burundization of positions can resolve itself by taking into account the students now being trained both here and abroad.

The table which follows, detailed by Annex II, shows the number of students being training abroad in the different disciplines and their probable date of return.

## 2. ADVANCED NON UNIVERSITY INSTITUTES

This section concerns :

- ISTAU : Advanced Institute of Urban Planning
- ISA : Advanced Institute of Agriculture
- EPJ : Judiciary Police School
- ESCO : Advanced School of Commerce
- ECOJO : Journalism School.

The division of teachers by degree, including the variable of nationality, is the following :

- Doctorate : 12 of whom 5 are Barundi
- Engineer : 17 of whom 8 are Barundi
- Masters (Master's) : 4 of whom 2 are Barundi
- Masters (Maîtrise) : 5 of whom 1 is Murundi
- Bachelor : 70 of whom 52 are Barundi.

In all, with the exception of the Journalism School, the number of the teaching staff is 108 of whom 68 are Barundi, or 62.87 %, as one can read in the table on the following page.

In order to accomplish the Burundization of positions within these institutes, it is necessary to recruit 7 doctors, 9 engineers, 6 masters (Maîtres) and 18 bachelors, if the same number of teachers with the same degrees are maintained. But it was not possible to indicate the disciplines of these degrees.

## 3. SECONDARY EDUCATION

Secondary education includes general secondary education as well as pedagogical, technical and professional secondary education.

The different recommendations which guided the policy adopted by the Central Committee of the Party (2) are grouped around the following objectives :

- the professionalization of secondary education to train intermediate technical personnel;
- the extension of the network of secondary schools for the training of adequate numbers of national personnel;
- growth in the number of places in secondary schools;
- productive work at the school for at least a partial auto-financing of the schools;
- the always increasing improvement in the quality of teaching.

### 3.1. General Secondary Education

#### 3.1.1. Advanced Personnel

For the year 1986, the total number of secondary teachers is 1,089 of which 719 are qualified [with a Bachelor degree or the first two years of university education (candidacy)].

Out of these, there are 143 professors that have completed candidacy or the Pedagogical Institute (I.P.). Those who have completed 3 years of post-secondary education (Regents or Graduates) are 46 in number.

According to the Direction of Educational Planning, training needs can be expressed as the difference between the total number of teaching staff and the number of qualified personnel ; that is,  $1,089 - 719 = 370$ .

For the future, Educational Planning advances two hypotheses :

#### First hypothesis

The training needs for Secondary School professors is dependent upon the increase in the successful candidates for the national competitive examination. If the successful candidates for the national competitive examination increase by 200, the possibility of assigning professors remains unchanged in relation to the preceding years.

- Blacksmith and soldering : 3
  - 3 technical graduates
  
- Plumbing and pipes : 6
  - 6 technical graduates or B.T.S.
  - Sheet-iron WorkBody Work : 6
  - 6 graduates or technicians with associate degrees
  
- Auto-Mechanics : 6
  - 2 graduates in heavy machinery mechanics.
  - 2 graduates in injection specialty.
  
- Tool Mechanics : 3
  - 3 Associate degrees in mechanical manufacturing
  
- Industrial Electronics : 2
  - 2 technicians with associate degrees

3.2.2. Annual Training Proposal : 26

Table # 5 : Annual training proposal, level A2 (from 1987 to 1992)

A2 : Intermediate technician, 7 to 8 years of post-primary education.

£ £ £ £ £	£ £ £ £ £	£ £ £ £ £	£ £ £ £ £	£ £ £ £ £	£ £ £ £ £	£ £ £ £ £	£ £ £ £ £	£ £ £ £ £	£ £ £ £ £	£ £ £ £ £
Types of Training	Civil Engineer State	Industrial Engineer	Bachelors	Associate Degree Graduate	Total	Training Proposal				
Mechanical Manufacturing	2			4	6	2				
Mechanical Construction	2				2	2				
Industrial Electronics		3			3	2				
Electrical Mechanics		3			3	2				
Electronics	3				3	2				
Architecture	3				3	2				
Civil Engineering	3	7			10	4				
Topography	4				4	4				
Rural Engineering	3				3	2				
Arts			6		6	2				
Social Assistance			5		5	2				
Food Nutrition			2		2	2				
Homemaking Secondary Teacher				2	2	2				
Food Preparation				2	2	2				
Cooking										
Clothing				4	4	2				
Executive Secretary				4	4	2				
<b>Total</b>	<b>20</b>	<b>13</b>	<b>13</b>	<b>20</b>	<b>66</b>	<b>34</b>				

N.B. : This does not include needs for Administration and Management options. The personnel is qualified even if it is foreign, and the University of Burundi trains them.

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Table # 6 : Annual Training Proposal, level A3 (from 1987 to 1992)

A3 : Specialized qualified laborers, 5 years of post-primary education.

£	£	£	£	£	£	£
Types of Training	Associa- te De- greee	Graduate for Bre- vet of Advanced Techni- cian (B.T.S.)	Total	Annual Training Proposal		
Bulding Construc- tion	15		15	4		
Carpentry - Cabi- netry	15		15	4		
Building Electri- ty	5		5	2		
Plumbing		6	6	2		
Blacksmith and Soldering		3	3	1		
Sheet-Iron Work- Body Work		6	6	2		
Auto Mechanic		5	5	2		
Automobile Elec- tronics		1	1	1		
Heavy Machenery Mechanics		-	-	-		
Diesel Motor In- jection Speciali- zation		4	4	2		
Mechanical Manu- facturing	3	-	3	2		
Mechanical Mainte- nance	8	-	2	1		
Industrial Elec- tronics	2	-	2	1		
£ Total	£ 48	£ 25	£ 73	£ 25		

Source : Document n° 615/347/610 of 26 March 1986 (Direction of Technical and Professional Education).

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In terms of the National Training Institutions for Technical and Professional Education, they are 13 in number.

They include :

1. E.T.S.A. : Secondary Technical Art School (Gitega)
2. ECOSO : Homemaking School (Gitega)
3. ENEFa : Normal School of Familial Economy (Kibumbu)
4. ESTA : Secondary School of Administrative Techniques (Kamenge)
5. ETS : Secondary Technical School (Kamenge)
6. ETG : Technical School of Management (Mutumba)
7. ETP : School of Public Works (Gitega) ex- GETO
8. ETMM : School for Intermediate Technique of Trades (Bubanza)
9. ETP Giheta : Professional Technical School (Giheta)
10. ETM Gihanga : Intermediate Technical School (Gihanga)
11. ETP Nyabigina : Professional Technical School (Giheta)
12. ETP Buhiga : Professional Technical School (Buhiga)
13. ETP Kiganda : Professional Technical School (Kiganda)

There are no predictions concerning planned expansion of these National Training Institutions because there are not sufficiently detailed studies on this subject according to the Direction of Technical and Professional Education.

3.2.3. Foreign aid

a) Belgium Technical Aid

£ Speciality	£	Unit	£
£ Industrial Electronic Engineer	£	1	£
£ Polyvalent Technical Engineer	£	1	£
£ Mechanical Technician	£	1	£
£ Diesel Technician	£	1	£
£ Electrical Technique Secondary Teacher	£	1	£
£ Sheet-iron and Body Work Technician	£	1	£
£ Industrial Electromechanical Engineer	£	1	£
£ Mechanical Industrial Engineer	£	1	£
£ Electrical Technician	£	1	£
£ Industrial Public Works Engineer	£	1	£
£ Automobile Technician	£	1	£
£ Mechanical A2 Technician	£	1	£
£ Total	£	14	£

N.B. : There are two departures that have been announced for the academic year 1986-87 : - 1 Industrial Electromechanical Engineer  
- 1 Mechanical Industrial Engineer.

a.1.2. E.T.P. of Gitega

E.T.P. = School of Public Works.

£ Speciality	£	Unit	£
£ Civil Engineer	£	1	£
£ Building Engineer	£	4	£
£ Architect	£	1	£
£ Topographer	£	1	£
£ Certificate E.S.S. and T.P.	£	1	£
£ A.2	£	1	£
£ A.2. T.P.	£	1	£
£ Total	£	10	£

a.1.3. E.T.M.M. of Bubanza

E.T.M.M. = School for Intermediate Technique of Trades

£ Speciality	£	Unit	£
£ Technician in Sanitary Equipment	£	1	£
£ A.2 Electromechanical Technician	£	1	£
£ Electrical Technician	£	1	£
£ Advanced T.P. Technician	£	1	£
£ Total	£	4	£

b) French Technical Aid

£ Speciality	£	Unit	£
£ Industrial Engineer in Mechanics	£	3	£
£ Bachelor in electronics	£	2	£
£ A2 Technical Degree in Mechanics	£	1	£
£ Civil Engineer	£	1	£
£ Total	£	7	£

c) American Technical Aid

£ Speciality	£	Unit	£
£ Heavy Machinery Automobile Mechanic	£	1	£
£ Blacksmith and Soldering	£	1	£
£ Maintenance Mechanic (departure June 1986)	£	1	£
£ Construction Specialist	£	1	£
£ Total	£	4	£

d) Canadian Technical Aid

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£ Speciality	£	Unit	£
£-----£	£	-----£	£
£ Civil Engineer in Construction	£	2	£
£-----£			£
£ Total	£	2	£

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Source : Direction of Technical and Professional Education.

4. PEDAGOGICAL OFFICES

Two pedagogical offices (B.E.P.E.S. and B.E.E.T.) (4) have been developed in order to conceive and elaborate the secondary and technical educational programs and to diffuse teaching materials and other indispensable pedagogical materials for the success of these programs (teacher's books, student's books, listening materials for language teaching, modern printing materials, etc.).

The different pedagogical offices consult regularly in order to have unity in the subject matter in their programs.

The Government will encourage greater coordination in the work of these offices in order to avoid a dispersion of material, financial and human means and a distortion of the indispensable unity of subject matter both at the different levels of education and among the different subjects in the training program.

4.1. Office of Studies of Secondary Education (B.E.P.E.S.)

4.1.1. Objectives

According to the terms of Decree # 100/195 of 9 September 1983, concerning the reorganization of the Ministry of National Education, the B.E.P.E.S. is charged with the tasks :

- to animate, coordinate and control activities related to the reform of secondary education, and the improvement of its quality;
- to conceive and elaborate the teaching materials necessary for the success of the reform of secondary education;
- to organize the continuing training and improvement of secondary teachers;
- to supervise the different workshops or sections charged with the conception, the experimentation, the diffusion, and the evaluation of teaching materials.

4.1.2. Training needs at B.E.P.E.S.

£	£	£	£	£
£ Speciality	£	Unit	£ training	£
£	£		£(in months)	£
£	£	£	£	£
£ Teaching specialization (language teaching)	£	3	£ 9 to 18	£
£ Teaching specialization (science teaching)	£	2	£ 9 to 18	£
£ Continuing training of teachers	£	2	£ 9 - 18	£
£ Specialization in the teaching of humanities	£	2	£ 9 - 18	£
£ Program evaluation and teaching materials	£	3	£ 9 - 18	£
£ Teaching native languages	£	1	£ 9 - 18	£
£ Teaching mathematics	£	1	£ 9 - 18	£
£ Teaching science	£	2	£ 9 - 18	£
£ Teaching agro-pastoral techniques	£	3	£ 9 - 18	£
£ Maintenance of electronic equipment	£	2	£ 9 - 18	£
£ Specialization for printing technicians	£	2	£ 9 - 18	£
£ Computer training	£	2	£ 9 - 18	£
£ Library studies	£	1	£ 9 - 18	£
£ Media Use	£	2	£ 9 - 18	£
£ Training techniques	£	2	£ 9 - 18	£
£	£	£	£	£
£ Total	£	30	£	£

Source : B.E.P.E.S., April 1986.

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4.1.3. Aid Personnel et B.E.P.E.S.

a) Belgian Technical Aid

£ Discipline	£	Specialty	£	Unit	£
£ Agriculture	£	Technical agronomic engineers	£	2	£
£ English	£	Bachelor in Germanic language	£	3	£
£ Mathematics	£	Mathematician	£	3	£
£ Pedagogical Media	£	Romance Languages	£	2	£
£	£	Electronics Specialists	£	2	£
£ Physics	£	Physicist	£	1	£
£ Technology	£	Physicist	£	1	£
£	£	Chemist	£	1	£
£ Production	£	Graphic Arts	£	2	£
£ Technology	£	Romance Languages	£	1	£
£ Total			£	18	£

b) French Technical Aid

£ Discipline	£	Specialty	£	Unit	£
£ Biology	£	Biologist	£	1	£
£ Chemistry	£	Chemist	£	1	£
£ Mathematics	£	Mathematician	£	1	£
£ French	£	Romance Languages	£	4	£
£ Physics	£	Physicist	£	1	£
£ Total			£	8	£

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c) Canadian Technical Aid

£ Discipline	£	Specialty	£ Unit	£
£ Agronomy	£	Agronomic Nutritionist Engineer	£ 2	£
£ Pedagogical Media	£	Sociologist	£ 2	£
£ Total			£ 4	£

4.2. The Office of Studies of Technical Training (B.E.E.T.)

4.2.1. Objectives

According to Degree # 100/195 of 9 September 1983, the B.E.E.T. is charged with the tasks to :

- elaborate the programs and various studies of interest to technical and professional education,
- assure the continuing training of professors and their in-service training, and
- conceive and elaborate the necessary teaching materials for the improvement of technical and professional training.

4.2.2. Personnel to recruit

a) Industrial Sector

£ Speciality	£	Unit	£
£ Electromechanical Engineer	£	1	£
£ Engineer in Mechanics of Manufacturing	£	1	£
£ Electrotechnical Engineer	£	1	£
£ Engineer in Building Mechanics	£	1	£
£ Engineer in Carpentry - Cabinetry	£	1	£
£ Total	£	5	£

b) Civil Engineering Sector

£ Speciality	£	Unit	£
£ Civil Engineer of Buildings	£	1	£
£ Civil Engineer of Public works	£	1	£
£ Rural Engineer	£	1	£
£ Architect	£	1	£
£ Total	£	4	£

c) Art Option

1 graduate in Graphic Arts

d) General Teaching Option

£ Speciality	£	Unit	£
£ Bachelor in Educational Psychology	£	1	£
£ Bachelor in Mathematics	£	1	£
£ Bachelor in Physics	£	1	£
£ Bachelor in French	£	1	£
£ Total	£	4	£

e) Homemaking and Familial Economy Option

£ Speciality	£	Unit	£
£ Homemaking Associate Degree	£	1	£
£ Housekeeping Associate Degree	£	1	£
£ Total	£	2	£

4.2.3. Personnal for Additional Training

£ Discipline	£	Unit	£ Length of training (in months)	£
£ Applied Teacher Training	£	4	£ 6 to 9	£
£ Education Administration and Management	£	2	£ 6 to 9	£
£ Pedagogy and Methodology of Technical Education	£	3	£ 6 to 9	£
£ TOTAL	£	9	£	£

4.2.4. Aid Personnel at B.E.E.T.

£ Speciality	£	Unit	£
£ Civil Engineer (Technical Professor)	£	1	£
£ Engineer in Automobile Mechanics	£	1	£
£ Certified in Mechanical Engineering	£	1	£
£ Civil Engineer in electromechanics (Specialty : Energy)	£	1	£
£ Bachelor in Business Law (University Diploma in the techniques of commercialization)	£	1	£
£ Diploma of University Studies of Technology (Mechanical Engineering) Specialty : Manual labor, Manual and Technical Education	£	1	£
£ Engineer in General Mechanics	£	1	£
£ Civil Engineer (Specialty : Electronics)	£	1	£
£ Engineer in Electrical Techniques (Professor)	£	1	£
£ Bachelor in Commercial Science (Specialty : Secretary)	£	1	£
£ Total	£	10	£

There are no predictions in terms of their replacement. B.E.E.T. has a structure which is not yet filled out. It is necessary to have competent national personnel to work with these aid personnel. In order to envisage replacement, first it is necessary to cover all the structures, which will not be accomplished immediately.

Source : Direction of the Office of Studies of Technical Training (B.E.E.T.)

#### 4.3. The Office of Rural Education (B.E.R.)

##### 4.3.1. Objectives

According to the terms of Decree # 100/195 of 9 September 1983, the objective of the B.E.E. is to :

- conceive all the necessary teaching materials for the reform and the adaptation of primary education to Burundi;
- undertake all research and initiatives liable to constantly improve the level of primary education and the qualification of teachers;
- conceive and apply appropriate strategies in order to build a community school supported by enlarged school cooperatives of parents and teachers as well as civic, public, and private organizations;
- work in close collaboration with the other pedagogical offices;
- animate, coordinate and supervise different workshops or sections in the area of the conception, experimentation, diffusion and evaluation of teaching materials; and
- assure the initial and continuing training of teachers in close collaboration with the Department that has Normal Schools in its framework.

Before turning to the training needs felt by the B.E.R., it is reasonable to first look at its personnel and its organization.

The national personnel of the B.E.R. includes 69 units as follows :

- 39 scientistis of which 31 have Bachelor degrees in humanities and 7 with Bachelor degrees in exact and natural sciences,
- 26 technicians who are collaborating personnel with the level (D7, D6 and D4), and
- 5 auxiliary workers for Secretariat work.

- The B.E.R. includes :

Elaboration workshops for Programs and Teaching Methods for General Disciplines.

These workshops are five in number :

1. Workshop for Study of Environment (A.E.M.)
2. Workshop for Kirundi (A.Ki)
3. Math Workshop (A.Ca)
4. Workshop for French (A.Fr)
5. Workshop for Physical Education (A.E.P.)

- Workshops with characteristics of Rural Development :

1. Workshop for Practical Agricultural Works (A.T.P.A.)
2. Domestic Economy Workshop (A.E.F.)

- Workshops for Teaching Support :

1. Workshop for Initial Training (A.F.I.)
2. Workshop for Continuing Training (A.F.C.)
3. School Radio
4. Documentation Workshop (School libraries : 141)
5. Evaluation Workshop (which comes to aid all the other workshops)
6. Workshop for Fundamental Research.

After reviewing the 12 workshops of the B.E.R., one must see which ones should receive priority for training according to the direction of the Office.

Options of Administration and Management (E.S.T.A., E.T.G.) : 28

- 8 executive secretaries
- Replacements posts :
  - 6 Bachelors in law
  - 5 Bachelors in Economics
  - 5 Bachelors in Business Management
  - 2 Bachelors in Commercial Science
  - 1 Bachelors in Political and Social Science.

N.B. : These posts are help by qualified professors, but they are foreigners.

b) Level A3 : 73

Construction Options (buildings) : 30

- 15 technicians with associate degrees in construction.
- Training possibilities :
  - France : B.T.S. + E.N.N.A.
  - Belgium: Technical Secondary Training.
- 15 technicians with associate degrees in carpentry.

Industrial options : 43

- Mechanical maintenance (E.T.M.M. BUBANZA) : 8
  - 8 Associate degrees in mechanics and techniques
- Building electricity : 5
  - 5 technicians with associate degrees

- Electronics (E.T.S.) : 4
  - 3 civil engineers
  - 1 graduate for the maintenance of materials.
  
- Construction options : 20
  - 3 architects
  - 10 industrial or civil engineers in building construction and public works (B.T.P.)
  - 4 geometric engineers
  - 3 engineers in rural engineering.

Possibilities for training :

France : B.T.S. or D.U.T. plus three years in a training center for Technical Professors (C.F.P.T.)

Belgium : Industrial engineering.

N.B.B.T.S. : Brevet of Advanced Technician

D.U.T. : University Diploma of Technology

A2 : Intermediate technician, 7 to 8 years of post-primary education.

Art Section (E.T.S.A.) : 6

- 2 Bachelors in Art (painting, engraving)
- 2 Bachelors in Art (sculpture)
- 2 Bachelors in Art (ceramics).

Homemaking options (E.N.E.Fa, ECOPO) : 13

- 5 social assistants with Bachelor degree
- 2 specialists in food and nutrition
- 4 specialists in clothing
- 2 regents with homemaking associate degrees
- 2 specialists in food preparation and cooking.

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1989-1990	:	531 prize winners
1990-1991	:	531 prize winners
1991-1992	:	531 prize winners
1992-1993	:	531 prize winners.

Looking at these figures, one can expect a slowing in the admissions to the first year of higher education unless exceptions are made and some finalists of the second cycle of technical education are admitted into certain types of this level of education.

### 3.2. Professional Technical Education

The training needs for trainers within the framework of Technical and Professional Education takes into account both present personnel and those in training.

#### 3.2.1. Needs of Schools

##### a) Level A2 : 66 + 22 replacements E.S.T.A.

##### - Industrial options : 18 Mechanical Construction (E.T.S.) : 8

- 4 industrial engineers of mechanics

Possibilities for training : France B.T.S. or D.U.T. plus three years in a training center for technical professors;  
Belgium : industrial engineering.

- Industrial Electronics (E.T.S.) : 3

- 3 industrial engineers  
same possibilities for training (France and Belgium)

- Electrical Mechanics (E.T.S.) : 3

- 3 industrial engineers  
same possibilities of training

Second hypothesis :

If one counts 20 students per professor, the needs are estimated as follows :

1987-1988	:	68 professors
1988-1989	:	113 professors
1989-1990	:	90 professors
1990-1991	:	78 professors
1991-1992	:	64 professors
1992-1993	:	60 professors
1993-1994	:	57 professors
1994-1995	:	55 professors.

Training will be accomplished here at the University of Burundi.

3.1.2. Intermediate personnel

Concerning those with Secondary Education diplomas that are potential candidates for higher education, their number will decrease following the year 1987-1988.

In effect, with the transformation of Normal Schools into Training Schools for Elementary Teachers (EFI), the number of candidates for the national test will decrease by about 320 candidates or a decrease of about 30 %.

The number of authorized certificates of the completion of humanities will decrease by 28 %. The average number of authorized diplomas will hardly be more than 530, instead of 650.

Until 1992, the probable evolution of diplomas for the second cycle of secondary education will be the following (3).

1986-1987	:	620 prize winners
1987-1988	:	500 prize winners
1988-1989	:	525 prize winners

4.3.2. Needs for training

a) Personnel to recruit

£	Discipline (or Workshop)	£	Unit	£	Level of training	£
£	In Kirundi	£	1	£	Bachelor in African Literature	£
£	In Fundamental Research	£	1	£	Bachelor in African Literature	£
£	In Evaluation	£	3	£	Bachelor in Education	£
£	In Mathematics	£	2	£	Bachelor in Mathematics	£
£	In French	£	3	£	Bachelor in French-Kirundi	£
£	In Continuing Education	£	2	£	Bachelor in Education	£
£	In Agricultural Public Works	£	2	£	1 Agronomic Engineer	£
£		£		£	1 Agricultural Technician	£
£	Total	£	14	£		£

b) Personnel to train

£	Discipline	£	Unit	£	Length of training	£	Country of training	£
£	Program Evaluation	£		£		£		£
£	and Teaching Methods	£	7	£	9 months	£	Canada	£
£	Management and Administration of Education	£	7	£	9 months	£	Belgium (Liege)	£
£		£		£		£	Canada	£
£		£		£		£	Belgium	£
£	Total	£	14	£		£		£

The B.E.R. also wants to organize local seminars during summer vacations in the form of introductory training in the evaluation of Education Programs. These training programs, one month in length, will take place every two years and would benefit from the support of foreign specialists invited by the B.E.R.

The Office thus needs financing for the purchase of materiel and for the costs of the trainers and the participant teachers.

#### 4.3.3. Aid Personnel

The number of aid personnel working for the B.E.R. is four, all French and working in two workshops.

##### 1. Workshop for French (A.FR)

- 2 agrégés in French (they have passed the agrégation, a competitive state examination)
- 1 primary teacher.

##### 2. School Radio

- 2 specialists in audio visual and television.

MINISTRY OF AGRICULTURE AND LIVESTOCK

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1. OBJECTIVES

The Ministry of Agriculture and Livestock has the mission to organize agriculture and livestock in order to accomplish self-sufficiency in food production and the production of a commercial surplus. This is the reason that the First National Congress of the UPRONA Party recommended (5) :

- the identification of crops and animals adapted to each region;
- the mobilization of the population for the protection of the soil through anti-erosion measures, reforestation, fertilizers, and the forbidding of brush fires;
- cultivation of valley marshes;
- the forbidding of transhumance and the teaching of modern methods of livestock raising;
- the training of specialists in soil science, meteorology, flora and fauna
- the use of selected seeds;
- the training of specialists in agriculture and livestock.

2. ORGANIGRAM

GENERAL DIRECTION OF AGRICULTURE	GENERAL DIRECTION OF LIVESTOCK	GENERAL DIRECTION OF AGRICULTURAL AND LIVESTOCK PLANNING	S. R. D. IMBO
			S. R. D. BUYENZI
DEPARTMENTS	DEPARTMENTS	SERVICES	S. R. D. KIRIMIRO
AGRONOMY	ANIMAL PRODUCTION	STUDIES AND PROGRAMMING	
RURAL ENGI- NEERING	ANIMAL HEALTH	FOLLOW-UP AND EVALUATION	S. R. D. RUMONGE
AGRICULTURAL DEVELOPMENT OF TERRITORY		AGRICULTURAL EDUCATION	S. R. D. MOSSO
		MANAGEMENT ASSISTANCE	
		AGRO-PASTORALE INFORMATION	
ISABU	OCIBU	OTB	COGERCO
			SLAUGHTERHOUSE
			ONAMA
			GENERAL DAIRY
			LAPHAVET

Nonetheless, the organigram above, even though it appears to be complex, remains incomplete because :

- Certain establishments coming from the Ministry and organized by decrees are not found in this organigram. This is the case of the Institute of Agricultural Techniques of Burundi, the Advanced Agricultural Institute, the Regional Development Society of BWERU, the Regional Development Society of BURAGANE and the Regional Development Society of KIRUNDO. The High Altitude Village Crops Project, the South Bututsi Project, the North Mugamba Project, and the North Imbo Project are also not included.
- This is also the case with the Goat Project of NGOZI, the Artificial Insemination Project, the KARUZI Farm, the Pasture Center of GAKUNGWE, the Pasture Center of GATUMBA, the RANDA Farm, the KINYINYA Project, the BUTAGANZWA Project, the ISALE-MUBIMBI Project, and the NYANZA-LAC Project.
- Finally, the Market Garden Project, the Project of Selected Seeds, the Fertilizer Program and certain forest projects are not included.

### 3. CURRENT COVERAGE OF PERSONNEL NEEDS

Table # 1 : Personnel of the Ministry of Agriculture and Livestock, first trimester 1986, several indications

£	Services	£	Degrees or level				£				
£	1) Cabinet	£	University level	:	3	£					
£		£	Intermediate level	:	2 (level A2)	£					
£		£	Subaltern personnel	:	4	£					
£	2) General Direction of Agricultural and Livestock Planning (all services mixed)	£	University	:	20	£					
£		£	Intermediate level	:	2 (A2 and A1)	£					
£		£	Personnel for execution	:	5	£					
£	3) General Direction of Agriculture	£	University	:	1	£					
£		£	Personnel for execution	:	3	£					
£	4) Department of Agronomy	£	Direction	£	Agronomists	£	Assistants	£	Agriculture	£	Monitors
£		£	personnel	£	and Exten-	£	and Exten-	£	al	£	
£		£		£	sion	£	sion Wor-	£		£	
£		£		£	Technicians	£	kers	£		£	
£	1. Bujumbura	£	14	£	4	£	24	£	94	£	
£	2. Bubanza	£	1	£	6	£	13	£	64	£	
£	3. Bururi	£	1	£	8	£	24	£	122	£	
£	4. Cibitoke	£	1	£	2	£	14	£	75	£	
£	5. Makamba	£	1	£	5	£	19	£	73	£	
£	6. Muramuya	£	2	£	3	£	36	£	108	£	
£	7. Gitega	£	2	£	2	£	11	£	69	£	
£	8. Karuzi	£	1	£	1	£	17	£	79	£	
£	9. Muyinga	£	1	£	13	£	26	£	94	£	
£	10. Kirundo	£	1	£	7	£	22	£	58	£	
£	11. Ruyigi	£	1	£	5	£	14	£	75	£	
£	12. Rutana	£	1	£	5	£	16	£	74	£	
£	13. Cankuzo	£	1	£	7	£	12	£	55	£	
£	5) Department of Water and Forests	£	University level	:	13	£		£		£	
£		£	Candidacy	:	3	£		£		£	
£		£	Level A2 (ITAB)	:	56	£		£		£	
£		£	Level A9 4	:	13	£		£		£	
£		£	Auxiliary personnel	:		£		£		£	
£		£	under contract	:	38	£		£		£	

Source : Ministry of Agriculture and Livestock, Annual Report 1985.

Table # 2 : Aid personnel working at the Ministry of Agriculture and Livestock, in 1986, several indications.

£	SERVICE	£	NUMBER	£	SPECIALTY OR FUNCTION	£
£	1. General Direction of Agriculture and Livestock Planning	£	5	£	Counsellors	£
£	2. Department of Agronomy	£		£		£
£	- Market Garden Project	£	2	£	Agronomic Engineers	£
£	- Selected Seeds Project	£	4	£	Agronomic Engineers	£
£	3. Department of Water and Forests	£		£		£
£	- Direction of Projects	£	3	£	Forestry Engineers	£
£		£		£	project heads	£
£	- Work in the field	£	7	£	Volunteer forestry technicians	£
£	4. Department of Rural Engineering	£	5	£	Counsellors for hydroagricultural projects and rural construction	£
£	5. Agronomy Department	£	1	£	Veterinarian	£
£	6. Bututsi-Sud Project	£	4	£	Agronomic Engineers	£
£	7. Ngozi Goat Project	£	3	£	Zootechnicians	£
£	8. Struggle Against Ticks Project	£	1	£	Biologist	£
£	9. Artificial Insemination Project	£	2	£	Technicians	£
£	10. S.A.B. Project	£	1	£	Veterinarian	£
£	11. Mugamba-Nord Project	£	2	£	Veterinarians	£
£	12. LAPHAVET	£	6	£	Veterinarians and Progress volunteers	£

Source : Table developed by our efforts from the reports of the first trimester 1986 of these services.

It is equally instructive to note the training of the personnel in certain decentralized administrations by noting them as well the number of aid personnel.

Table # 3 : National personnel in certain establishments coming from the Ministry of Agriculture and Livestock, end of 1985

£ Level and Nbre £ of personnel £	£ University £	£ Intermediate and £ Technical Level £	£ Personnel £ for execu- £ tion £
£ Offices ISABU	£ 40	£ 40 : level A1 and A2 £ 89 : level A4 and A3 (of which 6 foreign £ Africans in each group)	£ 178
£ OCIBU	£ 12 : completed £ 30 : candidacy	£ 31 : level A2	£ 112 : grade A £ 107 : grade B £ 24 : grade C
£ O.T.B.	£ 10	£ 32	£ 151 subal- £ terns £ 73 no trai- £ ning £ 4530 daily £ workers
£ COGERGO	£ 3 : completed £ 3 : candidacy	£ 10 level A2	£ 41: grade A £ 68: grade B £ 548: laborers
£ ONAMA	£ 7	£ 10 : level A2	£ 46
£ CENTRAL DAIRY	£ 5	£ 6 : level A2	£ 42
£ SRD BUYENZI	£ 12	£ 37 : level A2	£ 260

Source : Ministry of Agriculture and Livestock, Annual report 1985 completed by information gathered in the services concerned.

- Note :
- 1) Personnel of the category of execution have generally completed studies between the 8th and 9th year.
  - 2) For LAPHAVET and the Slaughterhouse, the executive personnel are mentioned under the rubric of livestock personnel.

Table # 4 : Aid personnel working in certain establishments from the Ministry of Agriculture and Livestock in 1986

£ OFFICES	£ NUMBER	£ FONCTION OR SPECIALTY	£
£ ISABU	£ 34	£ Researchers	£
£	£ 1	£ Accountant	£
£ OCIBU	£ 3	£ Agronomic Engineers	£
£	£ 2	£ Electricians	£
£	£ 1	£ Counsellor	£
£ O.T.B.	£ 5	£ Counsellors	£
£ COGERCO	£ 1	£ Counsellor	£
£	£ 1	£ Accountant	£
£	£ 1	£ Technician	£
£ ONAMA	£ 0	£	£
£ CENTRAL DAIRY	£ 0	£	£
£ S.R.D. BUYENZI	£ 1	£ Agronomic Engineer	£
£	£ 1	£ Trainer	£
£	£ 1	£ Administrative and financial counsellor	£
£	£ 1	£ Rural Engineer	£
£	£ 1	£ Technologist	£
£	£ 1	£ Construction Supervisor	£
£	£	£	£

Source : Ministry of Agriculture and Livestock, Annual Report 1985.

The livestock services have in particular predicted their personnel needs in technical assistance as follows :

Table # 5 : Personnel Needs in technical assistance for Livestock, 1986-1990

£ 1. Projects to continue	£ Number of personnel					£
	£ 1986	£ 1987	£ 1988	£ 1989	£ 1990	
£ South Bututsi Project	£ 4	£ 5	£ 5	£ 5	£ 5	£
£ French, North Mubamba-Project	£ 5	£ 5	£ 5	£ 5	£ 5	£
£ Ngozi Goat Projet	£ 3	£ 4	£ 4	£ 4	£ 4	£
£ UNDP-FAO Project against Ticks	£ 2	£ 2	£ 2	£ 3	£ 3	£
£ Veterinary Lab Projet	£ 4	£ 4	£ 2	£ 2	£ 2	£
£ 2. Projects to Initiate	£	£	£	£	£	£
£ Artificial Insemination Administration	£ 2	£ 4	£ 4	£ 4	£ 4	£
£ Milk Project KARUZI	£ 1	£ 2	£ 2	£ 2	£ 1	£
£ Support for central Administration	£ 0	£ 2	£ 3	£ 3	£ 3	£
£ Support for industrial milk program	£ 0	£ 1	£ 2	£ 2	£ 2	£
£ Support for industrial meat program	£ 0	£ 0	£ 2	£ 2	£ 2	£
£ Project for the structure of basic health	£ 0	£ 0	£ 2	£ 2	£ 3	£
£	£	£	£	£	£	£
£ Total	£ 21	£ 29	£ 33	£ 34	£ 34	£

Source : General Direction of Livestock

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In the future, with reference to the predictions of the IVth Five-Year Plan, only the number of subaltern personnel with continue to increase in 1987, as can be seen from the following tables elaborated at the end of 1982, that is during the writing of the IVth Five-Year-Plan.

Table # 6 : Needs for the organization of the agricultural sector in 1987

£ Branches of use	£ Advanced	£ Intermediate	£ Subaltern	£ Total
£	£ personnel	£ personnel	£ personnel	£
£-----£	£-----£	£-----£	£-----£	£-----£
£ Central Administration	£ 20	£ -	£ -	£ 20
£ Agricultural Planning	£ 10	£ 5	£ -	£ 15
£ Agricultural Education	£ 25	£ 10	£ -	£ 35
£ Agronomic Research	£ 20	£ 20	£ 60	£ 100
£ Integrated Rural Development	£ 50	£ 100	£ 1560	£ 1710
£ Project	£	£	£	£
£ Agronomy	£ 7	£ 33	£ 1000	£ 1040
£ Rural Engineering and Mechanization	£ 5	£ 15	£ 40	£ 60
£ Forestry and Soil Conservation	£ 10	£ 30	£ 250	£ 290
£ Coffee, Tea, Quinine	£ 15	£ 45	£ 100	£ 160
£ Cotton	£ 3	£ 12	£ 70	£ 85
£ Sugar Cane	£ 5	£ 15	£ 20	£ 40
£ Animal Production and Fish	£ 35	£ 60	£ 700	£ 795
£-----£	£-----£	£-----£	£-----£	£-----£
£ Total	£ 205	£ 345	£ 3800	£ 4350

Source : Ministry of Planning, IVth Five-Year Plan for the Economic and Social Development of Burundi, Annex 1, Volume 1, p. 150.

Table # 7 : Coverage of needs of agricultural organization in 1987

£ Level and Completion	£ Situation in 1982	£ Supplementary personnel completing training 1983-7	£ Personnel in 1987	£
£ <u>Advanced</u>	£	£	£	£
£ In place	£ 117	£	£	£
£ New diplomas	£	£ 135	£	£
£ Available	£	£	£ 252	£
£ Needs	£	£	£ 205	£
£ Result	£	£	£ + 47	£
£ <u>Intermediate</u>	£	£	£	£
£ In place	£ 235	£	£	£
£ New diplomas	£	£ 340	£	£
£ Available	£	£	£ 575	£
£ Needs	£	£	£ 345	£
£ Result	£	£	£ + 230	£
£ <u>Subaltern</u>	£	£	£	£
£ In place	£ 2595	£	£	£
£ New diplomas	£	£ 450	£	£
£ Available	£	£	£ 3045	£
£ Needs	£	£	£ 3800	£
£ Result	£	£	£ - 750	£
£ Total in place	£ 2947	£	£	£
£ " New diplomas	£	£ 925	£	£
£ " Available	£	£	£ 3872	£
£ " Needs	£	£	£ 4350	£
£ " Result	£	£	£ - 478	£

Source : Idem. p. 151

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The analysis of the preceding table shows :

- that the needs for advanced and intermediate personnel will be covered in 1987.
- that there will be a deficit of subaltern personnel. Nonetheless, these affirmations should be revised because :
  - the advanced personnel, in place in 1982, included a high proportion of technical assistants, who should eventually be replaced by agronomic engineers;
  - the number of personnel to be trained between 1983 and 1987 was calculated in terms of the projected capacities of the schools and a certain failure rate ; but these two indicators, are, one well known, quite changeable;
  - the current level of agricultural organization is far from having attained the estimated level (estimation made by the heads of SRD projects).

Table # 8 : Desired level for agricultural organization

£ Administration	£ - 1 Agronomist (A2 level) per commune	£
£	£ - 1 Assistant (EPA level Karuzi, or currently	£
£	£ level ETAS) per zone	£
£	£ - 1 Monitor (trained on site) for 2 or 3 hills	£
£	£	£
£ SRD Projects	£ - 1 Agronomist (A2 level) per 5000 to 10000	£
£	£ households	£
£	£ - 1 Assistant for 3000 to 3500 households	£
£	£ - 1 Monitor for 500 to 2500 households	£

Source : Agricultural and Livestock Planning, Agricultural Education Service, Oral communication.

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#### 4. NATIONAL TRAINING INSTITUTIONS

##### 4.1. Presentation

The national training institutions originating from the Ministry of Agriculture and Livestock are :

- The Advanced Institute of Agriculture of GITEGA "I.S.A."
- Institute of Agricultural Techniques of Burundi "I.T.A.B"
- The Schools of Specialized Agricultural Techniques at KIGAMBA, GISOZI, RUVYIRONZA AND KARUZI.
- The training Center for Agricultural Extension Workers at GIHANGA.

Even though originating from the Ministry of National Education, one could add to this list the Department of Agronomy of the University of Burundi, whose prize-winners are usually employed in the services of the Ministry of Agriculture and Livestock.

##### 4.1.1. Advanced Institute of Agriculture, I.S.A.

The I.S.A. created by the decree # 100/59 of 6 May 1983 and modified by decree # 100/21 of 22 November 1983, has the mission to train industrial engineers at the Bachelor's level, specialized from four basic types :

- Agriculture
- Zootechny
- Rural engineering, water and forests
- Technology of industrial agriculture and food technology.

##### 4.1.2. Institute of Agricultural Techniques of Burundi (I.T.A.B.)

ITAB was created by decree # 1/200 of 10 October 1968 with the objective to train technicians in the areas of agriculture, forestry, and veterinary.

4.1.3. The E.T.A.S.

The Schools of Specialized Agricultural Technique (E.T.A.S.) are currently in the process of being developed, even though the text creating them is still being elaborated. Their goal is to train Extension Technicians.

4.1.4. The Center of Training for Agricultural Extension Workers of GIHANGA (CFVA)

Created in 1977, the CFVA trains agricultural extension workers.

4.2. Some figures

Table # 9 : National training institutions of interest to the Minister of Agriculture and Livestock

£ Special information	£ Year of creation	£ # of students recruited per year	£ entry level	£ length of study (years)	£ Level of training
£ Agronomy Department	£ -	£ + or -25(3)	£ Completed humanities	£ 5	£ Engineer conceptio
£ I.S.A	£ 1981	£ + or -30	£ Completed humanities	£ 3	£ Technical engineer
£ I.T.A.B.	£ 1986	£ + or -80	£ Common trunk	£ 4	£ Technicia
£ E.T.A.S. Gisozi	£ 1984	£ + or -50	£ Common trunk	£ 2	£ Technicia
£ I.T.A.B.	£ 1986	£ + or -80	£ Common trunk	£ 4	£ Technicia
£ E.T.A.S. Gisozi	£ 1984	£ + or -50	£ Common trunk	£ 2	£ Technicia

From the preceding table, it can be seen that the government intends to train extension technicians in the E.T.A.S. at Kigamba, Gisozi, Ruvyironza,

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Karuzi and Gihanga. Thus, ITAB of four years will disappear in 1988, as the C.F.U.A. Gihanga will also disappear.

#### 4.3. Intentions and Predictions

The first intention of the public authorities is to train extension technicians and no longer technicians and extension workers. This training will be maintained until it satisfies the need for organization of agriculture.

The Department of Agronomy should produce about 25 engineers each year. According to the projections developed by the Ministry at the Presidential Office Responsible for Planning, Burundi should have, at the rate of 24 graduates a year since 1985-86 from the Department of Agronomy :

- 119 agronomic engineers in 1990
- 1,400 agronomic engineers in 2035.

This personnel will be divided according to the following divisions :

- 140 : basic organization
- 340 : regional projects
- 250 : export crops
- 200 : food crops
- 160 : livestock and fish
- 130 : agricultural education.

The norm of reference is that an agronomic engineer is responsible for organizing 1,000 farmers.

The Ministry of National Education has also made its projections concerning the Department of Agronomy, ITAB and ETAS at Kigamba.

Table # 10 : Number of promotions and graduates at the FACAGRO, ITAB and ETAS Kigamba, estimates to the year 2000.

£	Institutes£	FACAGRO		ETAS KIGAMBA		ITAB		£
£Years	£	£	£	£	£	£	£	£
£	£	£	£	£	£	£	£	£
£	£	£	£	£	£	£	£	£
£	£	£	£	£	£	£	£	£
£	£	£	£	£	£	£	£	£
£	£	£	£	£	£	£	£	£
£ 1984-85	£ 14	£ 13	£ n.r.	£ n.r.	£ n.r.	£ n.r.	£ n.r.	£ n.r.
£ 1985-86	£ 18	£ 17	£ n.r.	£ 38	£ 63	£ 63	£ 63	£ 63
£ 1986-87	£ 18	£ 17	£ 42	£ 36	£ 63	£ 63	£ 63	£ 63
£ 1987-88	£ 18	£ 17	£ 40	£ 34	£ 63	£ 63	£ 63	£ 63
£ 1988-89	£ 18	£ 17	£ 38	£ 32	£	£	£	£
£ 1989-90	£ 18	£ 17	£ 36	£ 31	£	£	£	£
£ 1990-91	£ 18	£ 17	£ 34	£ 29	£	£	£	£
£ 1991-92	£ 18	£ 17	£ 32	£ 27	£	£	£	£
£ 1992-93	£ 18	£ 17	£ 30	£ 26	£	£	£	£
£ 1993-94	£ 18	£ 17	£ 28	£ 24	£	£	£	£
£ 1994-95	£ 18	£ 17	£ 27	£ 23	£	£	£	£
£ 1995-96	£ 18	£ 17	£ 26	£ 22	£	£	£	£
£ 1996-97	£ 18	£ 17	£ 25	£ 21	£	£	£	£
£ 1997-98	£ 18	£ 17	£ 24	£ 21	£	£	£	£
£ 1998-99	£ 18	£ 17	£ 23	£ 20	£	£	£	£
£ 1999-2000	£ 18	£ 17	£ 22	£ 19	£	£	£	£

Note : n.r. : data not gathered  
: basis of estimate

FACAGRO : rate of promotion 100 %  
rate of graduates 92.9 %  
ITAB : rate of promotion 100 %  
rate of graduates 100 %  
ETAS : rate of promotion 94.9 %  
KIGAMBA : rate of graduates 85.5 %

Source : Ministry of National Education, Office of Educational Planning.

#### 4.4. Training of trainers

According to the General Direction of Agricultural and Livestock Planning, the trainers at ISA are doctors, engineers and bachelors, but also one of the graduates of the Institute has been retained as a teacher.

There are also current negotiations between the Ministry of Agriculture and Livestock and FAO for the latter to increase its finance for :

- training scholarships for both long-term and short-term study,
- scholarships for training programs abroad, and
- training programs in Burundi.

These scholarships will be destined for trainers or future trainers at ISA, ITAB or the ETAS.

Table # 11 : Needs for in-service training and retooling in Planning agricultural and rural projects in Burundi.

£	£ Current	£ Additional	for	£
£	£ 1983-84	£ 1986-88		£
£	£	£	£	£
£ <u>Central Level</u>	£	£		£
£ Ministry of Agriculture	£	£		£
£ Agricultural Planning	£	£		£
£	£	£		£
£ <u>Services</u>	£	£		£
£ - Studies and Programming	£ 4	£ 2		£
£ - Follow-up and Evaluation	£ 2	£ 1		£
£ - Aid for projects	£ 3	£ 1		£
£	£	£		£
£ Ministry of Rural Development	£ -	£ 2		£
£ Ministry of Planning, Rural Division	£ -	£ 2		£
£ Last replacement of expatriates	£ -	£ 5		£
£ <u>Field Level</u>	£	£		£
£ Integrated rural development projects	£ -	£ 5		£
£	£	£		£
£ Totals	£ 9	£ 18		£

Source : FAO, Division of policy analysis, Service of training and studies of development policies, Evaluation of training needs for planning and analysis of agricultural and rural projects in Africa South of the Sahara, Rome, FAO, 1984, p. 56.

#### 5. NEEDS FOR TRAINING ABROAD

These needs are understood, but the planning for them has not yet been done. To give an idea of these needs, take the example of the area studied by the FAO. Even though the FAO study does not suggest that the training take place abroad, there is no doubt that in terms of the infrastructure currently available in our country, training for the planning of agricultural and rural projects should take place abroad.

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MINISTRY OF RURAL DEVELOPMENT

## 1. OBJECTIVES

Created by the decree # 100/139 of 25 October 1979, the Ministry of Rural Development has the goal to encourage the regrouping of the population in villages and to organize cooperatives in rural areas. These actions are accompanied by measures meant to improve the well-being of the rural population :

- Water supply in rural areas
- Rural electrification
- Improvement in the quality of housing
- Better arrangement of the housing environment
- Support for production and commercial cooperatives.

## 2. ORGANIZATION AND FUNCTIONING

The Minister of Rural Development is based on the decree # 100/116 of 28 December 1984 dealing with the reorganization of the Ministry. It includes a General Direction and four Departments, but also the Fund for Rural Housing whose Director depends directly upon the Minister's Cabinet, such that the following organigram results :

ORGANIGRAM OF THE MINISTRY OF RURAL DEVELOPMENT

Minister's Cabinet

Cabinet's Secretary

Office of Studies and  
Statistics

GENERAL DIRECTION

Secretariat

Direction of Fund  
for Rural Housing

Cooperatives  
Department

Dep. of Rural  
Housing and  
Appropriate  
Technology

Deartment of Water  
and Rural Electri-  
fication

Office of Produc-  
tion and Equipment

Sub-Directions  
Training and Judicial  
Affairs

Studies and  
Control

Rural Housing

Appropriate  
Technology

Technique

Administration  
and Finance

Management of  
Rural Infrastructure

SERVICES

Cooperative  
Education and  
Training

Cooperative  
Agreements  
and Disputes

Studies of  
Cooperative  
Projects

Studies and  
Rural Anima-  
tion

Promotion of  
Rural Housing

Studies and Planning

Extension

Planning

Water

Electrification

Finance

Personnel

Water

Electrification

Public Sanitation  
and Road System

Administration and  
Finance

OFFICES

Survey

Topography

Water  
and Geology

Laboratory  
Analysis

Supply Technique

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### 3. Rates of Coverage in the Ministry

Table # 1 : Personnel of the Ministry of Rural Development at the end of 1985

£	Categories	£Advanced £personnel £ (1)	£Intermediate £personnel £ (2)	£Technical £personnel £ (3)	£ Total £	£
£	1. Cabinet	£ 3	£ 1	£ 3	£ 7	£
£	2. General Direction	£ 5	£ 0	£ 2	£ 7	£
£	3. Department of Rural Housing and Appropriate Technology	£ 5	£ 1	£ 3	£ 9	£
£	4. Department of Cooperatives (Central Administration)	£ 29	£ 0	£ 8	£ 37	£
£	5. Provincial Offices of Cooperatives	£ 27	£ 0	£ 41	£ 10	£
£	6. Department of Water and Rural Electrification	£ 10	£ 0	£ 0	£ 10	£
£	Total	£ 79	£ 2	£ 57	£ 138	£

Note (1) With a diploma from higher education  
 (2) General humanities  
 (3) Technical humanities or two years of specialized training after the common trunk.

Source : Table developed by our efforts from information furnished by the Direction of Personnel Management Service on the framework of the Ministry of Rural Development for 1985.

The preceding table shows the range of needs in personnel for the Ministry of Rural Development. In effect, in terms of its assigned objectives, this ministry is currently obliged to use either aid personnel or personnel trained on-the-job, or those with insufficient training. This is particularly true for technical work linked to rural housing, water and rural electrification.

The Department of Rural Housing and Appropriate Technology currently have neither engineers in rural engineering nor Burundi specialists in the organization of territory or in rural urbanization.

The Department of Water and Rural Electrification only includes among its specialized personnel one technical engineer, an advanced technician in operational hydrology, two hydro-geological engineers and four engineers in hydraulic construction.

The Department of Cooperatives is better supplied with personnel, as a result of the graduates from the Center of Cooperative Training (CEFOCOOP) and the Advanced School of Commerce (ESCO).

Table # 2 : Total of graduates from CEFOCOOP up to 1985

£ School	£ Total number of graduates	£
£ CEFOCOOP long cycle	£ 36	£
£ CEFOCOOP short cycle	£ 61	£
£ ESCO	£ 16	£
£ TOTAL	£ 113	£

Nonetheless, this number remains largely insufficient, especially if one knows that the process of villagization will lead to the development of a cooperative per village.

These problems can be better understood by taking into account the personnel needs expressed in the IVth Five-Year Plan.

Table # 3 : Department of Rural Housing : Personnel necessary for the IVth Plan

£ Years	£ 1983	£ 1984	£ 1985	£ 1986	£ 1987	£ Total
£ Categories	£	£	£	£	£	£ (1) £
£ Engineer of Rural	£ 1	£ 2	£ 2	£ 2	£ 2	£ 2 £
£ Engineering	£	£	£	£	£	£ £
£ Specialist in Territo- £ rial organization	£ 1	£ 1	£ 1	£ 1	£ 1	£ 1 £
£ Specialist in Rural	£ 1	£ 1	£ 1	£ 1	£ 1	£ 1 £
£ Urbanization	£	£	£	£	£	£ £
£ Construction Site	£ 10	£ 13	£ 15	£ 18	£ 20	£ 20 £
£ Foremen	£	£	£	£	£	£ £
£ Topographer	£ 2	£ 3	£ 3	£ 4	£ 4	£ 4 £

Source : Ministry of Planning, IVth Five-Year Plan of Economic and Social Development of Burundi 1983-1987, Annex I, Volume 2, p. 20.

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Table # 5 : Water and Rural Electrification Department : Personnel necessary for the IVth Plan

Rural Water

£	Qualifications	£	Number	£
£	Sanitary Engineers	£	1	£
£	Hydraulic Engineers	£	3	£
£	Hydro-geological Engineers	£	2	£
£	Hydrologists	£	1	£
£	Civil Engineers for Construction	£	3	£
£	Electromechanic Engineers	£	1	£
£	Geometric-Topographic Engineers	£	1	£
£	Lawyer	£	1	£
£	Economist	£	1	£
£	Hydraulic Technicians	£	2	£
£	Sanitation Technicians	£	10	£
£	Hydro-geological Technicians	£	20	£
£	Geometric-Topographic Technicians	£	5	£
£	Technicians of Public Works	£	8	£
£	Chemists	£	1	£
£	Solderers and Mechanics	£	10	£

Source : Ministry at the Presidential Office Responsible for Planning, IVth Five-Year Plan of Economic and Social Development of Burundi.

Table # 6 : Department of Water and Rural Electrification : Personnel needs necessary for the IVth Plan

Rural Electrification

<u>£ Personnel</u>	<u>£ Available</u>	<u>£ Needs</u>	<u>£ To Recruit</u>	<u>£</u>
<u>£ Advanced Personnel</u>	£	£	£	£
£ Electromechanical Engineer	£ 2	£ 3	£ 1	£
£ Civil Engineers in Construction	£ 0	£ 1	£ 1	£
<u>£ Intermediate personnel</u>	£	£	£	£
£ Civil Electrical Engineer	£ 2	£ 3	£ 1	£
<u>£ Personnel for execution</u>	£	£	£	£
£ Electricians	£ 1	£ 15	£ 14	£
£ Topographer	£ 0	£ 5	£ 5	£
£ Mechanics	£ 0	£ 7	£ 7	£

Source : Same source as table # 3, p. 47

In confronting the current situation and that desired by the IVth Plan, one can note that the needs for qualified personnel remain, and this is better understood if one has an idea of the aid personnel at the Ministry.

Table # 7 : Aid personnel working at the Ministry of Rural Development in 1986

£	Fonction	£	Diploma	£
£	Head of (D.H.E.R.) Project	£	Electro-mechanical Engineer	£
£	Assistant to Head of D.H.E.R. Projet	£	Hydraulic Engineer	£
£	Head of Kayanza-Ngozi Water Supply Project	£	Hydraulic Engineer	£
£	Counsellor to the Department of Water and Rural Electrification	£	Electrical Engineer	£
£	Coordination of Rural Water Supply Project	£	Hydraulic Engineer	£
£	Administrator of Water and Sanitation Project/D.H.E.R.	£	Hydraulic Engineer	£
£	Head of Rural Housing Project	£	Not indicated	£
£	Principal Technical Counsellor for Project PNUD/BIT/BDI/78-001 Development of Cooperative Movement	£	Agricultural economist, Sociologist and degree in Accounting	£
£	Charged with Support of Central Accounting and Management of Project PNUD/BIT/BDI/78-001	£	Agronomic Engineer	£
£	4 United Nations Volunteers	£	Not indicated	£
£	1 Associate expert	£	Not indicated	£

Source : Table developed by our efforts from information furnished by :

- the Secretary of the Department of Rural Housing and Appropriate Technology.
- The Secretary of the Department of Water and Rural Electrification.
- The Head of Projet PNUD/BIT/BDI/78-001 Development of Cooperative Movement.

#### 4. NATIONAL TRAINING INSTITUTIONS

##### 4.1. Existing Institutions

In terms of needs concerning rural housing, only the technical personnel are trained in Burundi at the School of Public Works of Gitega. Within the existing framework of rural development objectives, the capacity of the sections which train foremen and topographers should be increased because according to the estimates of the IVth Plan, they need at least one foreman for 100 houses and one topographer for 500 houses.

This is the same case for Rural Electrification for which the technical and advanced personnel are furnished by the Secondary Technical School at Kamenge and the Advanced Technical Institute.

For cooperatives, the current problem is at the level of technicians for cooperatives as well as personnel for cooperatives. In effect, the IVth Plan foresaw that the technicians for cooperatives should be furnished by the Advanced School of Commerce, whose "Cooperatives" section took over the training activities of the long cycle of the former Center for Cooperative Training, "CEFOCOOP", which resulted from the PNUD/BIT/BDI/78-001 Project for the Development of the Cooperative Movement, signed in 1978 between the Government of Burundi on the one hand and PNUD and BIT on the other hand.

Since the academic year 1985-1986, there is no longer a "Cooperatives" section at the Advanced School of Commerce, as requested by the Ministry of Rural Development, not because the number of technicians for cooperatives trained was sufficient for needs, but because the services which should employ the finalists of that section do not for the time being have adequate infrastructural means. In terms of these needs, according to the IVth Plan, in addition to the technicians which should be employed by the central and provincial services, there must be at least one technician per commune.

In terms of Cooperative personnel, their training should be dispensed by CEFOCOOP II, but that school has not yet started.

#### 4.2. An Institution to Create : Center of Cooperative Training : CEFOCOOP II

The CEFOCOOP Project has, at its creation, a triple goal :

- The training of "Cooperative Agents" who were called, at the end of one year, to assure general assistance to cooperatives on site (the short cycle of CEFOCOOP, or the training which continued one year after the Common Trunk)
- The training of "Cooperative Technicians" who were called, at the end of two years, to assure on site and at the national level specialized assistance to cooperatives (long cycle of CEFOCOOP which continued training for two years after the end of Humanities).
- The dispensing for all appropriate means of training programs and recycling through short programs, to the benefit of directors, personnel, employees and members of Cooperatives.

Nonetheless, due to a lack of material belonging to CEFOCOOP, the third objective was never undertaken within the framework of this institution, and CEFOCOOP II, which will have its headquarters in Gitega, will take charge of this point.

CEFOCOOP II plans to integrate itself into the framework of the Project of National Federation of Cooperatives. This Federation should include the following "technical" development instruments (6) :

- The Center for Cooperative Training providing for :
  - \* the permanent organization of training programs destined for elected directors (members of management councils and oversight committees) and for the personnel and cooperative employees (managers, personnel and basic animators);
  - \* the functioning of a production and diffusion unit of pedagogical aids useful for the education and training of all the public involved (directors, personnel, and basic animators and cooperative members);

- \* The Central Purchasing Office, allowing for the improvement of supply for cooperative stores, by the rationalization of purchases, appropriate transport and storage, as well as the direct access to the import of certain products; and
- \* The Office of Commercialization, providing for the improvement of campaigns for organization of groups and commercial cooperatives, by aid for transport and market research, as well as by the regulation of storage conditions and flow of products.

In particular, the CEFOCOOP II has the mission of education and training for cooperatives.

a) Cooperative Education has the essential object of inculcating within cooperative members the principles the operating the cooperatives and the application of their modalities, as well as the rights and obligations of members, in order to obtain from the members a conscientious and active participation in the file of their cooperative.

The programs for cooperative education must be conceived by cooperative specialists who are at the same time specialists in adult education.

The structure of cooperative education will be of a pyramidal type (7) :

- at the summit, the Center, responsible for pedagogy, of the production of all education aids, and the training of trainers;
- a first level, the regional trainers, attached to Regional Unions, charged with the application of training needs, as well as the follow-up and recycling of directors and basic educators;
- a second level, of elected directors, charged with the carrying out and evaluation of educational programs for cooperative members; and
- at the base, the cooperative members-basic educators, taking the responsibility, at the level of hills, for the animation and education of cooperative members.

b) The cooperative training includes all the necessary functional training for the organization, for the management and the control of cooperatives, as well as the effective execution of their specific activities.

Cooperative training at CEFOCOOP II will aim at the following groups :

- elected directors of cooperatives : including members of the management councils and oversight committees, composed of democratically-elected cooperative members with unpaid functions, and for which they must receive specialized training and benefit from indispensable follow-up and retooling;
- the regional trainers, responsible at the level of regional cooperative structures, the promotion of adapted educational programs for the specific cooperative situations, and for which the programs must be prepared;
- the basic educators, chosen from among the cooperative members, by the cooperative members and responsible for the education of the adherents to the cooperatives (The educators must receive and adequate training as well as follow-up and retooling sessions.); and
- cooperative employeers, those with salaries exercising various jobs such as manager-accountants, sellers, stockpersons, weighers; they require basic training and in the case of manager-accountants, this training should be continued with regular in-service training.

The methods call for the following techniques (8) :

- visual and audio-visual education
- role-playing
- discussions and methods for meetings, in small groups
- analyses and examples based on real cases
- workshops

Employees of cooperative organizations will be trained by :

- use of normalized accountant documents
- the completing of monthly accountant reports
- the completing of all periodic inventories
- the organization of cooperative activities
- the organization of internal controls

In terms more especially of the education of cooperative members, it is foreseen that a Production Workshop of Pedagogical Material will include :

- a printing workshop
- a photo laboratory
- a silk-screening workshop
- an audio-visual laboratory
- additional services of : drawing rooms, stockrooms for supplies and productions, library, and media library.

In terms of the predictions for personnel and cooperative members to educate and train, we would hope to have up-to-date data in terms of the current number of cooperatives (200 in 1985), but we will only provide here the data that was established at the moment when the project study was completed (as of 1982). They give, nonetheless, approximative numbers to educate and to train following the evolution of the cooperative movement. Here is the planning for training for the first three consecutive years if the project has started at the beginning of 1983 (note here that the project has not yet started).

Table # 8 : First year : base of 150 existing cooperatives (end of 1982)

Targeted Group	Number of persons to train per cooperative	Total to train	Number of sessions per year	Maximum # of participants per session	Number of groups per year	Number of weeks of training per year
Management Councils	3	450	1	50	9	9
Oversight Committees	2	300	1	50	6	6
Employees	1	150	2	30	5	10
<b>Total</b>		<b>900</b>				<b>25</b>
		persons				weeks

Source : PNUD/BIT-BDI-78/6-001 Project, op. cit., Annexes.

Table # 9 : Second year : 150 + 25 newly created : basic of estimate = 175

£ Targeted Group	£ Number of £ persons	£ to train £	£ Total to £ train £	£ sessions £ per year	£ Number of £ participants	£ Maximum # £ per ses- £ sion	£ Number of £ groups	£ Number of £ weeks of £ training	£ per year £	£
£ Management	£ 3	£	£ 525	£ 1	£ 50	£ 11	£ 11	£	£	£
£ Councils	£	£	£	£	£	£	£	£	£	£
£ Oversight	£ 2	£	£ 350	£ 1	£ 50	£ 7	£ 6	£	£	£
£ Committees	£	£	£	£	£	£	£	£	£	£
£ Employees	£ 1	£	£ 175	£ 2	£ 30	£ 6	£ 12	£	£	£
£ Total	£	£	£ 1050	£	£	£	£ 30	£	£	£
£	£	£	£ persons	£	£	£	£ weeks	£	£	£

Source : PNUD/BIT-BDI-78/6-001 Project, op. cit., Annexes.

Table # 10 : Third year : 175 cooperatives + 25 newly created : basic of estimate : 200

Targeted Group	Number of persons to train per cooperative	Total to train	Number of sessions per year	Maximum # of participants per session	Number of groups per year	Number of weeks of training per year
Management Councils	3	600	1	50	12	12
Oversight Committees	2	400	1	50	8	8
Employees	1	200	2	30	7	14
<b>Total</b>		<b>1200 persons</b>				<b>34 weeks</b>

Source : PNUD/BIT-BDI-78/6-001 Project, op. cit., Annexes.

### 5. TRAINING NEEDS ABROAD

As one notes, the area of rural development suffers in cruel fashion from a lack of qualified personnel and, even where they exist, the needs to satisfy are still very high. We should have liked thus to obtain data on the needs for training abroad : but in their absence, we will indicate the desires as given by the responsible personnel from the Ministry.

In terms of the objectives of the Ministry of Rural Development, all the advanced, intermediate, and technical personnel should benefit from scholarships for training programs abroad, in order take account of the developments in other countries.

In addition, it is important to train, by scholarships for studies, nationals in the following subject areas :

- construction,
- rural urbanization,
- organization of territory,
- hydraulics,
- hydro-geology, and
- hydrology.

This training must be at the same time at the advanced and technical levels. This training should be accomplished abroad - as a result notably of the insufficient training infrastructure in these areas in Burundi - one must equally note that the preference would be toward countries presenting natural characteristics similar to Burundi, or where many objectives in rural development have been achieved, for example in certain African countries such as Mali, Burkina-Faso and Cameroon.

MINISTRY OF CIVIL SERVICE

## 1. OBJECTIVES

According to Decree # 100/28 of 17 February 1981, the Ministry of Civil Service seeks to obtain the following objectives :

- To elaborate the governmental policy in the area of administration and the management of civil servants and contracted agents of the civil administration of the State and to oversee the application of this policy.
- To direct, to coordinate, and to control the management of civil personnel of the State.
- To assure professional promotion, the improvement and in-service training of public and para-public sector agents.
- To coordinate in close collaboration with the General Inspection of the State, work aiming at the improvement of the structures and procedures of the administration and public services in order to oversee the rational utilization of agents of the State.
- To plan the development of members of the Civil Service in harmony with the development of the structure of services and the financial policy of the State.

## 2. ORGANIZATION AND FUNCTIONING

As one can see from the organigram on the following page the Ministry of Civil Service includes the services of the central administration composed of the Cabinet of the Ministry of the General Direction of Civil Service.

The following public establishments are under the direction of the Ministry of Civil Service :

- Center for Improvement and In-Service Training (C.P.F.)
- Civil Service Mutual Insurance Company (M.F.P.)

3. TRAINING NEEDS

One of the priority tasks of the Ministry is to assure the improvement and in-service training of agents in the public and para-public sectors. They accomplish this mission through the activities of the C.P.F.

MINISTRY OF CIVIL SERVICE

Technical Counsellors

Cabinet  
Secretariat

Center for Improvement and  
in-Service Training

General Direction  
of Civil Service

Mutual Insurance  
Company

Secretariat  
Chamber of  
Appeal

Administrative  
Secretariat

Bureau of Study and  
Statistics

Service of Internal  
Management

Department of Administration Management

Secretariat and  
Typing Pool

Sub/Direction  
Recruitment, Exams  
and Training

Sub/Direction  
Teachers

Sub/Direction  
Non-Teachers

Sub/Direction  
Personnel  
under contract

Sub/Direction or Archives and Records

Office of Payments

Claims Service

Secretariat

Sub/Direction  
Teachers

Sub/Direction  
Non-Teachers

Sub/Direction  
Under contract

## The Center for Improvement and In-Service Training (C.P.F.)

The C.P.F. was created by the public authorities on 8 November 1979 in order to assist the Government to better accomplish its program of socio-economic development, notably by an efficient organization and management of administration and economic institutions.

The C.P.F. provides its actions for agents already working for the Public Administration and in the para-public sector.

### 1. Mission of C.P.F.

The C.P.F. fulfills the followings missions :

- Evaluation of needs for improvement and in-service training.
- Research and organization of teaching in the areas of administration and management.
- Production and diffusion of documents in these areas.
- Studies and Councils on the organization and management of public and para-public services.
- training of trainers in administration and management.

### 2. Forms of Activity

The C.P.F. accomplishes its missions by teaching, studies and councils, and actions of cooperation and exchange supported by publications.

#### 2.1. Teaching

As part of the teaching activity of the C.P.F., there are training and improvement actions, both of which include general cycles in administration and management and specialized cycles.

##### 2.1.1. Training actions

The training actions include general cycles in public administration and in management. They are named "Stages Probatoires", probational Training Programs.

These are destined for civil servants not yet formally employed ("entitled"), as both the advanced category and the intermediate category with different profiles of basic training. The length of training is three weeks (60 hours).

The specialized training programs are organized for public agents who occupy posts for which they do not have the required diplomas or agents called upon to work in a new service.

#### 2.1.2. Actions for Improvement

There are cycles of continuing improvement in administration and management which all civil servants, in theory, should attend once every five years.

They have the goal to up-date the knowledge acquired during the Probational Training Programs. The length of training is three weeks (60 hours).

Besides these cycles, the C.P.F. also organizes specialized improvement actions for public agents in order to deepen an aspect of administration or management.

These cycles are, in general, of long duration, and some can be as long as six months.

The following table shows the action of C.P.F. in this area :

Table # 1 : Total of Certificates Granted

£ Year	£ Number of Certificates granted	£	Area	£
£ 1979	£ -	£	-	£
£ 1980	£ -	£	-	£
£ 1981	£ 61	£	General accounting	£
£	£	£	English	£
£	£	£	Executive secretariat training	£
£ 1982	£ 30	£	English	£
£	£	£	General accounting	£
£	£	£	Executive secretariat training	£
£ 1983	£ 75	£	Executive secretariat training	£
£	£	£	Analytical accounting	£
£	£	£	General accounting	£
£	£	£	English	£
£ 1984	£ 58	£	Budget and cost analysis and decision-making	£
£	£	£	Public Management	£
£	£	£	English	£
£	£	£	General accounting	£
£ 1985	£ 56	£	Executive secretariat training	£
£	£	£	Management of Import Supply	£
£	£	£	Documentation	£
£	£	£	English	£
£ Total	£ 280	£		£

Source : - Program and Calendar of Activities of C.P.F. 1986  
 - Program and Scientific Activities of C.P.F. 1985.

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Finally some seances of self-improvement are organized on site for the personnel of the C.P.F.

## 2.2. Actions of Cooperation and Exchange

The C.P.F. organize meetings in the form of colloquiums and round tables having objectives of cooperation, consciousness-raising, and exchange of points of view on problems concerning administrative activities. Their goal is to propose reform measures of public services.

## 2.3. Studies and Council Activities

Some services, through the authorities on whom they depend, seek the competence of the C.P.F. for the study and development or restructuting of the organization of their functioning or of their managment in order to increase their efficiency.

## 2.4. Publications and Production of Pedagogical Materials

In addition to a specialized trimestrial review on management of administration and training, the C.P.F. publishes documents for most of the seminars and other meetings which it organizes.

## 3. Means of the C.P.F.

The C.P.F. is assisted in the accomplishment of its mission by a PNUD project both at the level of personnel and material means.

The scientific personnel includes the members of the direction and of the project including 23 persons of whom :

- 14 advanced personnel.
- 10 intermediate personnel.

3 of the advanced personnel are expatriates.

1 advanced personnel and 1 intermediate personnel are continuing their training abroad.

The financial means of the C.P.F. are constituted by annual support from the ordinary budget of the State and is largely completed by the support of the Project, notably in the purchase of books for the library, the purchase and maintenance of audio-visual material and computers.

#### 4. TRAINERS AND NEEDS FOR TRAINING

##### 4.1. Trainers

In the organization of training programs the C.P.F. uses its own personnel. It collaborates with the services which send trainers in order to invite appropriate trainers to provide the type of in-service training desired.

The C.P.F. also calls upon teachers such as professors from the University of Burundi, or civil servants from the public administration as well as several experts from the resident missions of PNUD and the World Bank.

##### 4.2. Training Needs (1987 to 1990)

The C.P.F. foresees for its personnel, training programs abroad from 6 to 18 months in length.

##### 4.2.1. Long Training Programs (18 months)

£	Disciplines	£	Units	£
£	Computer science (already completed a program of 6 months)	£	1	£
£	Financial management and business management	£	2	£
£	Management of import supplies	£	1	£
£	Rural development (specialty : economist)	£	1	£
£	Management	£	2	£
£	TOTAL	£	7	£

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4.2.2. Short Training Programs (6 to 9 months)

£	Disciplines	£	Units	£
£		£		£
£	Maintenance of Equipment : - Office and Printing	£		£
£	Machines	£		£
£	- Maintenance of audio-	£	3	£
£	visual equipment and	£		£
£	micro-computers	£		£
£		£		£
£	Organization and Methodology	£	3	£
£		£		£
£	TOTAL	£	6	£

5. AID PERSONNEL

Aid personnel currently working or expected in the coming months are divided as follows :

£	Specialty	£	Units	£	Source	£
£		£		£		£
£	Computer Science	£	1	£	Canadian Center for Stu-	£
£		£		£	dies and International	£
£		£		£	Cooperation (CECI)	£
£		£		£		£
£	Audio-visual	£	1	£	CECI	£
£		£		£		£
£	Planning and Management of Rural	£	1	£	CECI	£
£	Developement	£		£		£
£		£		£		£
£	Public Administration	£	1	£	PNUD	£
£		£		£		£
£	Business Management	£	1	£	PNUD	£
£		£		£		£
£	Management	£	1	£	PNUD	£
£		£		£		£
£	Documentation	£	1	£	PNUD	£
£		£		£		£
£	TOTAL	£	7	£		£

6. ORGANIZATIONS WHICH COOPERATE WITH C.P.F.

The C.P.F. cooperates with international organizations in the form of scientific exchanges and participation in colloquiums.

The most important of these organizations is the United Nations Development Program (UNDP/PNUD).

In addition to PNUD others to mention include :

- The World Bank.
- United States Agency for International Development (U.S.A.I.D.)
- The Institute for Economic Development (I.D.E.)
- The Pan-African Institute for Development (I.P.D.), Douala, CAMEROUN.
- The Institute for International Public Administration (I.I.A.P.), Paris, FRANCE.
- The African Center for the Development of Administrative Research (CAFRAD), Tangiers, MOROCCO.
- The International Institute of Administrative Science (I.I.S.A.), Brussels, BELGIUM.

MINISTRY OF PUBLIC HEALTH

## 1. OBJECTIVES

### 1.1. Social and Preventive Medicine

"The Government of the Second Republic has undertaken a new and profound restructuring of the health policy of the country, based on the principle of social and preventive medicine, aiming at the improvement of the quality of life for all of the population, with the priority accorded to the rural milieu. This policy must benefit from both an integrated and a multi-sectorial approach in order to provide primary health care which will permit a framework of development conforming to social justice" (9).

### 1.2. Coverage of the population

The health policy of Burundi aims to serve all the population. To accomplish this objective, they are looking to provide services and accessible health care for all.

The priority has been placed on primary health care.

In Burundi, "it is estimated that the fundamental health needs to satisfy are the following :

- sufficient immunology, requiring a close collaboration, or even integration, with the enlarged program of vaccination.
- assistance to mothers during pregnancy to the moment of birth, post-natal and infant care, and family planning.
- the provision of clean water, adequate sanitation for the environment, protection against vectors of illness, and improvement of the environment.
- health and nutritional education.
- current care including diagnosis and early treatment of communicable diseases, emergency care, system of referral for the most serious cases.
- a minimum of statistical data permitting the evaluation of work" (10).

## 2. ORGANIZATION AND FUNCTIONING

From the health point of view, Burundi is divided into 4 medical regions, that is : the medical region of Bujumbura, that of Gitega, that of Ngozi and that of Bururi.

According to the Decree # 100/001 of 7 January 1985, the Ministry of Public Health includes two General Directions which depend directly upon the Minister's Cabinet, that is : the General Direction of Public Health and that of Health Logistics. The two other services which depend directly of the Minister's Cabinet are :

- The Service of Training and Personnel Management.
- The Office of Inspection and Planning.

The General Direction of Public Health supervises the activities of the Department of Health Care and those of the Department of Hygiene and Prevention.

The General Direction of Health Logistics supervises the activities of the Department of Budget and Supply as well as those of the Department of Management of Health Infrastructure.

ORGANIGRAM

MINISTER'S CABINET

SERVICE OF TRAINING  
AND PERSONNEL MANAGEMENT

OFFICE OF INSPECTION AND  
PLANNING

GENERAL DIRECTION OF PUBLIC  
HEALTH

GENERAL DIRECTION OF HEALTH  
LOGISTICS

DEPARTMENT OF  
HEALTH CARE

DEPARTEMENT OF  
HYGIENE AND  
PREVENTION

DEPARTMENT OF  
BUDGET AND  
SUPPLIES

DEPARTMENT OF  
MANAGEMENT OF  
HEALTH INFRA-  
STRUCTURE

SUB/DEPARTMENT

CARE UNITS  
AND LABORATORIES

EPIDEMIOLOGY  
AND HEALTH STA-  
TISTICS

MATERNAL AND  
INFANT HEALTH  
EDUCATION

PUBLIC HYGIENE  
AND ENVIRON-  
MENTAL HYGIENE

PURCHASE AND STOCK MANAGEMENT

DISTRIBUTION  
AND PHARMACIES

BUILDINGS AND  
EQUIPMENT

TRANSPORTATION

### 3. HEALTH COVERAGE OF THE POPULATION

#### 3.1. Notion of "Health coverage of the population"

The calculation of the average spread of action (R.M.A.) of each type of health establishment in Burundi is based on the unrealistic hypothesis of equal distribution of health establishments.

In spite of this, the hypothesis corresponds to the most favorable situation that could exist.

$$R.M.A. = S/N.Pi$$

R.M.A.	=	Average spread of action
S.	=	geographical size of the administrative unit considered
N.	=	number of establishments of the type considered
Pi	=	3.14

#### 3.2. Health coverage in Burundi : situation in 1980 (11)

Table # 1

Province	Km <sup>2</sup> size	Hospital	Spread (km)	Dispensary Center	Spread (km)	ther	(km)	
Province	Km <sup>2</sup> size	Hospital	Spread (km)	Dispensary Center	Spread (km)	ther	(km)	
Ruyigi	5,718	3	24.6	25	8.5	28	8.1	
Bururi	4,957	3	22.9	18	9.4	21	8.6	
Bubanza	2,712	1	29.4	19	6.9	20	6.6	
Muyinga	3,700	1	34.3	18	8.1	19	7.9	
Gitega	3,447	4	16.6	22	7.1	28	4.5	
Muramvya	1,546	2	15.7	14	5.9	17	5.4	
Ngozi	2,707	5	13.1	21	6.4	26	5.8	
Bujumbura	1,322	2	14.5	14	5.5	16	5.1	
Totat	26,109	21	19.4	152	7.4	172	6.9	

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On the average, hospitals have a spread of action of 20 kilometers. If one considers the ensemble of health establishments, the spread of action of each establishment is 7 kilometers.

### 3.3. The normal spread of coverage

"It is generally admitted that a health unit cannot be effectively responsible except for a population within a distance of 5 kilometers. In favorable geographic conditions (a plain), this represents about one hour walking in order to arrive and another hour to return home. However, the geographic situation of our country with its hilly terrain, can considerably modify these data. One could thus say that the 161 peripheral health units, assuming they were uniformly distributed would cover only half the population. Consequently it is necessary to multiply the number of health centers, but without a preliminary study (12), it is impossible to determine where and how to place these new centers." (13).

### 3.4. Total coverage for health in Burundi : perspectives for the year 2000

In the "Report of the Mixed Commission of the Ministry of Public Health (of Burundi/O.M.S.) concerning Health Planning" (14), a plan was established which included predictions of health units to create from 1983 to 1995 and a plan of annual investments spread through this entire period. (15)

#### 3.4.1. Perspectives of W.H.O. : Health for all by the year 2000 (16)

In order to assure health for all by the year 2000, W.H.O. has elaborated a health development plan which it proposes for certain African countries including Burundi.

Within the general lines of this plan, W.H.O. proposes as objectives to accomplish in the short term, three periods :

- 1987 : Operational support activities for primary health care (peripheral level).
- 1988 : Activities of technical support for primary health care (intermediate level).

- 1989 : Activities of strategic support for primary health care (central level).

### 3.4.2. Total health coverage of the population of Burundi

#### a. Objectives of the IVth Five-Year Plan : 1983-1987 (17)

The health policy adopted by Burundi is to orient the health services toward a social form of medicine.

Within the framework of the objectives decided by the IVth Five-Year Plan, different actions will concern :

- the decentralization of health services.
- the improvement of existing infrastructure and the implantation of new hospitals and health centers.
- struggle against contagious diseases
- environmental hygiene
- health education
- personnel training.

In the area of implantation of new health units, the IV th Five-Year Plan foresees the construction of 5 new hospitals, one in Bujumbura (the hospital in Kamenge that is already completed), 4 others in the interior of the country : Mutaho (already operating), Makamba, Rutovu and Karuzi ; and 22 health centers.

#### b. Medical schools in Burundi (18)

The Department of Medicine of the University of Burundi is responsible for training general practitioners.

Four schools will be able to assure the training of medical technicians : the Medical Institute of Gitega, Bururi and Ngozi where medical technicians and nurses' aids will be trained and the Medical Institute of Bujumbura for hygiene technicians and their auxiliaries and hygiene assistants.

3.4.3. Insufficiency of medical personnel and health infrastructure.

Table # 2 : Evolution of the number of doctors (19)

Year	1968	1973	1976	1977	1979	1980	1982	1986	
Numbers	53	51	99	93	103	111	170	238	= 135 nationals and 103 aid personnel and complementary agents

If one considers the ratio : population/doctors, internationally considered as the indicator showing the theoretical number of persons to be treated by one doctor, one notes that it is far from the norm of W.H.O. (1 doctor for 1000 inhabitants).

In 1980, the health sector included 295 advanced personnel and 498 intermediate personnel (20).

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Table # 3 : The distribution of jobs : case of 1980 (21 and 22)

£	Groups of jobs	£	Jobs	£	Number	£	Total	£
£	1. Advanced personnel with	£	- Executive accounting	£	8	£		£
£	administrative and	£	- Executive administrator	£	16	£		£
£	commercial competence	£	- Executive external manage-	£	3	£	45	£
£		£	ment	£		£		£
£		£	- Miscellaneous	£	18	£		£
£		£		£		£		£
£	2. Advanced personnel with	£	- Doctors and those	£		£		£
£	technical competence	£	assimilated	£	62	£		£
£		£	- Miscellaneous	£	188	£	250	£
£		£		£		£		£
£	3. Intermediate personnel	£	- Accountants	£	6	£		£
£	with administrative and	£	- Administrators	£	20	£		£
£	commercial competence	£	- Production Managers	£	9	£	57	£
£		£	- External Managers	£	3	£		£
£		£	- Miscellaneous	£	19	£		£
£		£		£		£		£
£	4. Intermediate personnel	£	- Medical technicians	£	421	£		£
£	with technical competence	£	- Veterinary technicians	£	13	£	441	£
£		£	- Miscellaneous	£	7	£		£
£		£		£		£		£
£		£	TOTAL	£	793	£	793	£

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Table # 4 : Numbers of Doctors : 01/05/1986

Administrative or professional sectors	Numbers		Total
	National doctors	Aid personnel doctors and complementary agents	
Central Administration	7	0	7
Administration of medical regions	4	0	4
C.P.L.R.	10	6	16
H.P.R.C.	25	26	51
National Service of Epidemiology and P.E.U.	1	0	1
Health Center of Musaga	0	1	1
Leprosorium	0	1	1
Neuro-Psychiatric Center of Kamenge	0	2	2
PMI/PF/E.S. Project	0	1	1
Struggle against Bilharzia	0	1	1
Hygiene Service	1	1	2
Hygiene : Malaria Section	1	0	1
Cibitoke Hospital	1 + 1 = 2	0	2
Islamic Center	0	3	3
Kibumbu Hospital	3	0	3
Kibumbu Sanatorium	0	2	2
Muramvya Hospital	2	1	3
Rwibaga Hospital	1	1	2
Medical Sector of Bubanza	1	0	1
Gitega Hospital	10	9	19
Medical Institute of Gitega	2	0	2
Rutana Hospital	1	2	3
Ruyigi Hospital	1	1	2
Buhiga Hospital	0	2	2
Mutaho Hospital	1	1	2
Murore Hospital	2	0	2
Bururi Hospital	5	4	9
Matana Hospital	2	0	2
Rumonge Hospital	2	1	3
Rutovu Hospital	2	0	2
Makamba Hospital	2	0	2
Ngozi Hospital	1	9	10
Kirundo Hospital	1	0	1
Muyinga Hospital	1	3	3
Kayanza Hospital	1	1	2
Buye Hospital	1	0	1
Military Hospital	2	0	2
Health Service of the Armed Forces	5	0	5

Administrative or professional sectors	Numbers		Total
	National	Aid personnel	
	doctors	doctors and complementary agents	
Department of Medicine	17	7	24
C.H.U. of Kamenge	9	0	9
Mutual Insurance Company of Civil Service	1	0	1
Agregated doctors			17
Private doctors	4	4	8
<b>TOTAL</b>	<b>135</b>	<b>103</b>	<b>238</b>
<b>Percentage</b>	<b>56.7 %</b>	<b>43.2 %</b>	<b>100 %</b>

Commentary of this table (23)

1. The Ministry of Public Health employs 56.7 % national doctors against 43.2 % foreign doctors (aid personnel and complementary agents).
2. Private doctors are only 8 in number, or 3.3 %. This indicates that the Government of Burundi does not much favor the opening of hospitals and other private health establishments.
3. Agregated doctors are 17 in number, or 7.1 %.

1.3. Barundi Students Abroad

Table # 3 : Number of Students According to Discipline

£ Discipline	Probable date of return										£ Total
	£ 1986	£ 1987	£ 1988	£ 1989	£ 1990	£ 1991	£ 1992	£ NOT MENTIONED		£	
£ 1. Health	£ 15	£ 22	£ 15	£ 21	£ 13	£ 4	£ -	£ -	£ -	£ -	£ 90
£ 2. Industry	£ 28	£ 17	£ 11	£ 12	£ 11	£ 2	£ -	£ -	£ -	£ -	£ 81
£ 3. Construction and Public Works	£ 18	£ 13	£ 13	£ 18	£ 14	£ 1	£ 2	£ 1	£ -	£ -	£ 80
£ 4. Energy and Mines	£ 32	£ 9	£ 11	£ 5	£ 11	£ 6	£ 2	£ -	£ -	£ -	£ 76
£ 5. Agriculture Livestock	£ 13	£ 13	£ 11	£ 16	£ 18	£ 2	£ 2	£ -	£ -	£ -	£ 75
£ 6. Letters and Humanities and Social Siences	£ 11	£ 8	£ 22	£ 11	£ 13	£ 1	£ 2	£ -	£ -	£ -	£ 70
£ 7. Exact and Natu-ral Sciences	£ 10	£ 7	£ 8	£ 13	£ 9	£ 5	£ -	£ -	£ -	£ -	£ 52
£ 8. Communication	£ 3	£ 4	£ 3	£ 14	£ 9	£ -	£ -	£ -	£ -	£ -	£ 33
£ 9. Finance and Economics	£ 2	£ 7	£ 9	£ 10	£ 3	£ -	£ -	£ -	£ -	£ -	£ 31
£ 10. Transport	£ 8	£ -	£ 8	£ 7	£ 4	£ 2	£ -	£ -	£ -	£ -	£ 29
£ 11. Miscellaneous	£ 2	£ 2	£ 5	£ 2	£ 1	£ -	£ -	£ 2	£ -	£ -	£ 14
£ Total	£ 142	£ 102	£ 116	£ 129	£ 106	£ 23	£ 8	£ 5	£ -	£ -	£ 631

Source : Office Scholarships for Study and Training Programs.

#### 1.4. Needs for training

For the University of Burundi, the table below represents the state of training needs for trainers during the period from 1983 to 1996.

Table # 4 : Needs for training of trainers during the period 1983-1984

£	£83-84	£84-85	£85-86	£86-87	£87-88	£88-89	£89-90	£90-91	£91-92	£92-93	£93-94	£94-95	£95-96	TOTAL
£ Department of	£ 2	£ 4	£ 4	£ 6	£ 3	£ 6	£	£	£	£	£	£	£	£ 26
£ F.L.S.H.	£ 4	£ 5	£ 5	£ 7	£ 5	£ 5	£ 3	£ 3	£ 2	£	£	£	£	£ 39
£ F.S.E.A.	£ 2	£ 3	£ 2	£ 2	£ 1	£	£	£	£	£	£	£	£	£ 10
£ Department of	£ 4	£ 8	£ 6	£ 5	£ 9	£ 6	£ 4	£ 2	£ 2	£	£ 1	£	£	£ 47
£ Medicine	£	£	£	£	£	£	£	£	£	£	£	£	£	£
£ Law Depart-	£ 3	£ 2	£ 6	£ 8	£ 10	£ 9	£ 7	£ 3	£ 2	£	£	£	£	£ 50
£ ment	£	£	£	£	£	£	£	£	£	£	£	£	£	£
£ Department of	£ 2	£ 4	£ 5	£ 5	£ 2	£ 1	£	£	£	£	£	£	£	£ 19
£ Agronomy	£	£	£	£	£	£	£	£	£	£	£	£	£	£
£ F.P.S.E.	£	£ 1	£ 3	£ 2	£	£	£	£	£	£	£	£	£	£ 6
£ I.E.P.S.	£	£	£ 3	£ 2	£	£	£	£	£	£	£	£	£	£ 5
£ I.P.	£	£ 2	£ 2	£ 4	£ 3	£ 2	£ 3	£ 3	£ 1	£ 3	£ 2	£ 2	£ 4	£ 31
£ Department of	£	£	£	£	£	£	£	£	£	£	£	£	£	£
£ Applied	£ 4	£ 5	£ 4	£ 4	£	£	£	£	£	£	£	£	£	£ 17
£ Sciences	£	£	£	£	£	£	£	£	£	£	£	£	£	£
£ I.T.S.	£ 2	£ 2	£ 2	£	£	£	£	£	£	£	£	£	£	£ 6
£ TOTAL	£ 24	£ 36	£ 42	£ 45	£ 33	£ 29	£ 17	£ 11	£ 7	£ 3	£ 3	£ 2	£ 4	£ 256

Source : - Direction of Educational Planning, Ministry of National Education.  
 - University of Burundi : Direction of Academic Services.

Table # 2 : Professorial Staff by Degree, Sex, and Nationality, Academic Year 1985-6

£ Degree	£ Doctorat of state				£ Doctorat of 3rd cycle				£ Engineer				£ Masters				£ Masters (maîtrise)				£ Bachelor				£ TOTAL
	£ H	£ F	£ H	£ F	£ H	£ F	£ H	£ F	£ H	£ F	£ H	£ F	£ H	£ F	£ H	£ F	£ H	£ F	£ H	£ F	£	£			
£ Barundi	£10	£9	£	£	£42	£6	£3	£	£13	£3	£1	£	£5	£2	£2	£	£	£	£37	£8	£7	£1	£122	£27	
£ Rwanda	£	£	£	£	£2	£1	£	£	£	£	£	£	£	£	£	£	£	£	£3	£	£	£	£5	£1	
£ Zaïre	£	£	£	£	£	£3	£	£	£	£	£	£	£	£	£	£	£	£	£1	£	£	£	£1	£3	
£ Belgian	£	£	£	£	£18	£2	£14	£1	£	£1	£	£	£	£	£	£3	£	£	£12	£	£2	£	£35	£4	£14
£ French	£11	£3	£11	£	£15	£2	£	£1	£1	£	£	£	£1	£	£2	£	£	£	£1	£	£	£	£30	£7	£11
£ Soviet	£12	£	£1	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£1	£	£	£	£13	£1	
£ Swiss	£	£3	£	£	£1	£	£	£	£	£	£	£	£1	£	£	£	£	£	£1	£	£	£	£3	£4	
£ Canadian	£	£	£	£	£	£1	£	£	£10	£4	£	£	£	£	£	£	£	£	£	£	£	£	£10	£5	
£ American	£1	£	£1	£	£	£	£	£	£	£	£	£	£1	£	£	£	£	£	£	£	£	£	£4	£	
£ German	£2	£	£	£	£	£	£	£	£3	£	£1	£	£	£	£	£	£	£	£1	£	£	£	£7	£	
£ Other	£	£4	£	£	£	£	£	£	£	£	£	£	£	£	£1	£	£	£	£	£	£	£	£1	£4	
£ Africans	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	
£ Other	£4	£1	£	£	£	£	£	£	£1	£1	£	£	£2	£	£	£	£	£	£1	£	£	£	£8	£2	
£ Total	£40	£16	£16	£1	£79	£10	£19	£3	£28	£5	£4	£2	£9	£1	£2	£8	£1	£	£58	£8	£9	£1	£239	£44	£39

PT : Full time.  
 TP : Part time.  
 V : Visitor.

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Table # 11 : Units functioning at the end of each year

£ Successive £ sectors £ undertaken	£ 1983	£ 1984	£ 1985	£ 1986	£ 1987	£ 1988	£ 1989	£ 1990	£ 1991	£ 1992	£ 1993	£ 1994	£ 1995
£ S.A.R.O.	£ 1 Hos	£ 1 Hos	£ 1 Hos	£ 1 Hos	£ 1 Hos	£ 1 Hos	£ 1 Hos	£ 1 Hos	£ 1 Hos	£ 1 Hos	£ 1 Hos	£ 1 Hos	£ 1 Hos
£	£ 3 HCE	£ 6 HCE	£ 10 HCE	£ 14 HCE	£ 16 HCE	£ 16 HCE	£ 16 HCE	£ 16 HCE	£ 16 HCE	£ 16 HCE	£ 16 HCE	£ 16 HCE	£ 16 HCE
£ 2 sectors	£	£	£ 2 Hos	£ 2 Hos	£ 2 Hos	£ 2 Hos	£ 2 Hos	£ 2 Hos	£ 2 Hos				
£	£	£	£ 4 HCE	£ 12 HCE	£ 20 HCE	£ 28 HCE	£ 32 HCE	£ 32 HCE	£ 32 HCE	£ 32 HCE	£ 32 HCE	£ 32 HCE	£ 32 HCE
£ 2 sectors	£	£	£	£ 2 Hos	£ 2 Hos	£ 2 Hos	£ 2 Hos	£ 2 Hos	£ 2 Hos	£ 2 Hos	£ 2 Hos	£ 2 Hos	£ 2 Hos
£	£	£	£	£ 4 HCE	£ 12 HCE	£ 20 HCE	£ 28 HCE	£ 32 HCE					
£ 3 sectors	£	£	£	£	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos
£	£	£	£	£	£ 6 HCE	£ 18 HCE	£ 30 HCE	£ 42 HCE	£ 48 HCE				
£ 3 sectors	£	£	£	£	£	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos
£	£	£	£	£	£	£ 6 HCE	£ 18 HCE	£ 30 HCE	£ 42 HCE	£ 48 HCE	£ 48 HCE	£ 48 HCE	£ 48 HCE
£ 3 sectors	£	£	£	£	£	£	£ 3 Hos						
£	£	£	£	£	£	£	£ 6 HCE	£ 18 HCE	£ 30 HCE	£ 42 HCE	£ 48 HCE	£ 48 HCE	£ 48 HCE
£ 3 sectors	£	£	£	£	£	£	£	£ 3 Hos					
£	£	£	£	£	£	£	£	£ 6 HCE	£ 18 HCE	£ 30 HCE	£ 42 HCE	£ 48 HCE	£ 48 HCE
£ 4 sectors	£	£	£	£	£	£	£	£	£ 4 Hos				
£	£	£	£	£	£	£	£	£	£ 8 HCE	£ 24 HCE	£ 40 HCE	£ 56 HCE	£ 64 HCE
£ Total	£ 1 Hos	£ 1 Hos	£ 3 Hos	£ 5 Hos	£ 8 Hos	£ 11 Hos	£ 14 Hos	£ 17 Hos	£ 21 Hos				
£	£ 3 HCE	£ 6 HCE	£ 14 HCE	£ 30 HCE	£ 54 HCE	£ 88 HCE	£ 130 HCE	£ 176 HCE	£ 226 HCE	£ 272 HCE	£ 306 HCE	£ 328 HCE	£ 336 HCE

Source : Document already cited, p. 30.

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Table # 10 : Investment during each year

£ S.A.R.O.	£ 1983	£ 1984	£ 1985	£ 1986	£ 1987	£ 1988	£ 1989	£ 1990	£ 1991	£ 1992	£ 1993	£ 1994	£ 1995
£ S.A.R.O.	£ 1 Hos	£ 3 HC	£ 4 HC	£ 4 HC	£ 4 HC	£	£	£	£	£	£	£	£
£ 2 sectors	£	£ 2 PS	£ 2 Hos	£ 8 HC	£ 8 HC	£ 8 HC	£ 4 HC	£	£	£	£	£	£
£ 2 sectors	£	£	£ 2 PS	£ 2 Hos	£ 8 HC	£ 8 HC	£ 8 HC	£ 4 HC	£	£	£	£	£
£ 3 sectors	£	£	£	£ 3 PS	£ 3 Hos	£ 12 HC	£ 12 HC	£ 12 HC	£ 6 HC	£	£	£	£
£ 3 sectors	£	£	£	£	£ 3 PS	£ 3 Hos	£ 12 HC	£ 12 HC	£ 12 HC	£ 6 HC	£	£	£
£ 3 sectors	£	£	£	£	£	£ 3 PS	£ 3 Hos	£ 12 HC	£ 12 HC	£ 12 HC	£ 6 HC	£	£
£ 3 sectors	£	£	£	£	£	£	£ 3 PS	£ 3 Hos	£ 12 HC	£ 12 HC	£ 12 HC	£ 6 HC	£
£ 4 sectors	£	£	£	£	£	£	£	£ 4 PS	£ 4 Hos	£ 16 HC	£ 16 HC	£ 16 HC	£ 8 HC
£ TOTAL/YEAR	£ 3 HC	£ 3 HC	£ 2 Hos	£ 2 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 3 Hos	£ 50 HCE	£ 40 HCE	£	£
£	£	£	£ 8 HC	£ 16 HC	£ 26 HCE	£ 34 HCE	£ 42 HCE	£ 46 HCE	£ 44 HCE	£ 40 HCE	£ 34 HCE	£ 22 HCE	£ 8 HCE

Source : Primary health care in Burundi. Total Coverage of Population Preplanning. s, 1.; February 1982, p. 29.

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## NOTES

- (1) Program-Report of the Central Committee of the UPRONA Party, Bujumbura, 25-28 July 1984.
- (2) Program-Report of the Central Committee of UPRONA Party, Bujumbura, 25-28 July 1984.
- (3) Days of Reflection on Planning of Human Resources, 27-28 August 1985.
- (4) Program-Report of the Central Committee of UPRONA Party, Bujumbura, 25-28 July 1984.
- (5) Republic of Burundi, Central Committee of UPRONA Party, Acts of the First National Congress of the UPRONA Party, Bujumbura, November 1980, pp. 243-245.
- (6) Project for the creation of a Center of Cooperative Education, PNUD/BIT/BDI/78/001 Project Development of Cooperative Movement, January 1984, p. 8 document available at the Department of Cooperatives of the Ministry of Rural Development.
- (7) Op. cit., p. 10.
- (8) Op. cit., p. 13.
- (9) Primary health care in Burundi. Total coverage of the population. Preplanning, February 1982, 5.1. (Bujumbura), p. 7.
- (10) Op. cit., p. 7
- (11) NTAHOMVUKIYE Juvenal in Population and Health. Case of Burundi. Training Institute and Demographic Research, June 1985, p. 50.
- (12) It was with the goal to plan new implantations of health establishments that a study was completed at the request of the Government of Burundi, that is :

Primary health care in Burundi. Total coverage of the population. Preplanning. S.1., mimeographed, February 1982.

- (13) Primary health care in Burundi. Op. cit., p. 10
- (14) and (15) Idem. pp. 16-87
- (16) See the W.H.O. document : "To accelerate the development of Health for All/2000 in States of the African Region." 9th regional meeting for the program. Brazzaville 18-22 November 1985, W.H.O., African Regional Office, 1985, pp. 1-2.
- (17) Republic of Burundi. IVth Five-Year Plan of Economic and Social Development. 1983-1987, pp. 303-4.
- (18) Republic of Burundi, IVth Five-Year Plan, Op. cit., p. 306.
- (19) National Service of Studies and Statistics, 1980 and 1983, p. 34 and p. 41. We also referred to data gathered by the Ministry of Public Health, the Direction of Training and Personnel Management 1 May 1986.
- (20) Ministry of Planning, of National Education, of Labor and Professional Training : Employment of Training System : Perspectives/ 1981-2000, Volume 2, Bujumbura, October 1983.
- (21) and (22) Ministry of Planning, of National Education, of Labor and Professional Training : Labor and Training System : Perspectives 1981-2000, Volume II, Bujumbura, October 1983.
- (23) This table was developed by ourselves from a document obtained from the Ministry of Public Health entitled : "List of doctors at 01/05/1986 and their date of entry into service", mimeographed, 18 p.
- (24) Republic of Burundi. IVth Five-Year Plan of Economic and Social Development. 1983-1987. s.l., s.d. s.e. p. 83.
- (25) "Report of the Mixed Commission Ministry of Health/W.H.O. concerning Health Planning" in : Primary Health Care in Burundi, Total Coverage of the Population. Preplanning, February 1982, p. 17.

(26) Republic of Burundi. IVth Five-Year Plan of Economic and Social Development. 1983-1987, s.d., s.e., pp. 308-309.

(27) D<sub>4</sub> signifies : Diploma of 4 years of post-primary education.

(28) BELLONCLE (G.), FOURNIER (G.). Health and Development in Rural African Environment. Reflections on Nigerian Experience.