

**BASIC DESIGN STUDY REPORT  
ON  
THE DEVELOPMENT PROJECT  
FOR  
THE MEDIUM WAVE RADIO BROADCASTING NETWORK  
IN  
THE UNITED REPUBLIC OF TANZANIA**

MAY 1989

**JAPAN INTERNATIONAL COOPERATION AGENCY**

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## PREFACE

In response to the request of the Government of the United Republic of Tanzania, the Government of Japan has decided to conduct a basic design study on the Development Project for the Medium-Wave Radio Broadcasting Network and entrusted the study to the Japan International Cooperation Agency (JICA). JICA sent to Tanzania a survey team headed by Mr. Satoru Itoh, Special Advisor for International Cooperation, Communications Policy Bureau, the Ministry of Posts and Telecommunications, from 16th January to February 12, 1989.

The team exchanged views on the Project with the officials concerned of the Government of Tanzania and conducted a field survey. After the team returned to Japan, further studies were made and the present report has been prepared.

I hope that this report will serve for the development of the Project and contribute to the promotion of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the United Republic of Tanzania for their close cooperation extended to the team.

May, 1989



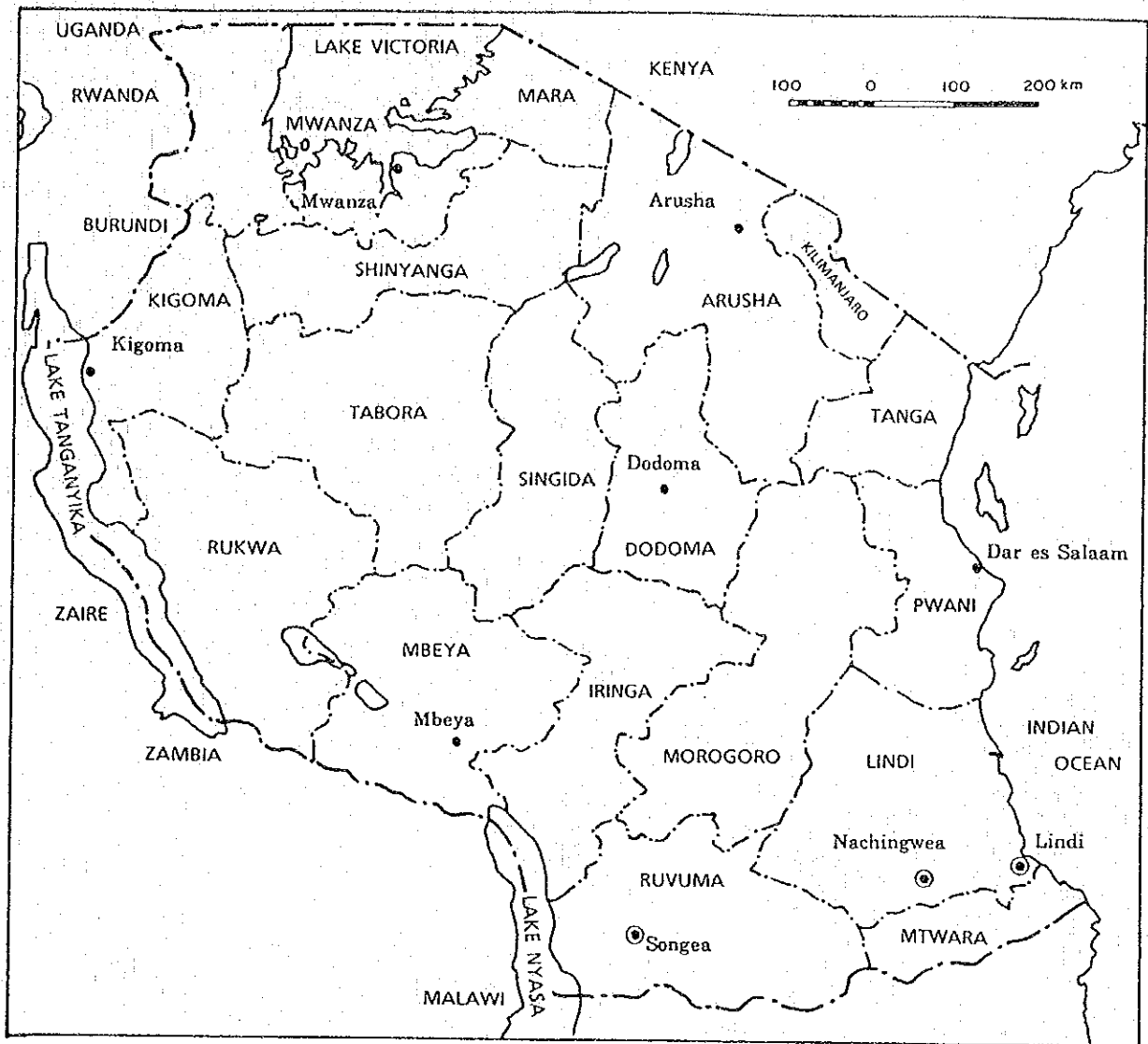
Kensuke Yanagiya

President

Japan International Cooperation Agency



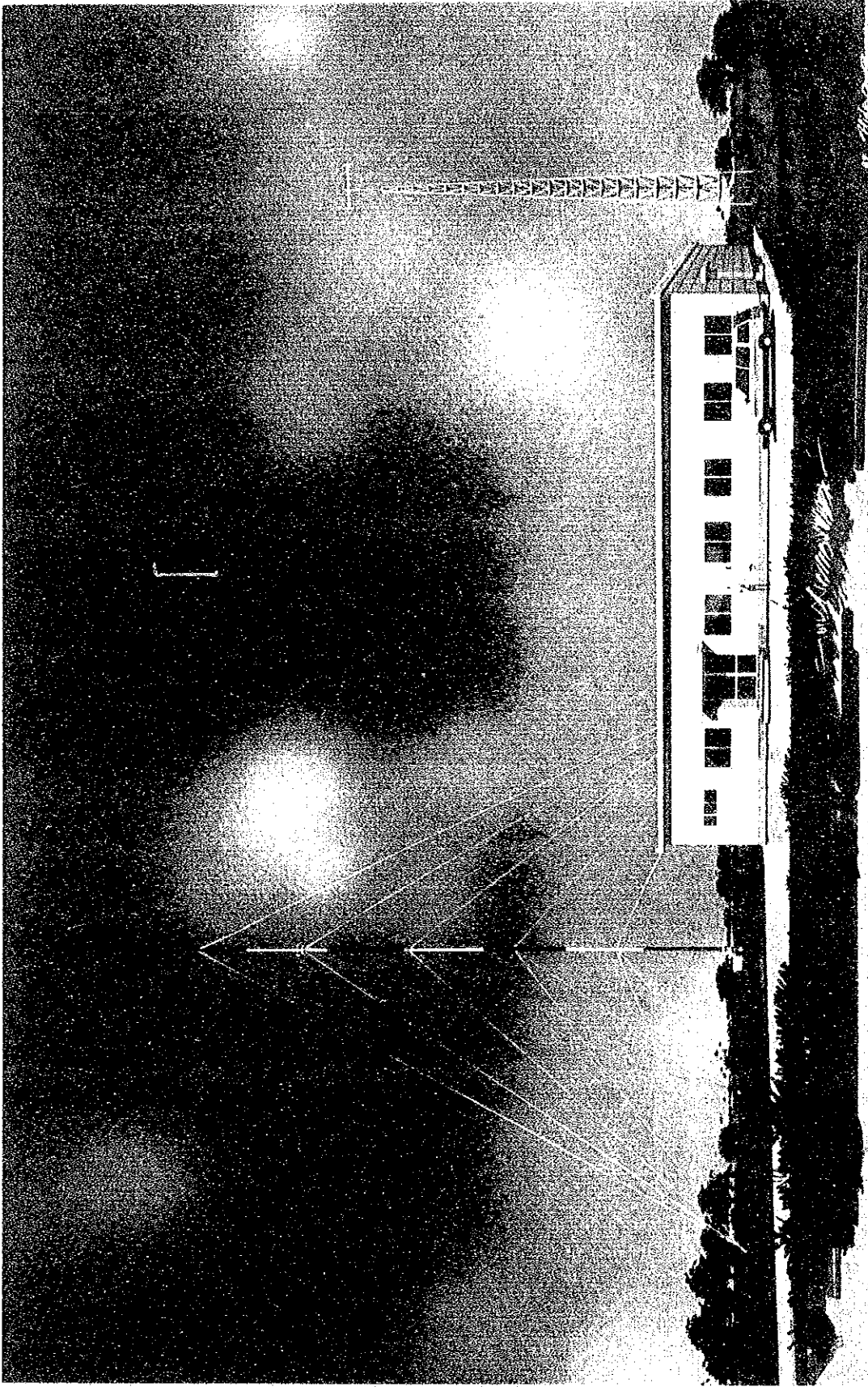




⊙ : PLANNING SITE OF THE PROJECT

## THE UNITED REPUBLIC OF TANZANIA





Perspective of Nachingwea Transmitting Station



## SUMMARY



## SUMMARY

Since independence in 1964, the government of the United Republic of Tanzania has carried out socio-economic development plans in many fields. Special emphasis has been placed on the promotion of agriculture, which is the basic industry of the country; the dissemination of knowledge regarding health and hygiene; the construction of hospitals; and the promotion of manpower development plans by completing school education and training systems including adult education schemes. For these items the government has long term plans up to the year 2000.

To promote socio-economic development, the government has used a variety of media to supply the people with information. The aim is to encourage the people to participate actively in national development and to give them elementary and technical education. Radio broadcasting has been used effectively because it can disseminate information to a wide area at one time. Several ministries in the country have facilities and staff to produce radio programs in cooperation with Radio Tanzania Dar es Salaam (RTD).

On the other hand, radio broadcasting in the United Republic of Tanzania is carried out by RTD on the mainland and by RTZ (Radio Tanzania Zanzibar) in Zanzibar independently.

Radio broadcasting in Tanzania, is done by RTD, which is operated under the Prime Minister's Office, on short and medium-waves over the mainland territory. However, the areas served by medium-wave national service designed for mainland Tanzania now cover only 52 percent of the population. Though people in other areas listen to short-wave radio, the truth is that reception is poor because of the propagation characteristics of short-waves. Short-wave radio waves travel by reflection from the ionosphere. In the ionosphere, however, there are very many kinds of noises caused by changes in sunspots and annual seasonal changes etc. and also there are several kinds of fadings caused by changes of the height and density of the ionosphere, even during a single day-time.

Accordingly, it is difficult to listen to short-wave radio during daytime because of peculiar propagation characteristics in the short-wave band. It is estimated that there are some 2.5 million receiving sets in the entire country, representing a penetration of almost 100 percent of households in the medium-wave service areas and 40-60 percent on average in other areas.

To solve this problem, under the grant aid from the Japanese Government in 1988 the Government of Tanzania completed 100kW medium-wave radio stations at both Dodoma and Kigoma cities, where population density was high and the installation of stations was most effective. After that, in view of this situation, the Government of Tanzania has requested grant aid from the Government of Japan for the construction of medium-wave radio stations in Nachingwea (Lindi) and Songea, where remarkable results can be expected because of those areas' relatively high population densities.

This report is based on a basic design study conducted in consideration of these circumstances. Our study has shown that it is appropriate to construct 100kW transmitting stations at both Nachingwea and Songea cities and also to supply program production facilities in Lindi and Songea studios.

An overview of the basic design is as follows.

Both in Nachingwea and Songea, transmitting stations from which medium-wave broadcasting is to be transmitted will be built on the sites acquired by RTD, and studio complexes in Lindi and Songea cities are now under construction by RTD.

The Songea 100kW transmitting station is designed to have an omnidirectional antenna 133m high, while the Nachingwea 100kW transmitting station will have a directional antenna 89m high which suppresses wave emission to the neighboring countries on the south-east of Tanzania. Both of these transmitting stations are designed to have a 432m<sup>2</sup> station building.

At the same time, both stations will be provided with a single production studio as a minimum requirement for producing local programs. This will be similar in scale to that of Kigoma station.



### Major Facilities and Equipment

Item	Major specification		Remarks
	Nachingwea station	Songea station	
Transmitting station			A repeater station will be constructed for the program transmission circuits between the Nachingwea Transmitting Station and the Masasi TPTC.
Transmitter	100kW 603kHz	100kW 990kHz	
Transmitting antenna	Directional antenna Main antenna: Guyed wire-supported cylindrical steel mast, 89m high Sub-antenna: Down-lead 50m	Omni-directional antenna Main antenna: Guyed wire-supported cylindrical steel mast, 133m high	
Station building	The same plan for both stations: 432m <sup>2</sup> Steel structure External wall: Autoclaved light-weight concrete panel Roofing: Galvanized steel corrugated roofing		
Studio	(Lindi Studio)	(Songea Studio)	Scale of both studios is similar to that of Kigoma station
Program production facility	One studio will be equipped.	One studio will be equipped.	

Construction on the Nachingwea site is scheduled for completion 16 months after the signing of the E/N by the two governments: 5 months for the consultant contract, detailed designing and tendering, and after the signing of the construction contract, a standard period of 6.5 to 7 months for the manufacture of equipment, 2 months for transportation (including the inland transport) and 7.5 months for the on-site installation work (including foundation work).

For the construction at the Songea site, it will take about 2 months to conclude consultant contracts etc. after signing E/N, and the schedule after the construction contract will be similar to that of Nachingwea site mentioned above. The total period for completing Nachingwea and Songea sites is scheduled as 20 months, assuming that a part of the construction work at both sites will be carried out at the same time.

RTD has made substantial achievements over the long period since it commenced radio broadcasting services in 1951, and has a wealth of experience in work such as installation and operation of both Dodoma and Kigoma stations, which are similar to those in this plan. RTD has no problems with operating and maintaining facilities and equipment provided under this grant aid project.

A request was also made that training in Japan be conducted for the RTD staff members. Though it is not an integral part of the project, the training, if carried out as requested, will help them to learn more sophisticated broadcasting technology and program production skills. The effects of this grant aid project will then be greatly enhanced.

The completion of this project will enable 2.31 million people to listen to radio on medium-waves, thus increasing the service area to include 61 percent of the population within a field intensity of 60dB  $\mu$ V/m (79 percent within field intensity of 54dB  $\mu$ V/m). Radio programs broadcast from Nachingwea and Songea Stations will greatly contribute to the socio-economic development of Tanzania by giving timely and appropriate information to people who have so far depended only on unstable short-wave radio.

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# CHAPTER 1 INTRODUCTION





## Chapter 1 INTRODUCTION

The United Republic of Tanzania is a typical agricultural country consisting of a mainland in Eastern Africa and islands in the Indian Ocean, including Zanzibar Island. Tanzania covers an area of approximately 880,000 km<sup>2</sup>, and has a population of approximately 22.60 million.

Radio broadcasting in the Tanzanian mainland was started in 1951. Since then, strenuous efforts have been made to improve the quality of the nation's radio broadcasting through expansion and improvement of the broadcasting facilities. Currently the nation's radio broadcasting is done by radio Tanzania Dar es Salaam (RTD), a branch of the Prime Minister and First Vice-President's Office.

In the metropolitan area three types of broadcasting services -- national, external, and commercial -- are conducted using medium-waves and short-waves. In regional areas national service is conducted in only five cities, namely, Arusha, Mbeya, Mwanza, Dodoma and Kigoma.

Having a land area about 2.3 times as large as that of Japan, Tanzania's transport facilities are still inadequate, which makes it difficult to disseminate the government's information nationwide through newspapers and other printed media quickly.

Under these circumstances, the Government of Tanzania thinks that the best way to disseminate information quickly is through radio broadcasting. Through radio, they can educate people scattered over a wide area and thereby promote the nation's socio-economic development. The Government of Tanzania thinks medium-wave broadcasting is preferable to short-wave broadcasting because it can be received with low-priced radios powered by dry batteries.

In actuality, however, medium-wave radio broadcasting is available only in the metropolitan area and five regional cities. Only about 52% of the nation's total population has access to this type of radio service. The rest of the population has no choice but to use short-wave radio broadcasting under rather poor reception conditions.

Accordingly, the Government of Tanzania feels that it is imperative that they expand their medium-wave radio broadcasting network. They asked the Government of Japan to provide grant aid for construction of a medium-wave radio station with two 100kW transmitters in Nachingwea and Songea, two primary granary regions along the southeastern border.

In response to this, the Government of Japan decided to implement a basic design study on the project. The Japan International Cooperation Agency (JICA) dispatched a survey team headed by Mr. Satoru Itoh, Special Advisor for International Cooperation, International Cooperation Division, Broadcasting Policy Bureau, Ministry of Posts and Telecommunications, to Tanzania from January 16 to February 12, 1989. The survey team investigated achievements by the country's mass media, RTD's current use of broadcasting for socio-economic development, and the current situation at the prospective sites and their vicinities including radio reception conditions at each of the prospective sites. The survey team also collected other relevant data and information and had discussions with representatives from the Government of Tanzania.

After returning to Japan, the survey team conducted an analysis based on the findings of the field survey, and confirmed the appropriateness of the project for Japan's grant aid cooperation. The team then worked out a basic design and prepared this report.

A list of the members of the survey team, their schedule, and minutes from their meetings with representatives of the Government of Tanzania are included in the appendix of this report.

## CHAPTER 2 BACKGROUND OF THIS PROJECT



## Chapter 2 BACKGROUND OF THIS PROJECT

### 2-1 The Need to Expand the Medium-Wave Radio Broadcasting Network

#### 2-1-1 Expansion of Service Area and its Effect

The United Republic of Tanzania has a land area of 881,289km<sup>2</sup>, which is about 2.3 times as large as that of Japan. She shares the 3 largest lakes in East Africa with neighboring countries; Lake Victoria with Kenya and Uganda on the northwestern border, Lake Tanganyika with Zaire and Brundi on the western border, and Lake Niasa with Malawi and Mozambique on the southern border.

The country has a population of 22.53 million (population increase for 1978~1988 is 2.8%), of which 98% are Bantu from more than 120 tribes. The rest of the population are Indians, Pakistanis and others. More than 75% of the country's population is concentrated in the eastern coastal area, the southern and northern mountainous areas and the western lake areas. The central upland is sparsely populated. The total number of households in the mainland is 4,300,000 (Average 5.3 per household) -- about 670,000 in the urban areas and about 3,630,000 in the rural areas (by the 1988 census. See Appendix VI).

The radio broadcasting in mainland Tanzania at present is conducted in three forms. First is the National Service, a medium-wave network, whose main objective is to offer information and technical education to promote socio-economic development. Second is the Commercial Service which is broadcast from Dar es Salaam in medium and short-waves with the provision of entertainment as the main objective. Third is the External Service which is broadcast from Dar es Salaam in short-wave with the objective of promoting friendship and exchanges with the neighboring African countries.

The Government of Tanzania established a long-term plan for the development project for a medium-wave radio broadcasting network as a part of the national development programs. The frequency allocation plan was registered with the International Frequency Registration Board (IFRB) in 1975.

As the first-stage program of the long-term broadcasting-network development plan for the National Service, three 50kW transmitting stations were constructed with Japanese yen credit in three regional cities from 1973 to 74: Arusha near the Mt. Kilimanjaro, Mwanza on the lakeside of Victoria, and Mbeya near the lake of Niasa. At that time, the whole service area was only 37% of the population.

The Government of Tanzania long maintained a 2nd-stage program to install two 100kW broadcasting stations in Dodoma in the central zone and Kigoma in the west border zone. In 1988, this program was realized with a Grant Aid from the Japanese Government. The whole service area was increased to 52% (65% within 54dB field intensity) of the population as a result of the completion of these two stations (refer to Fig. 2-1-1).

The current plan to install two 100kW radio stations in Nachingwea (Lindi) and Songea, corresponds to the 3rd-stage program and the service areas will completely cover the three regions of Luvuma, Linde, and Mtwara, along the southeastern border.

Consequently, it became possible for the residents of the three regions to receive stable medium-wave radio broadcasts which replaced the unstable short-wave service. This, in return, is expected to further promote the vitalization of the regional economies, as the people can now receive technical education as well as information concerning regional socio-economic development plans (for example, a plan to increase production of such cash farm products as cashew nuts and coffee which are the specialities of these regions) through the medium-wave radio service. And after completion of this program the national service area is expected to reach 61% (79% within the 54dB field intensity) of the population.

This means that main regions with high-density populations in Tanzania will be covered by medium-wave radio broadcasting network.

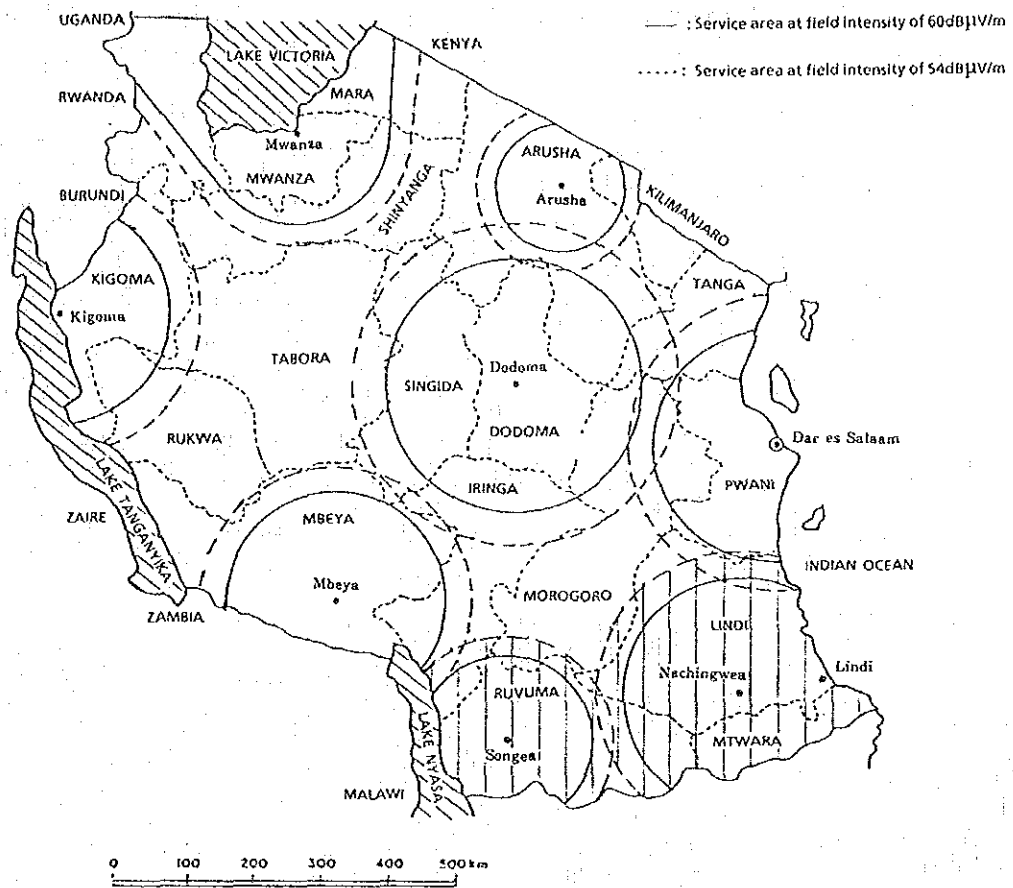


Fig. 2-1-1 The Whole Service Area of National Service

#### 2-1-2 Information Dissemination and Education to Promote Socio-Economic Development

Since the nation's independence in 1964, the Government of Tanzania has carried out socio-economic development programs in many fields. Great emphasis is specifically being placed on promotion of agriculture, dissemination of knowledge about health and hygiene, development of manpower by improving the adult and school education systems. Long range development programs up to the year 2000 have been established.

The Government of Tanzania hopes for the positive participation of the people in achieving socio-economic development. To realize this goal, the Government has put its emphasis upon radio broadcasting, the characteristics of which include wide geographical coverage and simultaneous reporting as a means of disseminating necessary information, while giving basic knowledge and technical education.

(1) Promotion of agriculture

Tanzania is an agricultural country in which the total annual output of agriculture, forestry, stockbreeding, and fishery amounts to 46% (1988) of the GNP. Food imports, however, make up more than 1/3 of the total imports. But cash crops such as coffee, cotton, tobacco, tea and cashew nuts amount to about 60% of total exports, including processed products. This makes farming products important for the acquisition of foreign exchange. However, in recent years production of these cash crops has decreased. Hence, the Government of Tanzania has been confronted with serious economic conditions due to the shortage of foreign exchange and a sharp rise in commodity prices. (See Appendix VI-1~VI-3)

To overcome these problems, the Government of Tanzania has been carrying out the 5th 5-year plan (1988/89~1992/93) in which the following measures are emphasized in order to increase agricultural and livestock production.

- 1) Introduction of appropriate farming equipment
- 2) Appropriate use of farm chemicals
- 3) Use of improved seeds, etc.
- 4) Introduction of proper techniques for soil and water conservation

In order to ensure permeation of the above-mentioned Government policies and promotion of agricultural education, there are a number of means including radio broadcasting, publications and practical training at agricultural training centers and agricultural/stock breeding research institutes. Among these, education by radio broadcasting is scheduled to be given emphasis by the Government as the most effective means.



- (2) Dissemination of health and hygiene knowledge and repletion of medical facilities

With the prevention of infectious diseases, public sanitation, family planning, and child and maternal health care as the main goals, the Ministry of Health and Social Welfare has been making efforts to disseminate health and hygiene knowledge since the 1970s. In the 4th 5-year plan (1980/81~1984/85), a plan aiming at prolonging the average life span from 50 years to 60 years was carried out.

In addition, in the 5th 5-year plan, the following points are emphasized as main themes:

- 1) Reinforcement of research institutes for prevention of infectious diseases.
- 2) Improvement of health and hygiene education at schools.
- 3) Reinforcement of personnel engaged in local health and hygiene services.
- 4) Reinforcement of medical facilities, training institutes and local pharmacies.
- 5) Improvement of mental-health education,
- 6) Ensuring continuous supply of medicine to regional medical institutes.

Of these items, regarding expansion of school health program and expansion of mental health program, greater development of radio broadcasting networks are requested because education through radio is the most effective method, the same as in the case of the previous plan.

(3) Enhancement of adult education

Since an educational center to eradicate illiteracy was completed in Mwanza in 1964 by a UNESCO project team, literacy education has been carried on effectively in different villages, where the team members taught the illiterate villagers in groups, using newspapers and textbooks and with the help of guidance-programs broadcast to teachers on the radio. As a result, a literacy rate as high as 80% has been reached.

During the first half of the 1980s, 52 Folk Development Colleges, which are rural training institutions for adults to promote rural development, are installed in villages of each region, and the involvement of Folk Development College and literacy activities was strengthened by the introduction of post-literacy classes in the new curriculum besides the regular short- and long-term courses. Thus a total of 144 post-literacy centers have been set up in the 52 Folk Development Colleges for the new post-literacy curriculum classes.

Efforts to achieve the objective of eradicating illiteracy had been enhanced by the second phase of National Literacy Campaign, the aim of which was to reduce illiteracy from 15 percent to 10 percent. According to the National Literacy Test in 1986, the nation had achieved a 90.4% literacy rate.

The Ministry of Education has continued to implement adult education programs which mainly include the eradication of illiteracy and advancing new literates to higher stages. Methods used to advance new literates include work-oriented post literacy programs, long- and short-term courses for adults at Folk Development Colleges and consolidation of literacy supporting programs which include Rural Newspapers, Rural Libraries, adult education by Radio and Film, and skilled training courses at Adult Education Skills Training Centers. The Ministry of Education set the following main objectives to promote adult education more effectively:

- 1) To promote the second phase of National Literacy Campaigns to attain a 100% literacy rate.
  - 2) To conduct in-service courses on adult teaching for serving teachers who participate in teaching adults
  - 3) To strengthen practical training in Folk Development Colleges
  - 4) To prepare radio programs of wider adult education that will be useful for rural development
- (4) Manpower development plan and perfection of the education and training system

The general school education system in Tanzania under the Ministry of Education consists of Primary schools (7 years), Secondary schools (Junior Courses (4 years) + Senior courses (2 years)), and Universities (4 years), as well as a technical education system in Technical Colleges (Full Technician Certificate class (3 years) + Diploma class (3 years)), and an adult education system in the Folk Development Colleges. Besides this, there are vocational training centers and various special colleges and institutions under other ministries, public corporations and private enterprises. Graduates who were educated at each stage of an educational institution are certified "A", "B", or "C" grade corresponding to their education level after work as an on-the-job training for a certain time in government services or enterprises (refer to Fig. 2-1-2).

It is essential to develop manpower with a view to promoting the national development programs in various fields. Therefore, the Ministry of Labor and Manpower has been planning a long-term plan of manpower development based on data concerning the number of vacancies for workers with each grade requested by national development programs and by all kinds of enterprises. The Ministry has researched the "Degree of attainment" and "Supplement rate by Tanzanians" of the long-term plan every 5 years as shown in Table 2-1-1 and Table 2-1-2.

Seeing these data for 1988, the percentage of vacancies of engineers and technicians with 'A' and 'B' grades was 13~15%, and that of technicians with 'C' grades was 7.7%. This degree of attainment of the long-term plan has been steadily made progress because of expansion in secondary education especially in the past three years (for example, 143 secondary schools were constructed, including private secondary schools and 44,605 pupils were added).

To attain the target of the manpower development plan, the Ministry of Education has set an education policy and improvement plan as follows:

- 1) Increasing the transition rate from primary school to secondary school from 4% to 15% by 2000.
- 2) Improving school and college facilities.
- 3) Strengthening training and education for teachers to meet the shortage of teachers, and improving the status of teachers.
- 4) Increasing university intake and post-secondary technical education to meet manpower requirements.
- 5) Planning a radio broadcasting university.

Primary and secondary school education programs and teacher training programs carried out by the Ministry of Education and RTD under the national policy have played important roles for manpower development, and will be expected to contribute even more in the future.

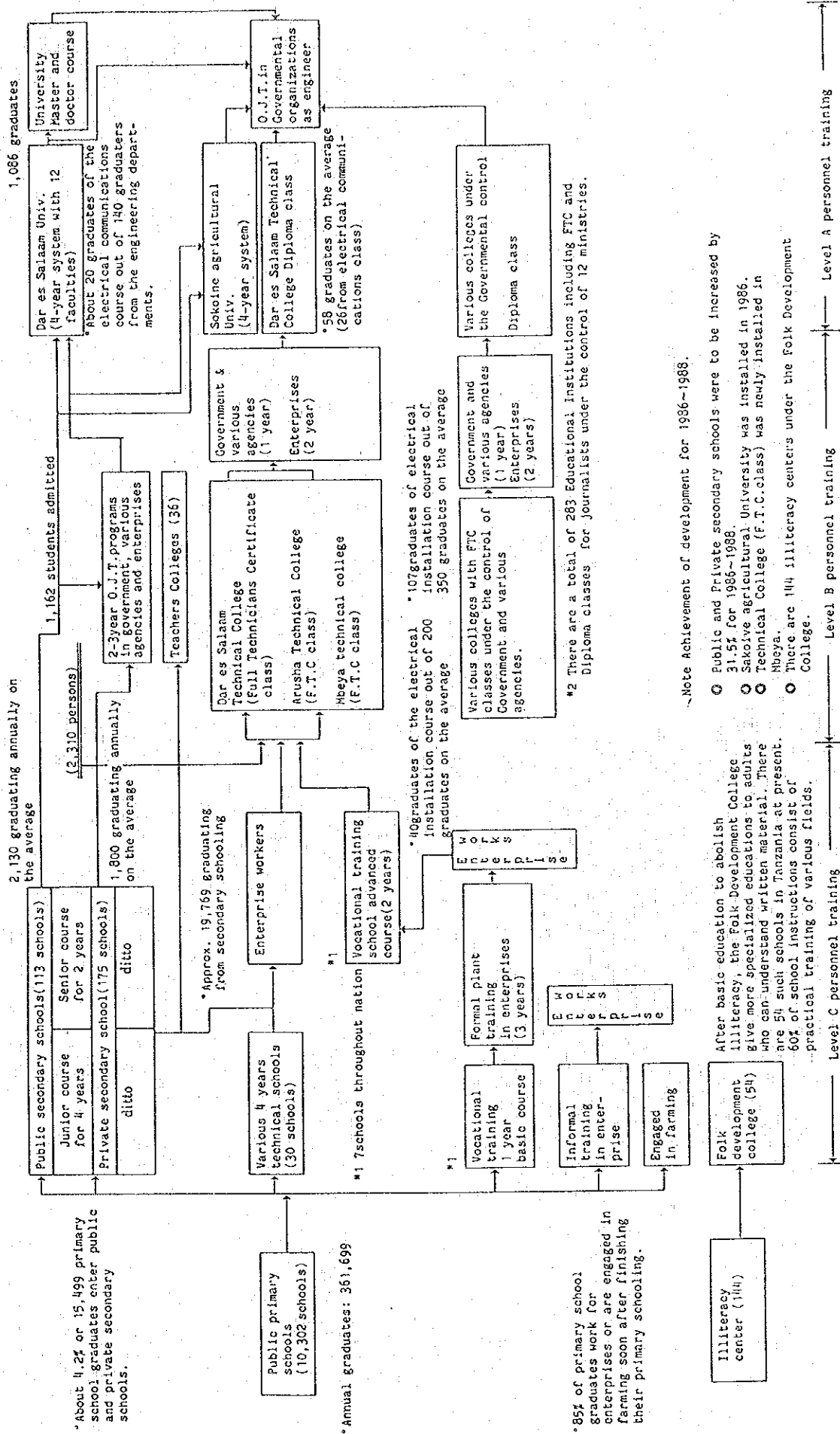


Fig. 2-1-2 Education & Training System in Tanzania

Table 2-1-1 Degree of attainment during the long-term plan for manpower development

Level of function	Degree of attainment in 1974				Degree of attainment in 1980			
	No. of actual workers	Total No. required	No. of vacancies	% of vacancies	No. of actual workers	Total No. required	No. of vacancies	% of vacancies
A-Research	36660	5848	2188	37.4				
A- Engineering	4146	5508	1362	24.7				
A's sub-total	40806	11356	3550	31.3	13756	18710	4954	26.5
B	23994	22609	5281	23.4	43583	55697	12114	21.7
C	93365	106837	10806	10.1	178912	214414	35502	16.6
Total of A, B, C	158165	140802	19637	13.9	236251	288821	52570	18.2
Level of function	Degree of attainment in 1988				Degree of attainment in 1993			
	No. of actual workers	Total No. required	No. of vacancies	% of vacancies	No. of actual workers	Total No. required	No. of vacancies	% of vacancies
A-Research	9083	10746	1663	15.5				
A- Engineering	13308	15269	1961	12.8				
A's sub-total	22391	26015	3624	13.9	26540	28111	1571	5.6
B	132533	152931	20398	13.3	158930	161954	3024	1.9
C	215708	233819	18111	7.7	244635	244635	0	0
Total of A, B, C	370632	412765	42133	10.2	430105	434700	4595	2.5

Source: Uchunguzi Wa Wahutaji Wa paraja La Juu Wa La Kat., 1989

Table 2-1-2 Supplement rate by Tanzania during the long-term plan for manpower development

Level of function	Supplement rate by Tanzanians in 1974				Supplement rate by Tanzanians in 1980			
	No. of actual workers	Tanzanians	Foreigners	% of Tanzanians	No. of actual workers	Tanzanians	Foreigners	% of Tanzanians
A-Research	3660	2487	1173	68.0				
A- Engineering	4146	3401	745	82.0				
A's sub-total	7806	5888	1918	75.4	13756	12752	1004	92.7
B	23994	23119	875	96.4	43583	43298	285	99.3
C	93365	90036	3329	96.4	178912	178647	265	99.9
Total of A, B, C	125165	119043	6122	95.1	236251	234697	1554	99.3
Level of function	Supplement rate by Tanzanians in 1988				Supplement rate by Tanzanians in 1993			
	No. of actual workers	Tanzanians	Foreigners	% of Tanzanians	No. of actual workers	Tanzanians	Foreigners	% of Tanzanians
A-Research	9083	8356	727	92.0				
A- Engineering	13308	12773	535	96.0				
A's sub-total	22391	21129	1262	94.4	26540	25480	1060	96.0
B	132533	132114	419	99.7	161954	158710	220	98.0
C	215708	215484	296	99.9	244635	244635	0	100.0
Total of A, B, C	370632	368727	1977	99.5	433129	428825	1280	99.0

Source: Uchunguzi Wa Wahutaji Wa paraja La Juu Wa La Kat., 1989

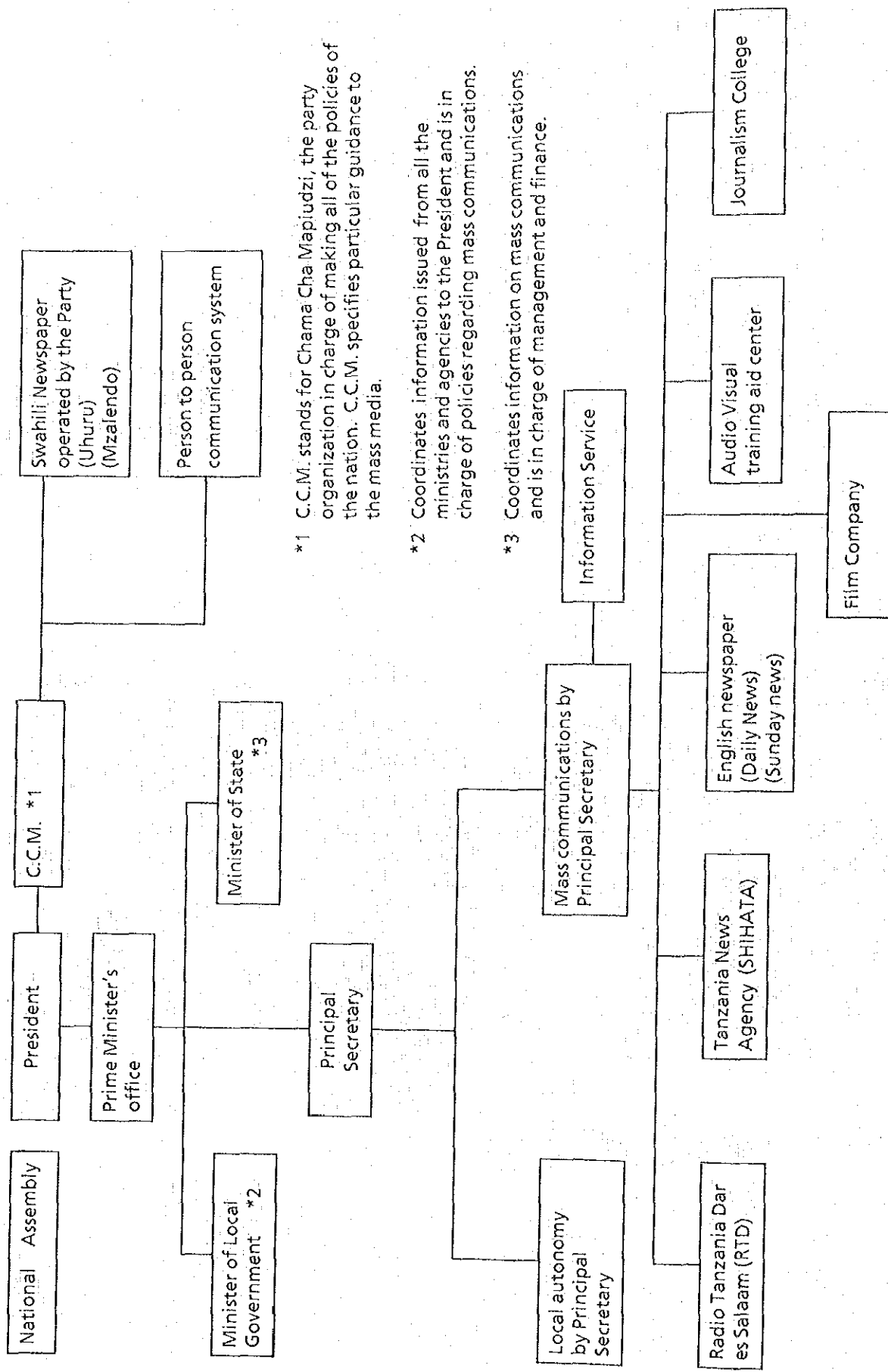
## 2-2 Mass Media in the United Republic of Tanzania

### 2-2-1 Organization Chart for the Prime Minister and First Vice President's Office

To push forward socio-economic development programs, the Government of the United Republic of Tanzania has effectively used all of the mass media to inform citizens of national policy and to instruct them in the necessary basic knowledge and techniques so that they can join in these development programs in a positive manner.

Accordingly, as shown in Fig. 2-2-1, the Government operates radio broadcasting, an English language newspaper, a news agency, the Tanzania Film Company, an audio visual training aid center, and a Tanzania school of journalism, and the Party operates a Swahili newspaper.

A deputy Principal Secretary in charge of mass communication is the responsible person who makes all the long-term plans for developing each service and takes budgetary measures for the development funds of each long-term plan as a controlling organ of all mass media as described above. The Minister of State in charge of mass communication is the highest responsible person.



\*1 C.C.M. stands for Chama Cha Mapinduzi, the party organization in charge of making all of the policies of the nation. C.C.M. specifies particular guidance to the mass media.

\*2 Coordinates information issued from all the ministries and agencies to the President and is in charge of policies regarding mass communications.

\*3 Coordinates information on mass communications and is in charge of management and finance.

Fig. 2-2-1 Organizational Chart of the section in charge of Mass Media in the Prime Minister and First Vice President's Office



## 2-2-2 Policy and Guidance on Mass Media

On May 23, 1988 the seminar for groups related to mass communications in the main land of Tanzania and Zanzibar was held in Arusha (this seminar is held every two years) in the presence of the CCM chairman, Mwalimu J.K. Nyerere, and the Prime Minister and First Vice President, Ndugu Joseph Warioba.

The purpose of this seminar was to discuss how each media organ could play an active role in the implementation of the National Development Plan to cover the period 1988 ~ 2002.

After the discussion, the seminar adopted the following guidance on Information Policy toward the mass media organs.

### (1) Guidance on Information Policy

The seminar supported the recent call by the Party Chairman Mwalimu J.K. Nyerere that self-reliance was the basis of national development and thought that there was need to help even small producers by making an effort to boost the self-reliance spirit.

- 1) That mass media institutions should cooperate with each other in carrying out their tasks.
- 2) That credibility and timeliness of news should be the cornerstone of carrying out the responsibility of mobilizing the masses.
- 3) That the mass media institutions should always speak the truth and expose evils wherever they occur.
- 4) To produce feature programs concerning national policies. In order to accomplish this, the reporter will need to be familiar with both the foundation and intention of the policy so that he can mobilize the people.
- 5) That mass media institutions, as a warning of development, should stress the need for cooperation and self-reliance.

- 6) That mass media institutions should explain important matters using simple language that will arouse the public interest.
- 7) That all reporters and broadcasters should be fluent in Swahili and English because it is important to use correct grammar.
- 8) That leaders at various levels should assist the media by telling the truth, and explaining issues.
- 9) That the mass media institutions should respect the people, workers and peasants, who are the force behind national development.
- 10) That mass media institutions should avoid biased and defamatory reports against individuals and against the community in general.

After describing the above guidance towards the mass media institutions, the seminar explained the necessity of educating and training journalists at the Tanzania Journalist School. The seminar stressed that it was urgently required to increase the circulation of newspapers, strengthen the news gathering network of Shihata (Tanzania News Agency), develop the radio broadcasting networks of RTD and Radio Tanzania Zanzibar (RTZ), and perfect the education of journalists. Thus, Shihata and other media institution can strengthen and widen their abilities to report events from all regions in Tanzania so that necessary information will reach the whole country.

The seminar also requested that the government assist financially so that they could provide the facilities to carry out their plans.

## (2) Development of Broadcasting Services

The seminar evaluated the achievement of RTD and RTZ's activities and recommended future development of broadcasting services as follows:

- 1) The seminar congratulates the Government's efforts to build medium wave radio stations on a zonal basis.
- 2) The seminar, however, calls upon the Government to make sure that cheaper radios are more available.
- 3) To counter foreign propaganda, the seminar proposes the introduction of short wave broadcasts by RTZ.
- 4) After debating the possibility of introducing television\* in the Tanzanian Mainland, the seminar was of the opinion that it would benefit only a few and called for proper planning before introducing it if it is to benefit the majority.

\* At present in Tanzania, television receivers are very expensive (15 ~ 20 times the monthly pay). Accordingly, it is difficult for the public to buy television receivers, and a high rate of propagation can not be expected.

#### 2-2-3 Management Scale of Mass Media Organs

Table 2-2-1 shows the management scale of each element of the mass media. The average circulation per day of Swahili newspapers (Uhuru/Mzalendo) and English newspapers (Daily News/Sunday News) are about 90,000 and 50,000 respectively, so the total circulation is no more than 140,000. Besides, both newspaper agencies have problems of shortages and decrepitude of facilities, and poor transportation to regions, so circulation decreases year by year.

The Prime Minister and First Vice President's Office is promoting the realization of a 5-year plan from the 1988/89 fiscal year to the 1992/93 fiscal year to provide facilities and install printing companies in some regions so that the circulation per day of the Swahili newspapers will be increased to 100,000 ~ 110,000, and that of the English newspapers to 100,000.

In comparison with total circulation of both newspapers, the service area of the medium-wave radio network has reached 61% (within 54dB of field intensity) in terms of population and diffusion of radio sets is

estimated at 2,500,000. This shows how large an effect radio broadcasting has in terms of simultaneous reporting and wide geographical coverage.

The government of Tanzania sees the importance of this, and so has made efforts to realize the installation of two 100kW radio broadcasting stations in Nachingwea and Songea in the first two years of the 5-year plan (1988/89 ~ 1992/93 fiscal years). If this program is realized, the whole service area would reach almost 79%.

Table 2-2-1 Management Scale of Mass Media Organs

Unit: TShs

	1984/1985	1985/1986	1986/1987	1987/1988
<b>RTD Radio Broadcasting</b>				
⊙ Annual income	56,528,500	109,903,900	137,744,400	165,877,200
⊙ No. of radio sets	2,500,000 (estimate)			
<b>Swahili Newspaper</b>				
⊙ Annual income	41,528,500	63,647,033	88,946,872	156,682,274
⊙ Gross sales	39,014,981	61,361,654	88,198,370	146,666,825
⊙ No. of circulation/year	36,500,000	36,500,000	30,320,000	33,370,000
No. of circulation/day	(100,000)	(100,000)	(83,068)	(91,424)
<b>English Newspaper</b>				
⊙ Annual income	80,638,655	92,736,024	125,364,135	—
⊙ Gross sales	—	—	—	—
⊙ No. of circulation/year	23,900,587	15,678,594	18,041,110	—
No. of circulation/day	(65,481)	(42,955)	(49,427)	—
<b>SHIHATA News Agency</b>				
⊙ Annual income	21,469,000	30,534,000	54,177,000	45,101,000
⊙ Gross sales	1,686,000	8,003,000	3,318,000	7,570,000
⊙ No. of news reports accepted/year	11,320	12,682	14,583	17,877
<b>Audio/Visual Institute</b>				
⊙ Annual income	4,522,331	5,284,390	10,162,836	14,594,173
⊙ Gross sales	—	284,390	662,836	1,113,973
<b>School of Journalism</b>				
⊙ Annual income	7,015,728	8,323,408	13,639,440	15,777,650
⊙ Income from school fees	2,102,454	3,241,051	3,967,458	3,624,000
⊙ No. of students	56	53	49	60
(No. of graduates)	(23)	(22)	(25)	

offered by: Tanzania Principal Secretary,  
Information Service (as of January, 1989)

#### 2-2-4 Development of Broadcasting Activities

In Tanzania, RTD and RTZ (Radio Tanzania Zanzibar) are presently conducting radio broadcasting. Their brief histories follow:

- \* In 1951, a small scale (200W) short wave broadcasting system was launched in Dar es Salaam by the Government. This was during the period when Tanzania was a trust territory under Great Britain.
- \* In 1956, the Tanganyika Broadcasting Service (TBS) installed a short wave transmitter with 20kW output at Pugu Road in Dar es Salaam, and a studio building with 2 studios and a master control room was also constructed, thus starting a full scale broadcasting service. In those days, both Swahili and English were used for broadcasting.
- \* In 1985, English broadcasting was commenced in 10kW short waves, and at the same time a small scale medium wave service (250W x 3) was also started.  
The organization was changed to TBC (Tanganyika Broadcasting Corporation) from TBS for the purpose of education and public service broadcasting.
- \* In 1961, Independence as the Republic of Tanganyika.
- \* In 1964, Independence as the United Republic of Tanzania.
- \* In 1965, a medium-wave transmitting station with a high power transmitter (100kW) was installed in Kunduchi and commercial broadcasting was begun. In the same year, TBC was renamed RTD (Radio Tanzania Dar es Salaam), thus becoming a governmental organ under the Ministry of Information and Tourism.
- \* In 1966, a short wave transmitting station with high-power transmitters (50kW x 2) was installed in Mabibo, and external broadcasting was started.

- \* In 1973 and 1974, medium-wave broadcasting was expanded by installing 50kW transmitting stations in the 3 regional cities of Mwanza, Arusha, and Mbeya with a Japanese yen credit; and two 50kW transmitters and one 10kW transmitter were installed to strengthen short wave broadcasting in Dar es Salaam.
- \* In 1988, medium wave broadcasting was expanded by installing two 100 kW broadcasting stations in Dodoma and Kigoma with Japan's Grant Aid.

RTZ is under the control of the Government of Zanzibar Island. The service area of a transmitting station in Chumbuni covers the entire area of Zanzibar island. RTD and RTZ have a close relationship and are broadcasting by exchanging programs with each other.

For TV broadcasting, Television Zanzibar (TVZ) started color broadcasting on Zanzibar Island in 1973 by installing one station, Channel 21, and then installing another station, Channel 9, at Pemba. At present both stations broadcast for 3 hours a day. System I and the PAL color system (International Radio Communication Council report 624-2) are used.

Although the TV Development Technical Committee of both RTD and Tanzania Posts and Telecommunications (TPTC) has occasionally studied the introduction of a TV system in the Tanzania mainland, the seminar for mass media was of the opinion that TV would benefit only a few and called for proper planning before introducing it, if it is to benefit the majority (as mentioned in 2-2-2).

#### 2-2-5 Existing Diffusion of Radio Receivers and Plan for further Diffusion

In the mainland of Tanzania, Matsushita Electric (East Africa) Co., Ltd., which has its factory in Dar es Salaam and started operation in 1972, and Philips Electronics (E.A) Co., Ltd., which has its factory in Arusha and started operation in 1986, have been producing radio receivers by obtaining a foreign currency allocation from the Government of Tanzania based on a specific production level determined by the Ministry of Industry.

(1) Total number of radio receivers shipped

The total accumulated number of radio receivers produced in 1988 was about 1.55 million by Matsushita and about 1.98 million by Philips. Radio receivers produced for export to Zanzibar and neighboring countries by both companies were about 280,000 sets in all. Therefore, the total number of radio receivers shipped inside Tanzania was about 3.25 million. (Refer to Appendix VI-6 and VI-7.)

(2) Total number of radio receivers imported

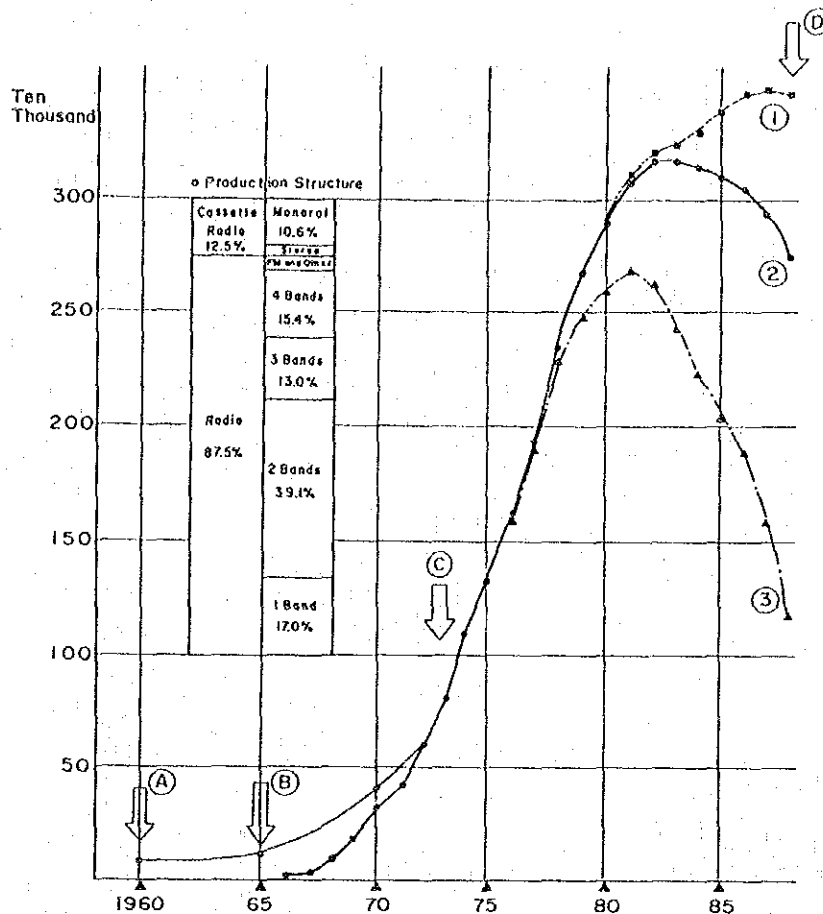
Detailed data on imports could not be obtained. However, both companies estimate that about 310,000 radio receivers might have been imported (Refer to Appendix VI-8).

(3) Estimate of diffusion

About 3.56 million radio receivers (the total number of (1) and (2)) had been produced and shipped. Generally the life cycle of a radio receiver, however, is assumed as 10~20 years. Accordingly, the present number in use is calculated to be about 1.2 million for a 10-year life cycle (diffusion curve ①), about 2.75 million for a 15-year life cycle (diffusion curve ②) and about 3.5 million for a 20-year life cycle as shown in Fig. 2-2-2 (Refer to Appendix VI-9). We feel it is reasonable to take about 2.5 million as an average.

All of these curves show a downward trend over the last several years. This is because the serious shortage of foreign currency in Tanzania has led to severe cuts in the allocation of foreign currency for the import of the radio component parts both companies need to produce radio receivers. As the result, radio receivers which had been out of order, or had been replaced as they reached the limit of their life cycle exceeded the number of those produced for the past several years. For example, the number of those produced in 1988 were only 8% of those produced at the peak time in 1987 and so the diffusion decreased to 80% comparing with the peak time.





- ① Estimated diffusion, assuming that the life-cycle of a receiver is 20 years.
- ② Estimate diffusion, assuming that the life-cycle of a receiver is 15 years.
- ③ Estimate diffusion, assuming that the life-cycle of a receiver is 10 years.
- Ⓐ Excerpted from the "Mass Communication in Tanzania", published by the Ministry of Information in 1980.
- Ⓑ In 1965, a 100kW high-power, medium-wave transmitter was installed, one each at Dar es Salaam and Kunduchi.
- Ⓒ In 1973-74, a 50kW medium-wave high-power transmitting station was constructed each in Arusha, Mwanza and Mbeya, and, at the same time, two 50kW short-wave high-power transmitters were assigned to each of Dar es Salaam and Mabibo.
- Ⓓ From 1987 to 1988, a 100kW medium-wave high-power transmitting station was scheduled for construction at Dodoma and Kigoma.

Fig. 2-2-2 Estimated Diffusion for Radio Receivers

#### (4) Plan for Increased Diffusion

Because of the problems mentioned above, the number of radio receivers is decreasing. According to an article in the Daily News on 10th November, 1988, the President Ndugu Mwinyi requested Matsushita Electric Co., Ltd. to look into the possibility of manufacturing simpler and cheaper radio receivers for rural people, who need radio receivers but cannot afford to buy them at current prices, and to consider the possibility of establishing workshops for

repairs and servicing in the regions. Matsushita Co., Ltd. assured that it will fulfill all of the requests of the President as soon as possible (Refer to Appendix VI-8).

After that, as some concrete plans for the diffusion of radio receivers, the government of Tanzania set forth an increased production plan for radio receivers by permitting both companies to export radio receivers to neighboring countries, and then allocating in priority half of the foreign exchange which they earned.

Matsushita Electric Co., Ltd. was planning to manufacture 30,000 radio receivers with only one band from 1989 after completing on-line production.

(5) Distribution structure and diffusion of radio receivers in regional areas

As for the distribution systems, the Ministry of Industry decides the official price and allocation to Regional Trade Companies (RTCs) in each region. The RTCs, which are under the control of the Government, then ship the radio receivers to the markets.

The rate of propagation is 10% of the population of Tanzania, or about 55% of the total number of households in Tanzania. As for distribution to each region through RTCs, nearly 100% had been attained in terms of the number of households in existing medium-wave service areas such as Dar es Salaam, Arusha, Mwanza, and Mbeya. In the Dodoma and Kigoma regions, however, all radio receivers on the market were sold immediately after the completion of the new medium-wave 100kW broadcasting stations in 1988, so the percentage of diffusion in these areas might be increasing.

The existing diffusion in the Ruvuma, Lindi, and Mtwara regions, the broadcasting areas of the proposed projects in Nachingwea and Songea, is approximated in Table 2-2-2.

Table 2-2-2 Diffusion of radio receivers in Ruvuma, Lindi and Mtwara Regions

Region	No. of Radio Receivers	Population	Rate of Diffusion to Population (%)	No. of Households	Rate of Diffusion to Households (%)
Lindi	64,000	645,550	10	138,070	47
Mtwara	78,000	889,494	9	198,726	40
Ruvuma	78,000	783,327	11	146,847	50

(6) Price of radio receivers

Radio receivers are very expensive compared with the daily commodity prices. The price of radio set (cheapest medium-wave portable type) is 5,600 TSh, and most expensive FM stereo radio cassette is 18,350 TShs. But these radio sets are sold at 2 to 3 times these official prices in markets. In spite of this, people still want to buy these items. They want to have these radio receivers as a means of seeking information and recreation. It is said that a barter market has been established.

Table 2-2-3 Costs of main living goods (as of January, 1989) unit: TShs

Item	Unit	Songea	Lindi	Nachingwea
Rice	1kg	65	65	100
Maize	1kg	10	19	-
Beans	1kg	55	110	-
Salt	1kg	25	9	50
Sugar	1kg	64	57	120
Shirt	1	1,200	1,700	-
Trousers	one pair	2,500	2,900	-
Beer	1 standard bottle	180	180	150
Cigarettes	20 Cigarettes	100	200	100
Radio Receiver (2 Bands type)	by Matsushita	5,600	5,600	5,600
Radio Receiver (3 Bands type)	by Matsushita	7,500	7,500	7,500
Radio Receiver	by Matsushita	18,350	18,350	18,350
Battery (UM1)	1	50	45	45
Petroleum	1ℓ	70	70	80

Data: Regional Trade Company (RTC) located in each city

(7) Shortage of batteries

Batteries are essential for radio receivers, particularly in areas where electric power is not yet supplied. Matsushita's factory is producing batteries but production is limited due to the shortage of foreign exchange, as with radio production. Thus the supply is insufficient. (See Appendix VI-10)

## 2-3 Usage and Evaluation of Broadcasting in Various Fields

Ministries and agencies of the Government of Tanzania have used different media to disseminate the knowledge required for development from the basic level to high professional levels, so that socio-economic development programs in each field can be pushed forward, and so that their aims can be made known to the people to ask for their positive participation. Radio broadcasting, because of its wide coverage and simultaneous reporting capability, has been used aggressively. Some ministries and agencies have their own program production studios and staffs, and they are producing and broadcasting in cooperation with RTD members within their limited budget. The following description is made according to actual usage and results of broadcast (in 1989) in the fields of agriculture, stockbreeding education, health education, adult education, and school education.

### 2-3-1 Using Broadcasting to Promote Agriculture and Stockbreeding

Since 1959, the Ministry of Agriculture and Livestock Development has been producing programs mainly aimed at introducing modern techniques for farming and stockbreeding, and improving farmers' life-styles. This radio section consist of 10 producers, forming 5 groups of two, and each group :is in charge of producing 5 programs with the durations (broadcasting hours/week) and contents shown in Table 2-3-1.

Table 2-3-1 Broadcasting Hours Per Week and Contents of Programs

Program Title	Actual Program Duration (Broadcasting Hours/week)	Purpose / Contents of Program
(A) Modern Farming I	15 minute Prog. (30 min./week including rebroadcasting)	Topics on Modern Farming and Good Methods of Husbandry
(B) Modern Farming II	15 minute Prog. (30 min./week including rebroadcasting)	Topics on Modern Stockbreeding and Good Methods of Livestock Keeping
(C) Home Farming	15 minute Prog. (30 min./week including rebroadcasting)	To encourage every family to garden and breed small animals
(D) Home Cooking	15 minute Prog. (30 min./week including rebroadcasting)	Home cooking to improve the nutrition problem
(E) Weekly Field Activities	30 minute Prog. (1 hour / week including rebroadcasting)	Interview program on farmers' experiences

According to the data shown in Table 2-3-2, these programs have received a great response from farmers: 622 letters have been sent directly to the producers during the three years (1986-1988).

The two programs of Modern Farming I and II have contributed to bringing about changes in scale from small- to large-scale farming and stockbreeding management, and the cooking program has been useful for improving not only farmers' eating habits but also the general public's.

Another questionnaire survey by producers of the programs listed in Table 2-3-2 shows the changes in the percentages of farmers who listen to agricultural radio programs, every decade since 1960. It is easily assumed from these data that with the expansion of medium-wave broadcasting networks and the propagation of radio receivers in farm villages, the rate of individual farmers in the audience has been increasing, and this percentage would be further increased by completion of two 100kW broadcasting stations in Dodoma (central zone) and Kigoma (west zone).

Table 2-3-2 Number of Letters classified with each region during 3 years (1986-1988)

Zone \ Program	(A)	(B)	(C)	(D)	(E)	Total
Northeast Zone	13	13	13	29	-	69
Northwest Zone	10	23	15	45	-	93
East Zone	46	31	16	118	-	211
Central Zone	13	27	6	38	-	84
West Zone	8	3	8	20	-	39
Southeast Zone	40	9	3	23	-	75
Southwest Zone	17	11	8	15	-	51
Total	147	120	67	288	-	622

Note: (A)-(E) correspond to Program Name in Table 2-3-1

Table 2-3-3 Audience Ratings of Radio Farm Programs for FARMERS in Every Ten Years, Starting from 1960

Year	Audience Ratings for all Farmers in Tanzania	Construction of New Broadcasting Stations
1960 ~ 1969	4.0%	
1970 ~ 1979	10.2%	Three 50kW transmitting stations were installed in 1973 in Arusha, Mwanza, and Mbeya.
1980 ~ 1987	28.0%	Two 100kW broadcasting stations were installed in 1988 in Dodoma and Kigoma.

### 2-3-2 Using Broadcasting for Health Promotion and Sickness Prevention

Since 1964, the Ministry of Health and Social Welfare has been producing programs to promote the health of the people and to prevent sickness. Two main programs with one repeat each are aired weekly: one 15-minute feature programs entitled "The Secret of Better Health" is aimed at the general public and another 20-minute program entitled "School Health" is aimed at school pupils, and specific campaign programs are aired on demand.

The contents of these programs vary from one to another. They inform and educate on the ways to prevent and control diseases and to improve and promote health. All the health issues described below are covered for a period of one or two years.

- \* Prevention of diseases such as malaria, measles, AIDS etc.
- \* Promotion of immunization
- \* Information concerning community organizations
- \* Promotion of maternal and child health
- \* Personal hygiene
- \* Family planning
- \* Other health program and projects

During the production of radio programs on various aspects of health, specialists such as doctors with different specialities and qualified public health nurses from different health institutions are invited to plan and write the scripts concerning the subjects planned by the four members of the Health Education Unit in the Ministry of Health and Social Welfare.

As a special planned program in "the Secret of Better Health ", a series on the Prevention of Malaria, including the contents shown in Table 2-3-4, is being broadcast on Wednesdays at 7:30 a.m. and repeated on Fridays at 1:30 p.m. from April to September 1989. This series of programs was specially planned to correspond to the Project for the Eradication of Malaria, which was implemented from 1988 using Japan's Grant Aid.

As an example of the effectiveness of these programs, the staff has received many questions regarding the AIDS campaign, which was broadcast all over the country for last year 1988. They evaluated that this campaign was responded to greatly by people in Dodoma and Kigoma regions, where two 100kW broadcasting stations were newly installed in 1988. The effectiveness of health and hygiene education by radio broadcasting have been remarkable so that the medium-wave radio broadcasting network should be expanded more all over the country.

Table 2-3-4 Contents of the Series on Malaria

◎ Series on Malaria I	<ul style="list-style-type: none"> <li>① Causes of Malaria</li> <li>② Signs and Symptom of Malaria</li> <li>③ Spreading of Malaria</li> <li>④ Effects of Malaria</li> </ul>
◎ Series on Malaria II	<ul style="list-style-type: none"> <li>① Ways of Controlling Malaria</li> <li>② Ways of Destroying Larvae</li> <li>③ Ways of Destroying Mosquitos</li> <li>④ Ways of Destroying Breeding Sites</li> </ul>
◎ Series on Malaria III	<ul style="list-style-type: none"> <li>① Community Participation against Malaria</li> <li>② On Malaria be cured?</li> </ul>



### 2-3-3 Using Broadcasting for Adult Education

The Ministry of Education has been conducting adult education programs, mainly aimed at eradicating illiteracy, in the production center of the Adult Education Headquarters and the Mwanza Literacy Center, which was constructed in 1964 as a UNESCO Project. The contents of programs have been the essentials of guidance for literacy education aimed at leaders, and campaigns for motivating adult learners. As a result, literacy education had reached almost all of the country, and according to the 1986 National Literacy Test, Tanzania has achieved a literacy rate of 90.4%.

At present, the Ministry of Education is working to attain the literacy target of 100% by organizing 144 new post-literacy centers under the control of 54 folk development colleges, and has introduced courses on crafts & technology and home economics & health to advance literates in every Folk Development College, as well as Agriculture and Animal Husbandry Centers in 40 of the colleges.

Three producers in the Adult Education HQ, and four producers in the Mwanza Literacy Center have been producing programs with the program durations (broadcasting hours/week), contents, & purposes shown in Table 2-3-5.

Table 2-3-5 Adult Education programs by the Ministry of Education

Program Title (Place of program production)	Actual Program Duration (Broadcasting hours/week)	Purpose / Content of Program
(1) Adult Education (in A.E.HQ.)	15 minutes weekly prog. (30 min. / week including rebroadcasting)	Interview program to motivate adult learners and leaders, to inform on adult education development and on adult education policy.
(2) Learning by Radio (in M.L.C.)	30 minutes weekly prog. (60 min. / week including rebroadcasting)	Educational materials to support lessons such as agriculture, craft & technology and home economic & health in adult classes.
(3) Advance Yourself (in M.L.C.)	30 minutes weekly prog. (60 min. / week including rebroadcasting)	Guidance program concerning adult education at a high level.
(4) Teacher for Teachers (in M.L.C.)	15 minutes weekly prog. (30 min. / week including rebroadcasting)	Adult teaching methods for teachers, and guidance for listening group leaders.
(5) Campaigns (in A.E.HQ.)	On demand	To motivate adult learners and leaders.

Besides these, educational programs produced by the Ministry of Agriculture and Livestock Development and the Ministry of Health and Social Welfare (as described in 2-3-1 and 2-3-2) are included in the category of adult education programs, and about 30 authorities concerned (such as the Ministry of Land, Natural Resources and Tourism, National Swahili Council, Chama Cha Mapinduzi, the Ministry of Labour and Manpower Development etc.), besides two Ministries mentioned above, take part in the production of educational programs.

The Adult Education Broadcasting Committee, which is composed of these authorities concerned, is in charge of confirmation and arrangement of the duplication of broadcasting materials and level of content among the educational programs planned by them, in accordance with basic guide lines concerning the production of educational programs. Table 2-3-6 shows examples of educational programs by other authorities.

Table 2-3-6 Examples of educational programs by other authorities concerned

Program Title	Purpose/Content of Program
© Mali Asili (Natural Resources)	Education on conservation of natural resources
© Mutu Chake (Cultural Heritage)	Education on Tanzanian history and cultural heritage
© Lugha Ya Taifa (The National Language)	Education on Swahili language by National Swahili Council
© Wmoja Wa Wolimu (Youth Movement)	Campaign to call to young people for positive participation in national development programs
© Ujumbe Wa Leo (Today's Message)	Speeches of President and Party Chairman regarding national development programs
© Duina Ya Mfanyakazi (Labour Movement)	Information and education on workers' rights & duties, and their welfare
© Usalama Wa Raia (Police and Citizens)	Education on maintenance of public peace
© Jibu Lako (Question & Answers)	Answers by specialists to listeners' letters in the fields of science, economy, culture, technology, history etc.

A survey concerning the effectiveness of adult education broadcasting in Tanzania was carried out in 1983 by the Ministry of Education. Following are some of the results found.

- 1) Literates understood the importance of education, and registered their children in school.
- 2) Many farmers could read signs (roadmarks, busstops, posts, etc.)
- 3) 87% of those interviewed had the habit of reading newspapers.
- 4) 96% of those interviewed ate a balanced diet.
- 5) 89% of those interviewed knew the techniques for preparing clean and safe drinking water.
- 6) 52% of those interviewed used modern farming methods.
- 7) Many farmers could read weighing machines when they sent their products for sale.
- 8) Many farmers had plans to advance themselves educationally and economically.
- 9) 87% of those interviewed could cast their ballots in national elections without help from other people.
- 10) 67% of those interviewed had good permanent houses.
- 11) Effects of educational campaign broadcasting:
  - 55% of those interviewed benefited from "Man is Health".
  - 44% of those interviewed benefited from "Food is Life".

#### 2-3-4 Using Broadcasting for School Education

The School Broadcasting Unit in the Ministry of Education has conducted school broadcasting for school education since 1954. It was suspended for one year in 1986 to improve the contents of the programs, and nowadays, the 8 staffers have been carrying out the production of programs for three educational levels i.e. primary schools, secondary schools and teachers' colleges as shown in Table 2-3-7.

In producing these programs, the unit takes charge of implementation in accordance with the policy of school broadcasts and guidance for the implementation of policy, which the School Broadcast Main Committee is responsible for formulating. This committee is composed of Directors from the Departments of Primary Education, Secondary Education, Teachers Education, and Adult Education of the Ministry of Education, including the Director of Broadcasting and the Head of the Education Section in RTD.

Broadcasting hours and number of programs are shown in Table 2-3-7.

Table 2-3-7 Number and Broadcasting Hours of School Education Programs for Three Educational Levels (as of 1989)

Educational Level	No. of Programs per week (Broadcasting hours/one program)	Broadcasting term (Total No. of programs & total broadcasting hours/year)
◎ For Primary School	4×5 Programs from Mon. to Friday (25 minutes each)	First Term : 12 weeks Second Term : 12 weeks (480 programs and 240 hours/year)
◎ For Secondary School	4×5 Programs from Mon. to Friday (25 minutes each)	First Term : 12 weeks Second Term : 12 weeks (480 programs and 240 hours/year)
◎ For Teachers' College	1×3 Programs for 3 days/week (25 minutes each)	First Term : 12 weeks Second Term : 12 weeks (72 programs and 36 hours/year)

The purposes of these three kinds of school educational broadcasts are different according to the needs of each level, as described below:

\* For primary school education:

There is a great need for qualified and competent teachers, and for

sufficient teaching material in primary schools. Accordingly the main purpose of primary educational broadcasting is to assist in teaching the school syllabus. Hence it is expected that even where the pupils cannot get a good teacher for a certain subject, they can still learn various topics of the subject by listening to the radio.

\* For secondary school education:

There are more teachers with ability in the public secondary schools than in the primary schools. However, there is a lack of teachers well-conversed in all subjects in many private schools, so the purpose here is just as same as with primary school education.

\* For teachers' college education:

The purpose is to give guidance on how to utilize school broadcasts and how to build the listening attitude among the pupils in school so that the usage of school broadcasts can be promoted further.

The School Broadcasting Unit conducted a survey concerning the statistics of radio receivers for primary and secondary schools throughout the country in 1987.

The survey revealed that there were about 5,000 radio receivers (1,600 out of 5,000 are radio cassettes) in 10,200 primary schools, and about 100 in 300 secondary schools.

The diffusion of radio receivers for school broadcasting is not yet sufficient according to these surveys, but the teachers' own radio receivers seem to be used for lessons in many cases.

A member of the Basic Design Study Team visited one of the primary schools in Dar es Salaam to observe school broadcasting. Seeing that about 40 pupils in a class were earnestly listening to radio, they concluded that the school broadcasting has become very effective (as shown in photographs 2-3-1 and 2-3-2).





Photo 2-3-1 "Primary school students listening to a school broadcast."

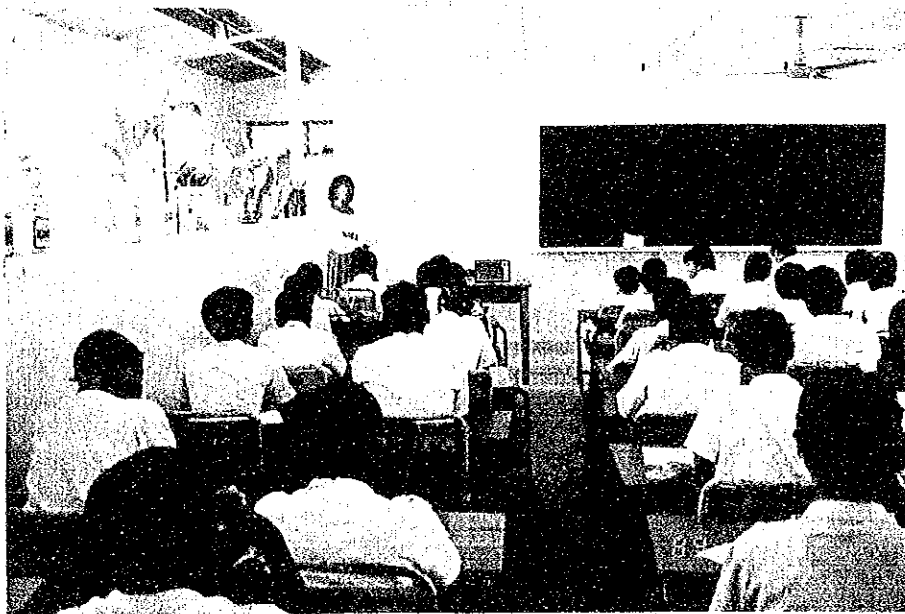


Photo 2-3-2 "Primary school students listening to a school broadcast."





## 2-4 Present Status of Radio Tanzania Dar es Salaam (RTD)

### 2-4-1 Organization

RTD, under a director-general appointed by the President through the recommendation of the State Minister, consists of a Manpower/Accounting Department with a staff of 348, a News Department with a staff of 52, a Program Production Department with a staff of 100, and an Engineering Department with a staff of 204. The total number of staffers is 704. (Refer to Figure 2-4-1)

The organizations, personnel formation, and functions of the four RTD stations are shown in Figure 2-4-2~2-4-5 in detail.

Because of the new installation of two 100kW radio stations in Dodoma and Kigoma in 1988, the total number of staff at RTD increased by 90 compared with the total number of 614 staff members when the Basic Design Study was executed in 1986.

Among increased numbers, 73 are increased at the Manpower/Accounting Department, 8 at the Program Production Department as the staff for producing programs, 7 for the staff for records/tapes library and 2 are increased at the Engineering Department.

The reason why there was only a small increase of personnel in the Engineering Department was that the number of retired employees was almost the same as the number of recruits for the three years, and the staff members necessary for the two new stations were assigned by rationalizing personnel in existing transmitting stations.

Accordingly, the engineering department has been executing a 3-year recruitment plan necessary for the project in Nachingwea and Songea. This includes replacements for employees who have retired since the 1988/89 fiscal year.

At the same time, the majority of the staff increase of 73 in the Manpower/Accounting Department were drivers, watchmen, gardeners etc. for the stations in Dodoma and Kigoma. Although the assignment of personnel

to the News and Programme Production Departments of both stations is appropriate at present, both departments will hire additional staff on demand when there is a more concrete program production plan in both stations.

Relationships between RTD and the ministries and agencies concerned, illustrated in Fig. 2-4-1, are as follows:

- Management Committee

The Management Committee, consisting of the Director-General and the four Department Chiefs, always keeps in mind the aims of the Prime Minister's Office and the national organs concerned, and the listeners' expectations, opinions, requests, and problems etc. regarding the programs. This committee is responsible for the execution of the national service, commercial service and external service.

- Program Advisory Committees

For the planning, production and presentation of programs, four program advisory committees that deal with school educational broadcasting, adult educational broadcasting, commercial broadcasting and religious broadcasts (Christianity and Islam) are organized to make recommendations to RTD. Except for the School Educational Program Advisory Committee organized jointly by RTD and the Ministry of Education, members of the other three program deliberation committees are appointed through consultations with other organs concerned and on their recommendations. These four committees function under the Director-General and are normally reorganized once every three years.

- TV Development Engineering Committee

The Engineering Department of RTD is aiming at the commencement of TV broadcasting. They have established a TV Development Engineering Committee with TPTC, which is under the control of the Ministry of Communications and Works, and they are mainly studying TV systems. However, the Committee does not actively discuss the introduction of television due to the recommendation of the seminar of mass media held in 1988 (as described in 2-2-2(2)).

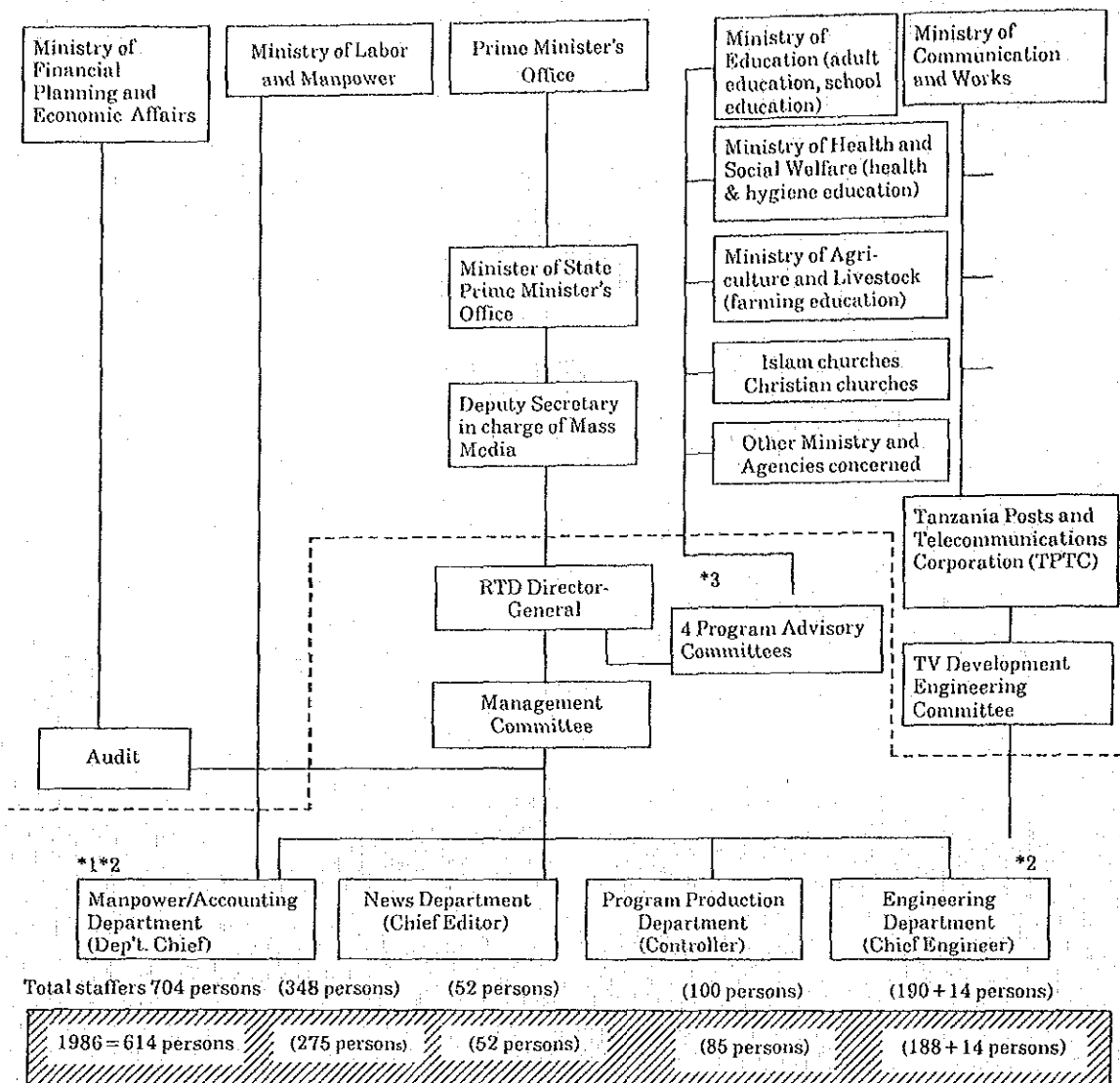
- Ministry of Financial Planning and Economic Affairs

Eight out of the 19 accounting staffers in the Manpower/Accounting Department are from the Ministry of Financial Planning and Economic Affairs. Expenses are funded from the Treasury and are subjected to a severe audit every year by the above ministry. In addition, staffers in charge of accounting for the equipment and spare parts in the engineering department are also from the above ministry.

- Ministry of Labour and Manpower Development

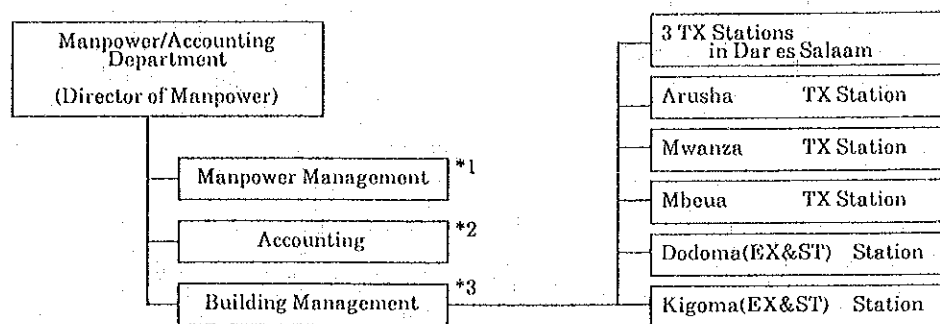
For personnel matters, RTD makes a request for the necessary manpower to the Manpower Development Department in the Ministry of Labour and Manpower Development, and the Department supplies the required staff members based on the long-term plan for manpower development. Accordingly, the chief of the Manpower/Accounting Department is also from the Manpower Development Department.

In addition, staffers of pay scale MS6 (See Appendix VI-5 for public servant pay rank.) or over are nominated by the President; staffers of MS 7 or under are appointed by the Minister of Labour and Manpower Development.



- \*1 Department Chief is from the Ministry of Labour and Manpower Development.
- \*2 A staff of 15 in charge of accounting and a staff of 14 in charge of engineering stores are from the Ministry of Financial Planning and Economic Affairs.
- \*3 4 Program Advisory Committees consist of Adult Education Committee, School Education Committee, Islam and Christian Churches Committee, and Commercial Broadcasting Committee. Each Committee meets 2 times a year.

Fig. 2-4-1 Relationship between RTD Organization and Ministries & Agencies Concerned (as of January, 1989)



- \*1 Managers belong to the Ministry of Labour - Manpower Planning.  
 \*2 15 persons of accounting belong to the Ministry of Finance and the Ministry of Economic Planning.  
 \*3 Telephone operators, drivers, watchmen, gardeners, commissionaires, etc.

Fig. 2-4-2 Organization and Personnel Formation in Manpower/Accounting Department of RTD (as of January, 1989)

Table 2-4-1 Occupational Category and Salary Scale in Manpower / Accounting Department (as of January, 1989)

Occupational Category	Salary Scale *4				
	MS10 ~ MS12	MS1 ~ MS5	MU	OS1~ OS4	Total
° Manpower Management (Director, Officer, II, III, Assistant I)	2	2			4
° Accounts (Grade I, II, Assis. I, II, Clerks)		14	3		17
° Personal Secretaries/Typists (Secretary III, Typist Grade I, II, III)		6	11		17
° Office Supervisor/Registry Assistants (Supervisor III, Regis. Assis. I, II, III)		16	8		24
° Telephone Operator (Senior, Grade I, II, III, IV)		5	5	7	17
° Office Attendants (Senior, Grade I, II, III)				98	98
° Drivers (Grade I, II, III, IV)		4		39	43
° Watchmen (Senior, Grade I, II, III)				67	67
° Gardeners (Grade I, II, III)				50	50
° Commissionaires (Grade I, II, III)				8	8
° Nurses (Midwife, Attendants)		1		2	3
Total	2	48	27	271	348

\*4 For salary scale, refer to Appendix VI-5.

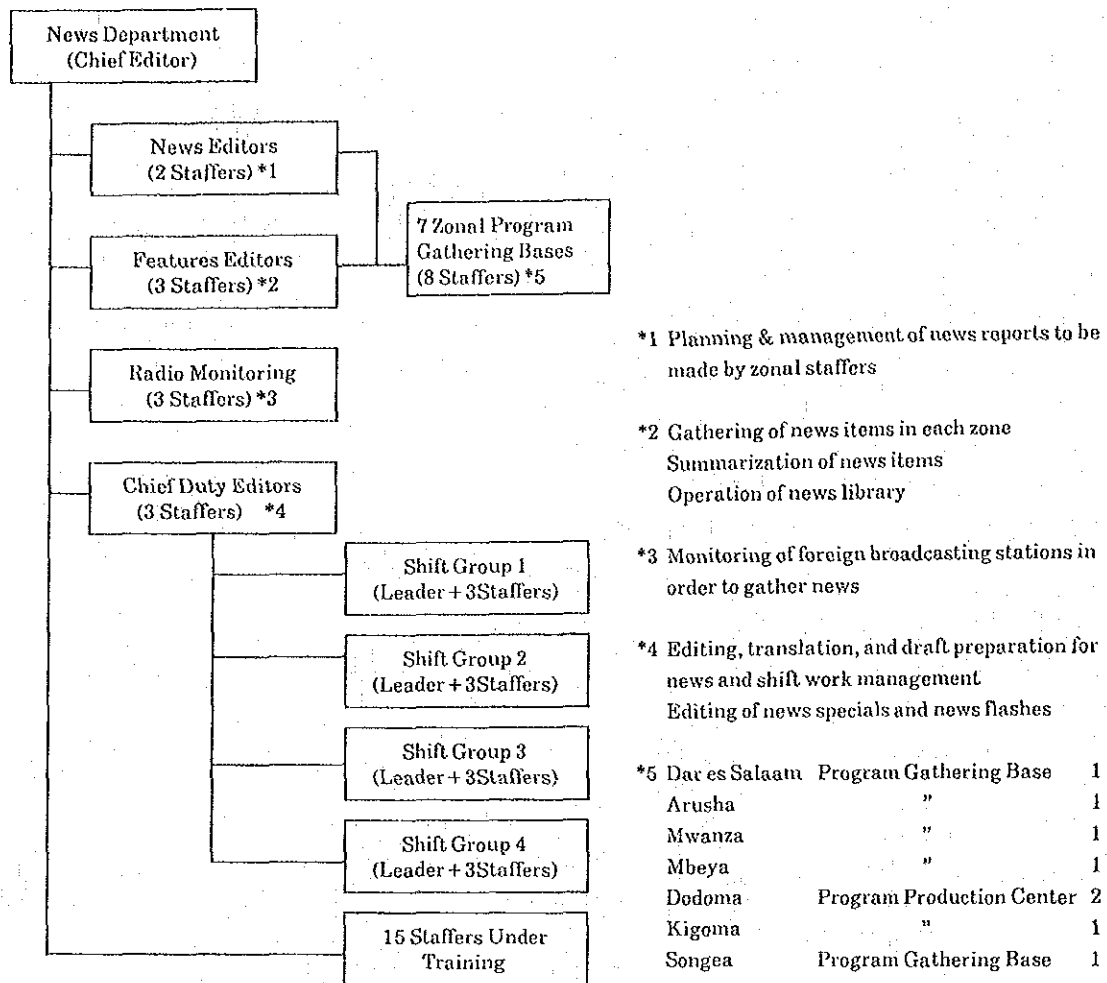


Fig. 2-4-3 Organization and Personnel Formation in News Department

Table 2-4-2 Function & Assignment and Salary Scale in News Department (as of January 1989)

Function & Assignment	Salary Scale *6				
	M10~M12	M6~M9	M3~M5	MS1~MS2	Total
° Principal News Editor (Grade I, II)	2				2
° Senior Editor Radio News (Grade I, II)		5			5
° Editor Radio News (Grade I, II, III)			21		21
° Journalist Assistant (Grade I, II, )				9	9
° Personnel Under Training				15	15
<b>Grand Total</b>	<b>52</b>				

\*6 For salary scale, refer to Appendix VI -5.

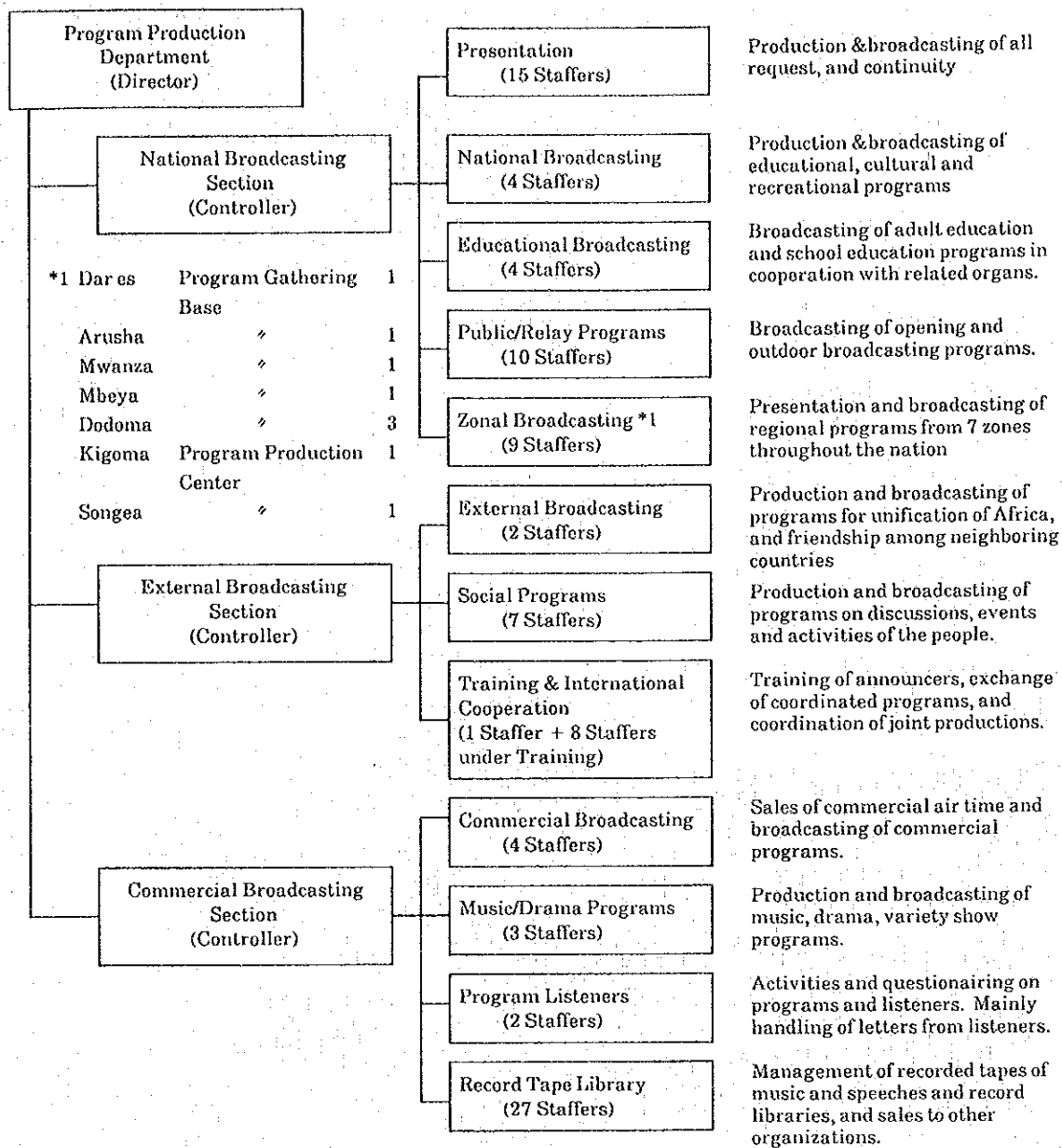


Fig. 2-4-4 Organization and Personnel Formation of Programme Production Department (as of January, 1989)

Table 2-4-3 Function & Assignment and Salary Scale in Program Production Department (as of January, 1989)

Function & Assignment	Salary Scale *2			
	M10~M13	M5~M9	M1~M4	MU
° Controller & Organizer (Senior, Grade I, II)	3	12		
° Programme Producer (Grade I, II, III)		8	16	
° Programme Assistant (Grade I, II, III)			21	13
° Record Librarian (Senior, Grade I, II, Assis.)	1	3	3	
° Record Librarian Assistant (Grade I, II, )			17	4
Total	3	23	57	17
Grand Total	100			

\*2 For salary scale, refer to Appendix VI-5.

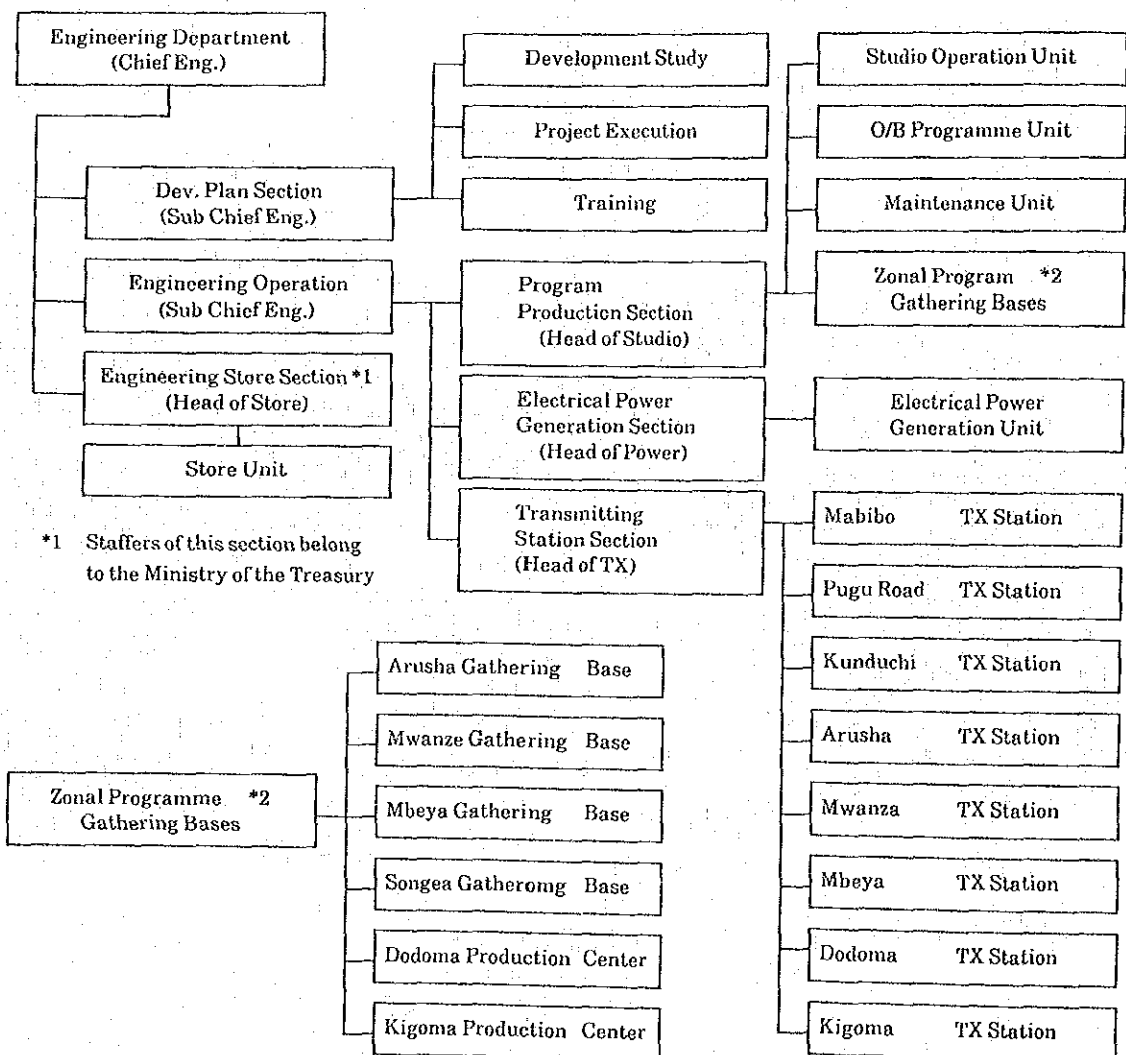


Fig. 2-4-5 Organization and Personnel Formation in Engineering Department (as of January, 1989)



Table 2-4-4 Function & Assignment and Salary Scale in Engineering Department (as of January, 1989).

Function Salary Scale *1	Engineers/Principal Technicians*			Technicians			Assistant Technicians			Total
	MS16	MS12 1 MS10	MS9 1 MS4	MS9 1 MS6	MS5 1 MS3	MS2 with FTC	MS 2	MS 1	MU	
Chief ENG/Head	1	1+3*								5
Development Study			2							2
Project Execution			2							2
Training			1		1					2
Under Training							1	6		7
Studio Operation			2	1	13	2	7	1	3	29
O/B Production			1		6	1				8
Maintenance			1	1	7	1		3	2	15
Zonal Gath. Base				2	2					4
Dodoma Pro. Center			1	1	2	1		1	3	9
Kigoma Pro. Center			1	1	1	1			1	5
Elec. Power Gen.				2	2			5	5	14
Mabibo TX Station		1*	1	1	5			2	1	11
Pugu R. TX Station		1*	1	1	6			1		10
Kunduch TX Station			2		4		1	1		8
Arusha TX Station		1*	2	1	6	1	2	1		14
Mwanza TX Station		1*	1	1	1	1		3	2	10
Mbeya TX Station		1*	1	1	5	1		2		11
Dodoma TX Station		1*	1	1	4	1	2	1	1	12
Kigoma TX Station			4		3	1	1	3		12
Sub Total		35			93			62		190
Stores Section					1		5	4	4	14
Grand Total										204

\*1 For salary scale, refer to Appendix VI-5.

## 2-4-2 Budget and Operating Expenses

### (1) Budget and Settlement

RTD is concerned with national broadcasting under the control of the Prime Minister and First Vice President's Office, hence all of the expenses are disbursed by the Government of Tanzania. The fiscal year is from July to the following June, but if necessary, a supplementary budget of about 20% can be approved. The Accounting Section of RTD is composed of 19 accountants who belong to the Ministry of Finance, Economic Affairs and Planning. These accountants control the budget. Changes in the budget and settlements in the past 5 years are listed in Table 2-4-5.

Table 2-4-5 Changes of Budget and Settlement in the Past 5 Years

Fiscal year	Amount of Budget (1,000TShs)	Increase from Previous year (%)	Amount of Budget (1,000TShs)	Increase from Previous year (%)	No. of staff members in June
'83/84	36,532	-	37,704	-	645
'84/85	47,610	30.3	53,569	42.1	624
'85/86	56,529	18.7	55,772	4.1	583
'86/87	109,903	94.4	90,695	62.2	-
'87/88	136,744	24.4	135,640	23.4	-
'88/89	172,932	26.5	(201,507)	(48.6)	704

( ) : Estimated amount of settlement

### (2) Details of Operating Expenses and Characteristics

A breakdown of RTD's annual expenses is shown in Fig. 2-4-6. The budget for this fiscal year, '88/89, shows an increase of 48.6% over the actual budget of fiscal year '87/88.

Table 2-4-6 Budget and Settlement (unit : 1,000TShs)

Expense Item	Amount of Budget		Amount of Settlement	
	1987/1988	1988/1989	1987/1988	1988/1989
Program production expenses	4,568 (3.34%)	6,968 (4.03%)	3,313 (2.44%)	[ 6,864] (3.41%)
Personnel expenses	27,901 (20.40%)	37,087 (21.45%)	30,414 (22.42%)	[38,467](19.09%)
Office and utility expenses	29,942 (21.90%)	40,661 (23.51%)	33,423 (24.64%)	[41,029](20.36%)
Facility maintenance and renewal expenses	20,108 (14.70%)	16,296 (9.42%)	15,455 (11.40%)	[ 19,003] (9.43%)
Maintenance & operation expenses	46,216 (33.80%)	63,498 (36.72%)	45,931 (33.86%)	[88,250](43.80%)
Training expenses	2,438 (1.78%)	2,801 (1.62%)	1,957 (1.44%)	[ 2,560] (1.27%)
Others	5,571 (4.08%)	5,621 (3.25%)	5,147 (3.80%)	[ 5,333] (2.64%)
Total	136,744 (100%)	172,932 (100%)	135,640 (100%)	[201,506] (100%)

[ ] : Estimated amount of settlement

Of these expenses, a 26.5% increase in personnel expenses, a 107% increase in program production expenses, and a 22.8% increase in office and utility expenses were added to the budget to cope with the average annual inflation of approximately 30%. But , the 30.8% increase in training expenses, the appropriation for special expenses, the 23% increase in facility maintain renewal expenses and 92.1% increase in maintenance & operation expenses are characteristic of the fiscal year 1988/89 budget.

In these amounts for each item, annual operation costs for Dodoma and Kigoma broadcasting stations are included. There are not yet actual data concerning the results for both stations. However, estimated operation costs in 1988 / 89 fiscal year are as follows.

Table 2-4-7 Estimated Operation Costs for Dodoma and Kigoma  
Broadcasting Stations (unit: TShs)

Items of Expenses	Dodoma Station	Kigoma Station
1. Personnel expenses	1,800,000	1,041,320
2. Charge for electricity	6,500,000	6,164,846
3. Maintenance expenses for transmitter and studio equipment	2,500,000	2,000,000
4. Maintenance expenses for power facilities and cars	2,200,000	1,800,000
5. Rental fees for exclusive phone lines	1,200,000	1,200,000
6. Program production expenses	560,000	400,000
7. Others	900,000	680,000
Total	15,560,000	13,286,166

(3) Revenue from Commercial Service

RTD conducts not only a national service but also a commercial service for which air-time is charged. Revenues from this commercial service are composed of charges for program sponsoring, spot advertisements, studio rental, advertisement preparation, etc. This revenue amounts to about 10% of the annual expenses of RTD as listed in Table 2-4-8.

RTD, however, is a national broadcasting organ, and these revenues are all treated as a part of the national revenue. Thus they are not directly related to the annual budget of RTD.

Table 2-4-8 Revenues from Commercial Service Over Annual Expenses of  
RTD (unit: TShs)

Fiscal year Items	'81/'82	'82/'83	'83/'84	'84/'85	'85/'86	'86/'87	'87/'88
RTD annual expenses	28,783	28,225	37,704	53,567	55,738	90,695	135,640
Revenue from commercials	2,345	3,992	4,357	4,160	4,525	8,434	13,290
Ratio	8.2%	13.8%	11.6%	7.8%	8.1%	9.2%	9.8%

- (4) Development funds for local portion works in the project for installing Dodoma and Kigoma broadcasting stations

The two 100kW broadcasting stations in Dodoma and Kigoma were completed in 1988 with Japan's Grant Aid. Expenses for all the local portion works in this project were paid in a special budgetary measure as development funds in the 1987/88 fiscal year.

1) Expenses for local portion works		
in the installation of Dodoma station	TShs	49,000,000
Original Budget	TShs	46,500,000
Revised Budget	TShs	2,500,000
2) Expenses for local portion works		
in the installation of Kigoma station	TShs	24,000,000
Original Budget	TShs	22,600,000
Revised Budget	TShs	1,400,000
Total	TShs	73,000,000

As above, the first budget covering both stations was 69,100,000 TShs. It had become necessary to increase the budget after changing some design specifications, and due to the continuing inflation.

The government of Tanzania completed the works within the term by forming a supplementary budget of 3,900,000 TShs.

(5) Budgetary Measures for the Development Project of Broadcasting Service

The Government of Tanzania has set a 5-year plan for development of the broadcasting service (5-year plan with monetary plan as shown in a table 2-4-6), which started in 1988/1989. Upon executing this plan, a budget totalling 2,830,000 shillings was appropriated as necessary expenses for local portion works shared with The Government of Tanzania.

Among these, as the budget of the first fiscal year 1988/1989, 90,000,000 shillings was formed and approved in the Diet. And the budget of 172,000,000 shillings for 1989/90 and 21,000,000 shillings for 1990/91 (but for constructing staff-houses) is expected to be appropriated.

The government of Tanzania considers that radio broadcasting is most important when promoting rural socio-economic development. So judging from past budget measures for the above established projects, the budget for this plan seems reasonable.

Table 2-4-9 Budgetary Measures for Developing the Broadcasting Service (1988/1989) (unit:1,000TShs.)

Project name	Amount
Dar es Salaam Headquarters	70,000
Kigoma Broadcasting Station	20,000
Nachingwea/Songea Transmitting Stations	60,000
Lindi Studio	30,000
Dodoma Studio	20,000
Total	200,000

## 2-4-3 Broadcasting Programs and Programming Control

### (1) Broadcasting Features and Purpose

RTD broadcasts three service features: national service, external service and commercial service. They are broadcast by medium-wave, short-wave and FM. The purpose of each service is as follows:

#### 1) Purpose of National Service

By providing chances to acquire basic knowledge and skills in various fields, the people are encouraged to participate positively in the socio-economic development of the nation. This will contribute to national unification, the construction of socialism, the maintenance of culture and the improvement of productivity.

#### 2) Purpose of External Service

For the purposes of supporting African liberation, contributing to the efforts of African unification, and promoting friendship and cultural exchange with neighboring countries, the external service is broadcast mainly in English, and some South African languages are also included. This service is mainly for neighboring countries but is for English-speaking Tanzanians and foreigners in Tanzania as well.

#### 3) Purpose of Commercial Service

To encourage the appropriate use of domestic products and services, entertainment programs with advertisements are mainly provided for the people.

(2) Broadcasting Hours and Frequencies/Powers

Broadcasting hours and frequencies/powers of the above three broadcasting features are listed in Table 2-4-10.

In Dar es Salaam Station the national service is conducted using 531kHz/10kW medium wave, and 4785kHz/50kW and 9685kHz/50kW short-wave and besides, 657kHz/100kW medium-wave, 5050kHz/10kW short-wave and 928MHz/50W FM (which are the frequencies for commercial service) by using the unused time of the commercial service. The transmitter output of 100kW at 657kHz is aimed at expanding the broadcasting area of the national service during the day.

In the national service, medium-wave radio broadcasting over in the whole country needs to be realized. At present, there are three 50kW Transmitting stations, in three regional cities (Arusha, Mwanza and Mbeya) and their frequencies are 1215kHz, 720kHz and 621kHz. Besides these, there are two 100kW stations, which were installed in 1988, in Dodoma and Kigoma cities; their frequencies are 603kHz and 711kHz.

FM broadcasting is conducted around Dar es Salaam, Dodoma, and Kigoma by emitting FM transmitting waves non-directional for the program transmission link between the studio and the transmitting station.



Table 2-4-10 Frequency/Power and Broadcasting Hours

	Dar es Salaam		Regional Station	
	Frequency / Power	Broadcasting Hours	Frequency/Power	Broadcasting Hours
National Service	531kHz/10kW 4785kHz/50kW	6:00-24:00	1215kHz/50 kW (Arusha) 720kHz/50 kW (Mwanza) 621kHz/50 kW (Mbeya)	6:00~24:00
	9685kHz/50kW 657kHz/10kW	8:00-18:00	603kHz/100 kW (FM) 87.7MHz/100kW (Dodoma)	
	5050kHz/10kW (FM) 92.3MHz/50W	6:00-16:00	711kHz/100kW (FM) 88.4MHz/150W (Kigoma)	
External Service	1035kHz/10kW 7165kHz/10kW  (FM) 89.9MHz/50W	6:00~7:30 12:00~13:30* *18:00~22:15 (Saturday, Sunday) 12:00~22:15		
Commercial Service	657kHz/100kW 5050kHz/10kW (FM) 92.3MHz/50W	16:00~23:15		

Note : \* Broadcasting hours of the external service are 6:30-7:30 and 12:00-22:15, on Saturday and Sunday.

### (3) Program Contents and Programming

The analysis of weekly programming at the time of January, 1989 is shown in Table 2-4-11 according to each broadcasting feature.

Table 2-4-11 Analysis of Weekly Programming of RTD (January 1989)

Program category	National service	External service	Commercial service
News	11 hr 12 min (8.9%)	6 hr 45 min (12.6%)	6 hr 25 min (12.0%)
Current affairs	25 hr 15 min (19.9%)	9 hr 25 min (17.5%)	5 hr 15 min (10.0%)
Documentaries	1 hr 00 min (0.8%)	2 hr 30 min (4.6%)	-
Dramas	14 hr 08 min (11.8%)	-	15 hr 50 min (32.0%)
Adult education	1 hr 15 min (0.9%)	1 hr 00 min (1.9%)	1 hr 30 min (3.0%)
Programs for women	1 hr 28 min (1.0%)	1 hr 30 min (2.8%)	-
Programs for children	2 hr 58 min (2.0%)	-	-
Religious programs	5 hr 57 min (4.8%)	0 hr 30 min (0.9%)	-
Sports programs	2 hr 15 min (1.8%)	0 hr 30 min (0.9%)	1 hr 45 min (4.0%)
Traditional music	7 hr 15 min (5.7%)	1 hr 00 min (1.9%)	0 hr 45 min (1.0%)
Light entertainment programs	53 hr 27 min (42.4%)	23 hr 35 min (43.9%)	19 hr 15 min (38.0%)
Liberation movement programs	-	7 hr 00 min (13.0%)	-
Total	126 hr 00 min (100%)	53 hr 45 min (100%)	50 hr 45 min. (100%)

Characteristics of each service are as follows:

1) National Service

The national service allocates about 30.5% of its broadcasts to news, news documentaries and dramas for the purpose of establishing national aims, constructing socialism, and enlightening the people regarding socio-economic development. About 19.3% is devoted to educational programs such as adult education programs required for participation in socio-economic development, programs for women and children, and religious programs.

In addition, school educational broadcasting is allocated in the first and second terms (12 weeks from the beginning of February and 12 weeks from the beginning of September). There are four 25 minute programs per day for primary schools (Monday to Friday) and two 25 minute programs for secondary schools Monday to Friday. Therefore, the percentage of educational programs during these terms is larger.

With programs divided roughly into news, education, and entertainment, they account for 30.5%, 19.3% and 50.2% respectively.

## 2) External Service

External service is significant in that about 13% of all programs or 7 hours a week is allocated to programs that promote friendship and brotherhood with neighboring countries.

Presently, the programs are composed of 36.6% news, 13% friendship and brotherhood with neighboring countries, 3.7% education, and 46.7% entertainment.

## 3) Commercial Service

Commercial programs are composed of 25.0% news, 32% adult education, and 43% entertainment; thus entertainment programs are weighted most. Comparing with the previous basic designs, this new system has the feature that adult education programs are more important. 17% (mostly light music) of the programs are sponsored, which encourages appropriate uses of domestic products and services in addition to the advertisement revenues. Revenue from this commercial service becomes national revenue.

Contents and programming are as stated above. In addition, RTD keeps a record and tape library consisting mainly of recorded music programs and news programs, such as speeches made by the President. RTD utilizes these as program materials and repeat programs and also presents copies of them to outside organs.

The number and weekly usage of tape record library programs in each category are shown in Table 2-4-12.

Table 2-4-12 Tape Library (as of January 1989)

Program Category	Number	Weekly Usage
N e w s	-	-
Current Affairs	7658	-
Documentaries	-	-
Adult Education	1072	10
Programs for Women	-	-
Programs for Children	-	-
Religious : Muslim	814	15
Religious : Christian	332	-
S p o r t s	-	-
Traditional Music	1279	280
Light Entertainment	4812	250
Liberation Programs	-	-
D r a m a	1684	2
T o t a l	17651	297

(4) Response of listeners

A total of about 140,000 letters were written from listeners to RTD in 1987. The contents consist of questions about programs, suggestions, and thanks for broadcasts of desired programs. The contributions of each region and each program are as shown in tables 2-4-13~2-4-14.

An analysis of contributions shows that 84.2% of letters were to music and entertainment programs and 14.6% to educational ones. By region, Dar es Salaam and its neighbouring districts accounted for the highest proportion of letters with 28.35%, while the regions that will benefit from the projects, Lindi, Mtwara and Luvuma, in other

words regions where people cannot listen to day-time medium-wave radio, accounted for a high 10.11%.

These are fairly large number of letters for a year and this shows that the listeners listen to the radio programs with fairly deep interest.

Table 2-4-13 Letters from Listeners by Program (1987)

Program Title	January	February	March	April	May	June	July	August	September	October	November	December	Total
Good Morning (K)	4393	3150	2631	2531	2166	2328	2496	2196	2878	2788	2366	958	30881
Good Evening (K)	2164	1918	1526	1173	1098	1373	1548	1265	1309	1695	1535	400	17092
Good Afternoon (K)	4743	3314	2759	2390	1918	2147	2054	2042	2131	2643	2339	1053	29533
Good Night (K)	764	1383	1057	506	477	602	960	468	1784	771	1050	251	10073
Your Request (K)	1611	732	712	849	880	954	1200	624	931	996	800	366	10585
Traditional Entertainment (K)	450	383	322	255	279	349	646	341	690	387	701	202	6005
Get Heeled (K)	620	593	580	418	380	636	649	563	692	988	600	213	6532
Night Greetings (K)	458	415	390	309	221	292	359	248	371	367	538	164	4122
From me to you (K)	181	114	86	70	64	111	144	167	183	226	172	74	1592
Poetry (K)	169	178	190	107	121	205	312	241	249	283	183	203	2441
Sub Total	84.2%												117856
Youth Movement (D)	680	616	641	492	445	574	631	617	740	901	685	164	7189
Peasant Program (D)	504	439	427	361	317	408	547	253	382	427	649	129	4734
SWAHILI speaking & Usage (D)	33	28	21	20	43	44	53	69	15	30	206	24	570
Question & Answer (D)	134	112	114	91	126	115	226	266	315	318	296	292	2405
Womens Greetings (F)	304	290	91	197	160	224	268	222	130	324	472	107	2779
Mother & Children (G)	135	—	182	158	210	263	313	333	319	354	238	225	2730
Sub Total	14.6%												20413
Your Message (H)	113	150	66	78	89	132	221	171	165	278	130	130	20413
Grand Total	17459	13824	11797	10005	8984	10657	12555	9976	13184	13676	12860	6026	14003

(H): Current affairs (F): Programs for woman (K): Music and light entertainment  
 (D): Adult education (G): Programs for children

Table 2-4-14 Letters from Listeners by Region (1987)

Region	January	February	March	April	May	June	July	August	September	October	November	December	Total	%
A	3003	2635	2173	2057	1740	1869	4113	1768	2857	2665	1814	689	23373	19.31
B	1069	1231	991	822	811	661	903	855	1041	1664	1332	456	11836	8.35
C	2019	1535	1498	1008	1021	1277	817	875	1141	1376	1234	528	14332	10.11
D	715	697	627	387	496	496	636	338	619	496	570	355	6332	4.46
E	5390	4066	3636	2968	2594	3297	3412	3431	3300	3113	3504	1461	40172	28.35
F	1798	1535	1350	1380	1028	1459	1056	966	1196	2057	1845	424	16094	11.35
G	1488	1234	1044	854	694	774	693	683	873	1062	1608	235	10941	7.72
Sub Total	15482	12933	11319	9476	8284	9833	11430	8906	11030	12433	11807	4147	127080	89.68
Oters Regions	217	295	188	373	206	214	217	445	372	516	1065	369	4477	3.15
Oters	647	667	676	454	689	767	1125	1070	1065	1263	1053	876	10140	7.15
Grand Total	16346	13895	12085	10303	9079	10804	12772	10421	12467	14212	13925	5391	141697	100.0

A. Northeast Region Killimanjaro Arusha Tanga  
 B. Central Region Dodoma Shingida Shinyonga  
 C. Southeast Region Lindi Mtwara Ruvuma  
 D. West Region Tabora Kigoma  
 E. Capital Peripheral Region Vuwani Dar es Salaam Morogoro  
 F. Southwest Region Iringa Mbeya Lukuwa  
 G. Northwest Region Mala Kagera Mwanza

## 2-4-4 Broadcasting Network Facilities and Operating Conditions

### (1) Broadcasting Network Facilities

There are RTD.HQ (Office block and program production facilities) and three transmitting stations in Dar es Salaam, and medium-wave broadcasting stations in five regional cities. They are summarized in Table 2-4-15.

Table 2-4-15 RTD Broadcasting Network Facilities

Broadcasting Station/ Transmitting Station	Transmitting Facilities	Studio/Receiving Station Facilities		
	Frequency/Main Power/ Standby Power (Broadcasting Feature)	Master Control Room/Studio	Area (m <sup>2</sup> )	Main Purpose of Usage
RTD HQ.	FM92.3MHz / 50W (NAT/COM) FM89.9MHz / 50W (EXT)	Mas.Con.R.		
		Studio 1	64	Production Studio for Music and Dramas
		Studio 2	27	Recording Studio for VIPs only
		Studio 3	27	Tape Editing
		Studio 4	27	Studio for Training/EXT Service Programs
		Studio 5	27	Continuity Studio for COM. Service
		Studio B	18	Continuity Studio for NAT. Service
		Studio R	18	Continuity Studio for EXT. Service
		Studio Y	11	Production for School Broadcasting Programs
		2 OB VANS		From outside Broadcasting
Pugu Road	1035 kHz / 10kW (EXT) 5050 kHz / 10kW (NAT/COM) 7165 kHz / 10kW (EXT)			
Mabibo	531 kHz / 10kW (NAT) 4785 kHz / 50kW (NAT) 9685 kHz / 50kW (NAT/COM)			
Kunduch	657 kHz / 100kW (NAT/COM)			
Arusha	1215 kHz / 50kW (NAT)	RX Station		No RX station has a studio, but they are provided with simple production equipment (tape recorder/ disc player etc.) as a program gathering base, besides a program link transmission equipment and all-wave receiver.
Mwanza	720 kHz / 50/10kW (NAT)	Ditto		
Mbeya	621 kHz / 50/10kW (NAT)	Ditto		
Dodoma	603 kHz / 100/10kW (NAT) FM87.7 MHz / 100W (NAT)	Mas.Con.R		
		Studio 1	126	For Music/Drama prog.
		Studio 2	31	For Talk/Education prog.
		Studio 3	16	For News/Current topics prog, etc.
Kigoma	711 kHz / 100/10kW (NAT) FM88.4 MHz / 50W (NAT)	Mas.Con.R Studio 1	38	Combined use with studio sub-control room for talk/news/current topics etc.

Notes : NAT = National Service EXT = External Service COM = Commercial Service  
 Mas.Con.R = Master Control Room Prog. = programs  
 TX = Transmitting RX = Receiving

1) RTD HQ.

A Master Control room is used to select and switch broadcasting programs from the output of each studio and from the outside broadcasting fields through transmission lines or wireless lines (in compliance with broadcasting times), and to send them to the three transmitting stations around Dar es Salaam and to the five regional stations.

Moreover, the recording of news and other program material sent over the telephone from zonal program gathering bases or Dodoma and Kigoma Program production centers as well as the regular program exchange with RTZ are conducted there.

The main input and output channels of the master control equipment are as follows:

Main input channels	18
* RTZ receiving line	1
* Outside broadcasting receiving lines	5
* Field pick-up receivers	4
* Studio receiving lines	8
Main output channels	14
* RTZ transmission line	1
* Transmission lines to Pugu Road Transmitting station	3
* Transmission lines to Mabibo transmitting station	2
* Transmission lines to regional transmitting stations	6
* FM program transmitting lines to the transmitting station	2

Program production in RTD HQ is conducted mostly in the 8 studios which are each used according to the purpose of usage.



Broadcast programs of the three services are all sent from the continuity studios, which are used exclusively for live broadcasting.

In addition to the above, RTD has 2 outside broadcasting vans. The outside broadcast programs are sent from the field to RTD HQ using VHF or UHF waves.

## 2) Transmitting Stations Around Dar es Salaam

Around Dar es Salaam, there are three transmitting stations, at Pugu Road, Mabibo, and Kunduchi.

The Pugu Road transmitting station is located very close to RTD HQ. It is equipped with one 10kW medium-wave transmitter and five 10kW short wave transmitters. It transmits mostly external and commercial services.

The Mabibo transmitting station is located about 8km north of RTD HQ. It is equipped with one 10kW medium-wave transmitter and four 50kW short-wave transmitters. It transmits mostly national services. Program transmission links from RTD HQ are by exclusive wire cables of TPTC.

The Kunduchi transmitting station is located about 30km north of RTD HQ. It is equipped with two 50kW medium-wave transmitters, and mainly transmits commercial services. Broadcast programs from RTD HQ are transmitted by a 50W FM transmitter in RTD HQ.

In addition to the above, there is a 50W FM transmitter in RTD HQ, which transmits external services.

Every transmitting station has an emergency generator in case of a service interruption to the commercial power.

### 3) Regional Stations

RTD installed and operated 50kW medium-wave radio stations in the three regional cities of Mwanza, Arusha and Mbeya and two 100kW medium-wave radio broadcasting stations in Dodoma and Kigoma.

Each station is equipped with a 10kW standby transmitter and an emergency generator in case of a service interruption to the commercial power.

The receiving stations in Arusha, Mwanza, and Mbeya do not have announcer studios but are equipped with microphones, a control console, a disc players and a tape recorder to edit the programs gathered at the zonal program gathering base. The broadcast programs which are sent using the program transmission line (TPTC's line) from Dar es Salaam HQ is also sent to the transmitting station through this control console. In case of a failure of this program transmission circuit, each receiving station is provided with a receiver to receive short-wave services direct from the RTD transmitting station in Dar es Salaam.

Broadcast program transmission between the receiving station and the transmitting station is conducted using a wireless link exclusively used for this purpose using UHF waves.

In the studio complex of the Dodoma radio station, there are a master control room and three studios: large, median, and small. The master control room is provided with a control console for switching programs from Dar es Salaam HQ through TPTC's line. A short-wave receiver in case of a failure of TPTC's line is used besides the transmitting/receiving equipment of the program transmission link. Each studio is used according to the program category such as music/drama, talk/education and news-analysis/current-topics programs.

In the studio complex of Kigoma radio station, there are a sub studio control room combined with master control equipment with

simple function almost equivalent to one as mentioned above and a medium studio for multi-purpose usage.

## (2) Facilities Operation and Maintenance

### 1) Operation and Maintenance of Studio Facilities

Basically a three shift system with 4 teams is employed in the studio working rotation, with a total of 29 staffers. In addition, eight staffers are in charge of outside broadcasting.

If equipment failures occur during the day shifts, they are recorded in the equipment trouble report and submitted to the maintenance group.

The maintenance group repairs the equipment and the results are recorded in the maintenance inspection record. Finally, this is kept in the maintenance record file according to equipment.

The maintenance group is also responsible for periodic maintenance. Maintenance is performed on the amplifiers and consoles once a year and on the disc players and tape recorders about twice a year in accordance with the maintenance instructions specified by RTD.

The maintenance group, with a total number of 15 including workers concerned with electric power and wood-working, is responsible for a wide range of maintenance including that of buildings, electric power equipment, and broadcasting equipment.

### 2) Operation and Maintenance of Transmitting Facilities

The basic work rotation in each transmitting station is a three shift system which consists of four teams, each having two staff members as described below.

Team A	06:00-14:00
Team B	14:00-22:00
Team C	22:00-06:00
Team D	Standby

While on duty, important matters such as equipment condition are all recorded in the technical equipment trouble record, and these matters are confirmed when the shift is changed. Periodic maintenance, as well as problems, causes, and actions taken in case of a failure of equipment are all recorded therein.

These data are summarized weekly and reported to RTD HQ. At the same time, the data are kept filed according to the individual pieces of equipment in each transmitting station.

Maintenance in the transmitting station is conducted by equipment type, and periodic inspections and maintenance are executed based on the instructions of RTD. Fig. 2-4-6 shows the chart of maintenance procedures for transmitters as an example.

In addition, regarding the stock of spare parts, they always have 200% of the necessary higher-output vacuum tubes and 25% of other spare parts in stock.

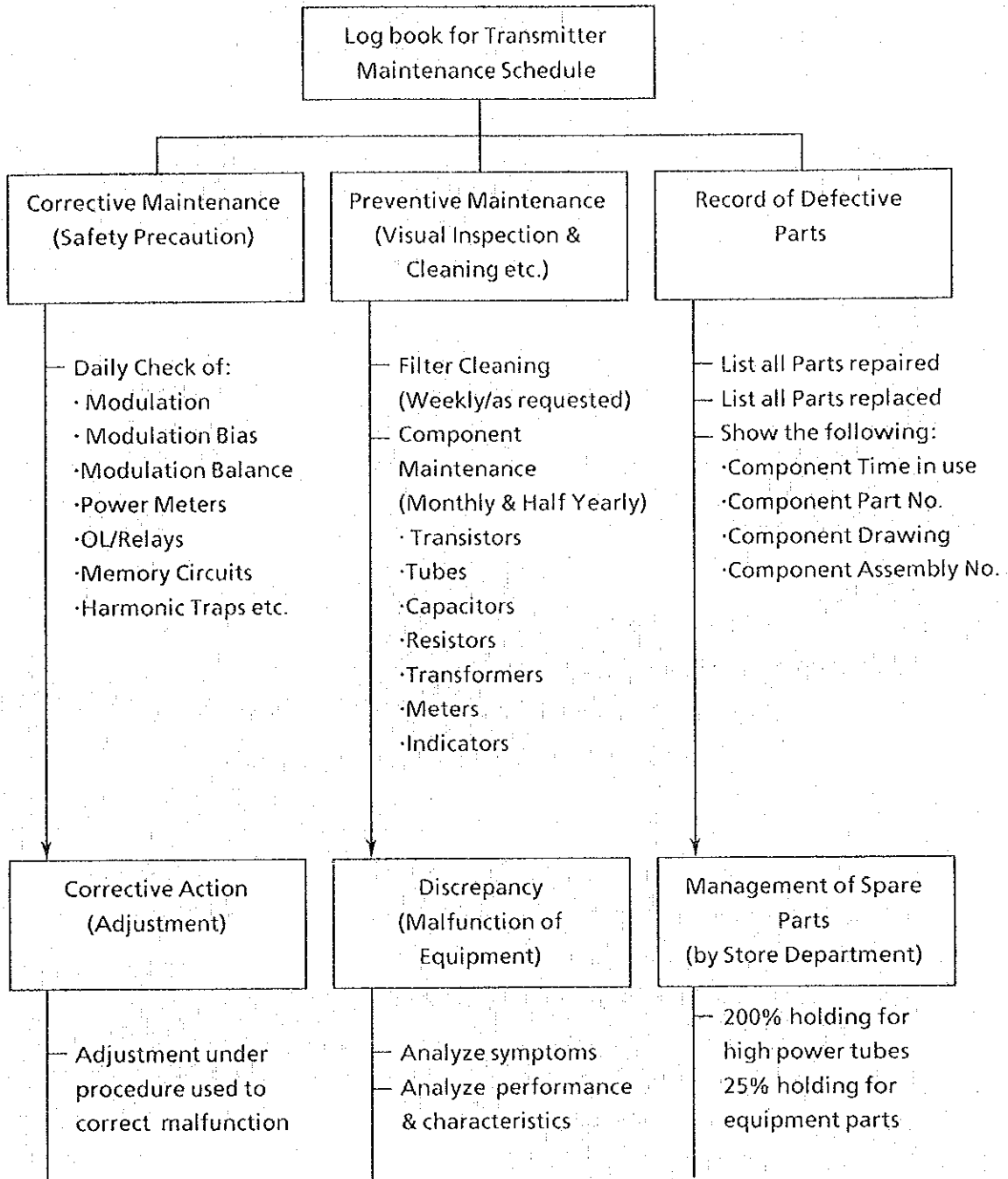


Fig. 2-4-6 Flowchart of Maintenance Procedure

(3) Practical use of Studios in Dodoma and Kigoma Radio Stations

Table 2-4-16 shows the practical use of studios in Dodoma and Kigoma Radio Stations completed in March and September 1988 respectively.

As RTD's basic policy regarding the practical use of these new studios, Broadcasting Director, Mr. David Wakati explained this structure to the Daily Newspaper when he guided Party Chairman, Mr Mwalimu Nyerere to the Dodoma radio station on January 20th, 1989.

"The broadcasting programs in zones will help in community development and they will be beneficial to the people because they will be broadcast in their own environment. The next phase will be to build broadcasting stations in Nachingwea, Lindi, and Songea. Studios in Lindi and Songea will also be used for program preparation.

Studio 1 in Dodoma station is larger than those in Dar es Salaam HQ. It can prepare all programs in addition to studios 2 and 3 and can record live music, jazz, bands, and choirs. Music groups in Dodoma and neighboring regions use the studios in Dodoma to save the cost of travel to Dar es Salaam"

Considering the practical use of the three studios (as shown in Table 2-4-16), they have not yet been managed sufficiently under the usage plan because the plan was passed after the inauguration of the station. However programs meeting the functions of each studio have been produced. The contents of programs are rich in local color; they include music programs played by dancing and chorus groups and information programs about the parliament during sessions of the parliament in Dodoma.

This means that these studios will be used effectively to meet with increases in program resources in Dodoma. The production of 15% programs out of the total produced in RTD will be attained in the near future, according to the initial target of the Basic Design Study.

Also, a studio in Kigoma Station has similar functions to Dodoma Station's Studio-2. It is used for compilation of information/news programs for about 4 hours per day, and also for producing talk/discussion programs.

Regarding the allocation of staff for program production, nine engineers/technicians, three producers, and two news staff members are constantly allocated to Dodoma station; and five technicians, one producer and one news staffer for the Kigoma station. In the case of the Dodoma station, more staffers will be dispatched to help at these stations from Dar es Salaam HQ each time, if necessary.

Table 2-4-16 Practical Usage of Studios in Dodoma Station

Studio-1 (126m <sup>2</sup> )	Studio-2 (31m <sup>2</sup> )	Studio-3 (16m <sup>2</sup> )
<u>30th Aug. 1988</u> Recording of Blue Stars Musical Club Group	<u>4th Aug. 1988</u> Production of Christian religious program	<u>11th Aug. 1988</u> Recording of the 'Local Government' program
<u>5th Sep. 1988</u> Recording of Dodoma Stars Musical Club Group	<u>8th Sep. 1988</u> Recording of speeches for local government and cooperative societies	<u>18th Sep. 1988</u> Recording of a program titled 'Conserve Land in Dodoma'
<u>15th Oct. 1988</u> Recording of St. Theresa Choir Group	<u>17th Sep. 1988</u> Recording a program of people's grievance for Office of Regional Commissioner, Dodoma	<u>13th Jan. - 8th Feb. 1989</u> Preparing of the 'Today in Parliament' program
<u>17th Oct. 1988</u> Recording of traditional dance groups	<u>13th Jan. - 8th Feb. 1989</u> Preparing of the 'Today in Parliament' program	Also dubbing of various programs as well as compiling such programs as 'Sports Today', news analysis, interviews and others were made almost every day.
<u>22nd Oct. 1988</u> Recording of Traditional Dance Group of Dodoma Women	Besides such activities dubbing of regular news analysis, sports programs etc, were made almost every day.	
<u>25th Oct. 1988</u> Recording of St. Theresa Church Choir Group of Dodoma		
<u>10th Nov. 1988</u> Recording of Islamic religious songs		
<u>23rd Jan. 1989</u> Recording of Dodoma Stars 'Taarab' musical group		



(4) Program Transmission Network

The existing telecommunications trunk lines of TPTC run east to west and north to south on the mainland of Tanzania as illustrated in Fig. 2-4-7, crossing in Dodoma. In addition, another trunk line runs north along the coast from Dar es Salaam.

These trunk lines use microwaves, and each has a large capacity of more than 200 channels. Small capacity lines of less than 120 channels using UHF waves connect these trunk lines and surrounding cities.

All of the broadcast programs of RTD are sent to each of the transmitting stations in Arusha, Mwanza and Mbeya from Dar es Salaam HQ through Dodoma. Hence, only one downstream line--equivalent to a 1 channel telephone line--is leased exclusively as a transmission line from TPTC.

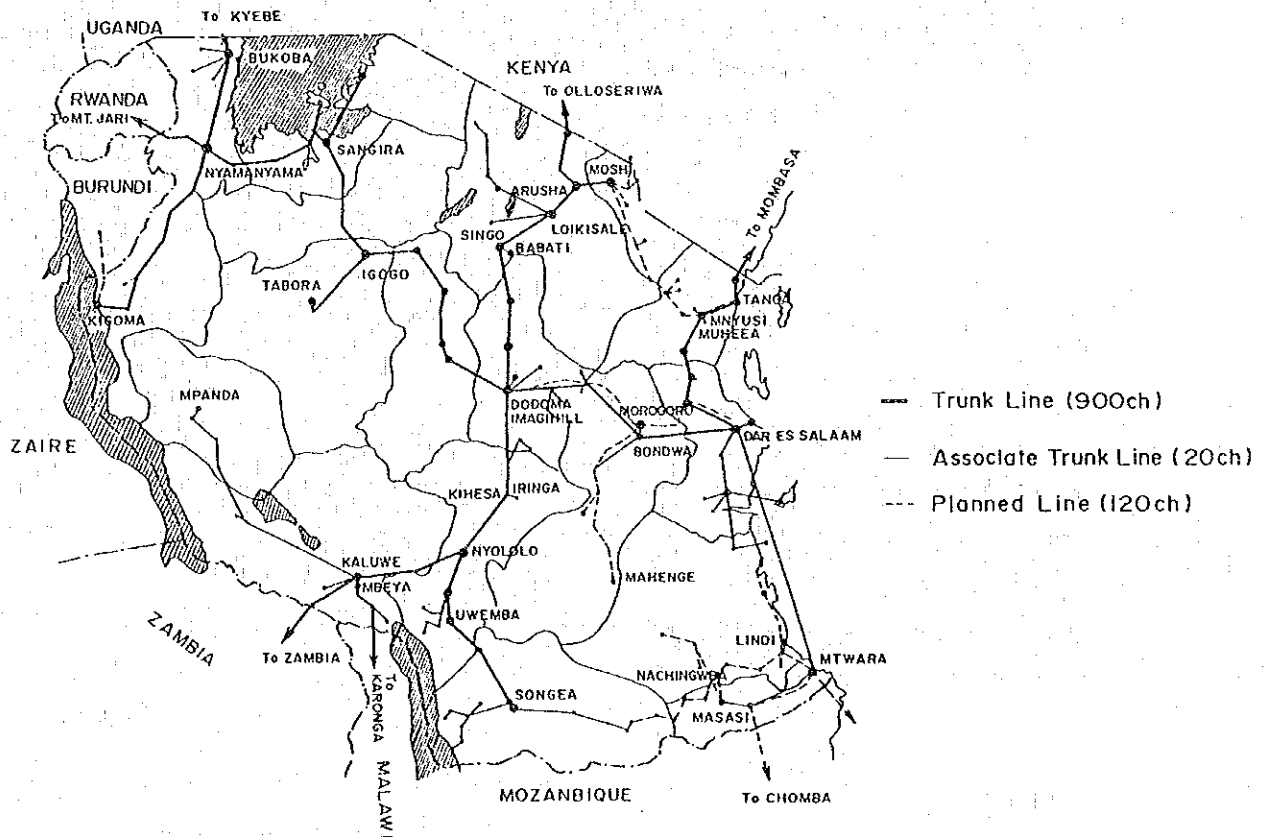


Fig. 2-4-7 Telecommunication Trunk Line Network on the Mainland of Tanzania

#### 2-4-5 Training/Promotion System

The training/promotion system for RTD is designed to improve the staff's capabilities and the quality of the broadcasting service. The following are reviewed and controlled by the management committee periodically: purpose of training, submission of the training budget to the Ministry of Financial Planning and Economic Affairs, approval of the training system/plan/curriculum and training activities. The budget for training amounts to about 1.5~2% of the total sum of budget every year.

In addition, a fact worth paying attention to is that 16 staffers of the news department, 8 staffers of the program production department, and 7 staffers of the engineering department are undergoing long-term training (or study abroad) for 1~4 years at journalism colleges, universities, technical colleges and overseas technical training institutes. Salary and educational expenses during study are covered by the Government of Tanzania. Besides, each department carries out a basic training course for recruits in the RTD training center every year.

In this training system, promotion is guaranteed when each course of training has been completed. This is a special system only for public officials of the country; there is no example in other public corporations or private firms. This is an important element for helping officials.

#### (1) Training System in the News Department and Program Production Department

In the News Department, a special training/promotion system is established as shown in Fig. 2-4-17. Every year 8 staff members undergo training in the India Mass Communication Institute and Tanzania School of Journalism controlled by Prime Minister's office, and an average of 5 staff members participate in an overseas training program.

To train program production staff and library staff, the Program Production Department established its own section in charge of training. It conducts only the training for announcers, and

despatches staff members to foreign broadcasting organs. The following 4 stages are under consideration for its own training system which will start from 1989/90 as shown in Table 2-4-18.

Stage 1: Orientation course plus basic program production course for recruits

Stage 2: General program production course for program assistants with several years experience in the production and broadcasting field, plus a library assistant qualification course

Stage 3: Special course for producers who lead a program production team

Stage 4: Policy education course and university course

## (2) Training System in Engineering Department

In the Engineering Department, 20~30 staff members are receiving training in domestic and overseas organizations every year in accordance with its own training system shown in Fig. 2-4-9.

The main aim of this system is to train staff who have finished a junior course of secondary school and vocational training center as broadcasting technicians. It is divided into 6 stages, each of which lasts 3 months. With this 6 stage training course and O.J.T. thereafter, they are moved to technician from assistant technician in 7 years.

As shown in a table 2-4-19, an average of 10 staff members are accepted into the Technical Bureau each year. After acceptance, and after training at working places for a set number of years, they are sent for long-term training at domestic and overseas organizations under a plan of the Ministry of Labour and Manpower Planning.

In addition, to obtain the staff necessary for the Nachingwea and Songea projects, and to replace retired workers, the Engineering Department plans to accept and train about 20 persons per year under a 3-years schedule starting fiscal year 1989/1990.

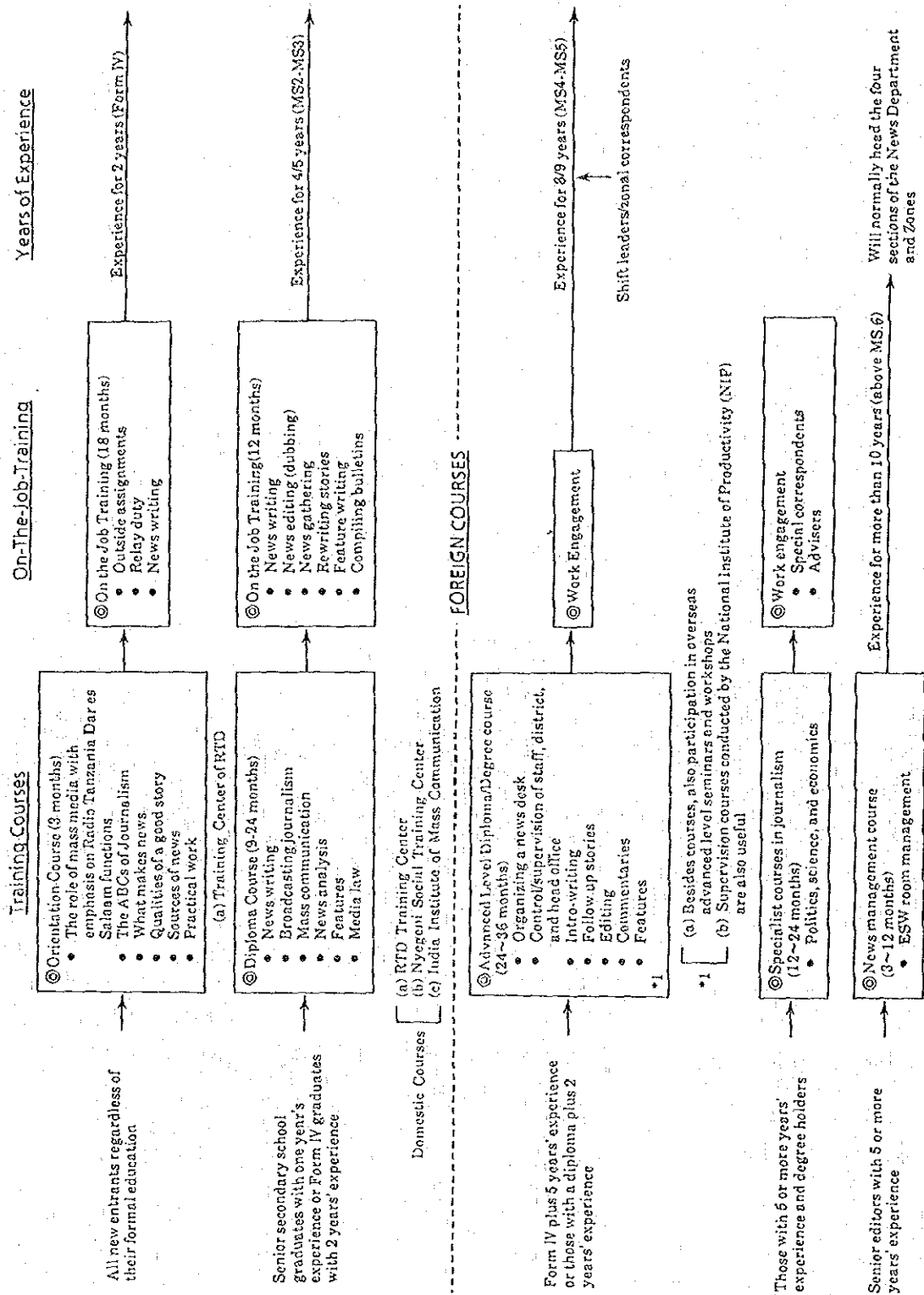


Fig. 2-4-8 Training System in the News Department

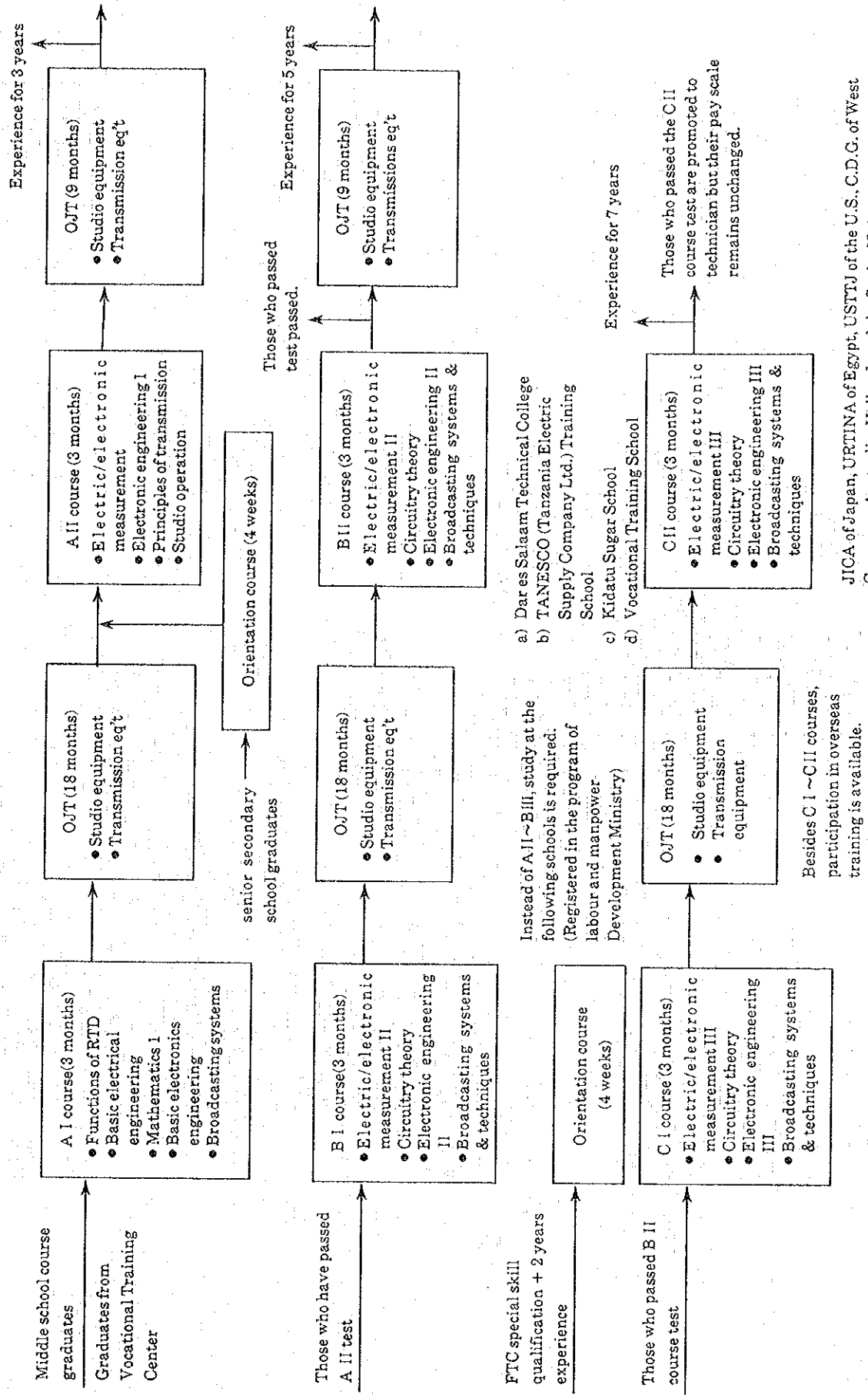


Fig. 2-4-9 Training/Promotion System in Engineering Department

Table 2-4-17 Training Program in the News Department

	Name of College/Other Institutions	Type of Education	Duration	No. of Students					
				'86	'87	'88	'89	'90	Total
1	Radio Tanzania Training Center local courses	Basic Course (Orientation)	3 Months	8	6	9	8	8	39
2	Tanzania School of Journalism Nyegezi Social Training Centre India Mass Communication Institute	Diploma Course in Journalism	9~25 Months	9	1	3	9	8	30
3	Foreign Training Institutes (U.K., US, Yugoslavia, India, Soviet Union, etc.)	Advanced level/ Diploma/Degree Courses	24~36 Months	3	3	3	3	3	15
4	Foreign Training Institutes (B.B.C., Radio Japan, Sweden, Thomson Foundation US., FRG, Yugoslavia)	News Management Course	3~12 Months	1	2	1	2	3	9
5	Foreign Training Institutes (U.K., US, FRG, Canada, Australia)	Specialists Courses in Journalism	12~24 Months	2	2	2	2	2	10
Total				23	14	18	24	24	103

Table 2-4-18 Training Program in the Program Production Department

Proposed course	Duration	Possible place	No. of candidates					Total
			89/90	90/91	90/91	90/91	90/91	
1.1 Basic Prog. Production Course	3 months	RTD Training Center	13	13	13	13	13	65
1.2 General Production Course	6 months	UNESCO, MISRI, W.	4	4	5	5	5	23
1.3 Advanced Production Course	6~9 months	Germany, BBC	2	2	2	2	2	10
2.1 Special Course 1) Rural Broadcasting 2) Commercial Broadcasting 3) Drama Broadcasting 4) Feature and Documentaries 5) General Administration 6) Resource Management 7) Audience Research 8) Politics	12~14 weeks	BBC, Holland, F.R.C. Australia, Tanzania	5	5	5	3	3	21
3.1 Instructors Courses (Program/Prod./Presentation) 1) Musical Programs 2) News 3) Talk and Features 4) Drama 5) Magazine/ Documentaries 6) Outside Program & B'casts 7) Interview & Discussions	15 weeks	BBC, UNESCO, F.R.G. Holland	2	2	2	2	2	10
4.1 Certificate/Diploma Course 1) Program Production 2) Radio Publications and Evaluation 3) Management & Staff Training 4) Radio Journalism	1~2 years	School of Journalism, UK, USA	1	1	1	1	1	5
5.1 1st Degree 1) Mass Communication 2) Management	3~4 years	UK, USA, India	—	—	1	—	1	2
Total			27	27	29	26	27	136

Table 2-4-19 Training Program in Engineering Department

	Name of Institution	Course	Duration	No. of Trainees					
				'84	'85	'86	'87	'88	Total
1	RTD Training Center	AI, AII, BI, CII	3 Months	8	14	5	13	10	50
2	Dar es Salaam Technical College	F. T. C. (BII)	3 Years	1	2	-	1	-	4
3	TANESCO Institute	F. T. C. (BII)	3 Years	2	1	2	2	1	8
4	Cairo Institute of Telecommunications	(BII)	5~6 Months	3	3	3	3	2	14
5	Dar es Salaam Technical College	Diploma (CII)	2 Years	3	3	3	-	1	10
6	Other Colleges in Tanzania	(CII)	2 Years	6	6	7	1	2	22
7	Foreign Training Institutes (UK, W.G. Japan, USA, etc.)	(CII)	6 Weeks~ 1 year	5	3	5	3	1	17
8	National Institute Production in Tanzania	Managerial Technical Leadership	1~3 Weeks	7	2	7	4	2	22
9	TANESCO Power Stations	(BII & CII Electrical Technology)	3 Months	-	2	2	-	1	5
Total				35	36	34	27	20	152



## 2-4-6 Long-Term Plan for Broadcasting Service Development

The Prime Minister and First Vice President's Office, which is the ministry in charge of controlling RTD and other agencies for other mass media, established a 5-year plan with the financing plan shown in Table 2-4-20 in 1987/88 fiscal year as a part of long term plan for the development of broadcasting service in a general 5-year plan (1988/89~1992/93 fiscal years) for the development of national mass media services.

Table 2-4-20 5-year Plan (1988/89~1992/93) for Broadcasting Service Development

Unit: 100 million TShs (70 TShs=1 \$ in 1987/88)

	1988/89	1989/90	1990/91	1991/92	1992/93
Medium-Wave Transmitting Station (Local Fund) (Foreign Fund)	Nachingwea ( 40) ( 400)	Songea ( 40) ( 400)	Morogoro ( 40) ( 400)	Johnse Corner ( 40) ( 400)	Tabora ( 40) ( 400)
Program Production Center (Local Fund) (Foreign Fund)	Lindi ( 50) ( 50)	Songea ( 60) ( 50)	Mbeya ( 70) ( 50)	Arusha ( 40) ( 50)	Mwanza ( 40) ( 50)
Dodoma Short Wave Transmitters (100kW×4)(Local Fund) (Foreign Fund)		Preparation ( 24)	Purchase of Equipment ( 30) ( 300)	Installation of Equipment ( 70) ( 450)	
Increasing Office Block in Dodoma Studio (Local Fund)	Preparation ( 2)	Construction ( 50)	Construction ( 50)		
Construction of Staff Houses (Local Fund)	Dodoma Kigoma Nachingwea Lindi ( 72)	Dodoma Kigoma Nachingwea Lindi ( 72)	Songea Mbeya ( 42)	Mabibo ( 42)	Arusha Pugu Road ( 42)
Maintenance of Buildings (Local Fund)	Mabibo TX Station ( 15)	Kunduchi TX Station ( 15)	Dar es Salaam HQ. ( 15)	Dar es Salaam HQ. ( 15)	Dodoma Station' ( 15)
Adjustment of Antenna (Local Fund)	Mabibo ( 3)	Mbeya ( 4)	Kunduchi/ Arusha ( 5)	Mwanza ( 6)	
Purchase of O/B Vans (Foreign Fund)		one ( 5)	one ( 5)		
Purchase of Cars (Local Fund)	10 Land-Rovers 1 truck 3 MiniBuses ( 25)	10 Land-Rovers 3 Mini Buses ( 25)	5 Land-Rovers 1 Mini Buses ( 10)	5 Land-Rovers 1 Mini Buses ( 10)	5 Land-Rovers 1 Mini Buses ( 10)

(1) Long-Term plan for developing the Medium-Wave Broadcasting Network

As a long term plan for developing the medium-wave broadcasting network, RTD presented the installation plan for medium-wave radio stations at the Regional Administrative LF/MF Broadcasting Conference (2nd session) held in Geneva in October, 1975. There, an agreement regarding this plan was concluded. As the result, in the same year the frequency allocation plan was also registered with the International Frequency Registration Board (IFRB).

Under the agreement, a total of 43 stations including eleven 100kW stations in eight regions, seven 50kW stations in five regions, eleven 20kW stations in eleven regions, and one 10kW station in one region were allocated to Tanzania to realize an entire medium wave radio broadcasting network (Refer to Table 2-4-21).

After the 100kW stations were constructed by Japan's Grant Aid at two areas of both Dodoma and Kigoma in 1988, the Government of Tanzania applied to the Japanese government for Grant Aid to realize the installation of two 100kW stations in Nachingwea and Songea cities in the first two years of the 5-year plan.

In the latter three years, RTD would like to install one 100-kW station in Morogoro city (1991/92) and two 50kW stations in Johnsconer (1991/92) and Tabora cities (1992/93) in order to service remaining regions where the condition of reception is not good or where medium-wave radio broadcasting is not available (Refer to Fig. 2-4-10).

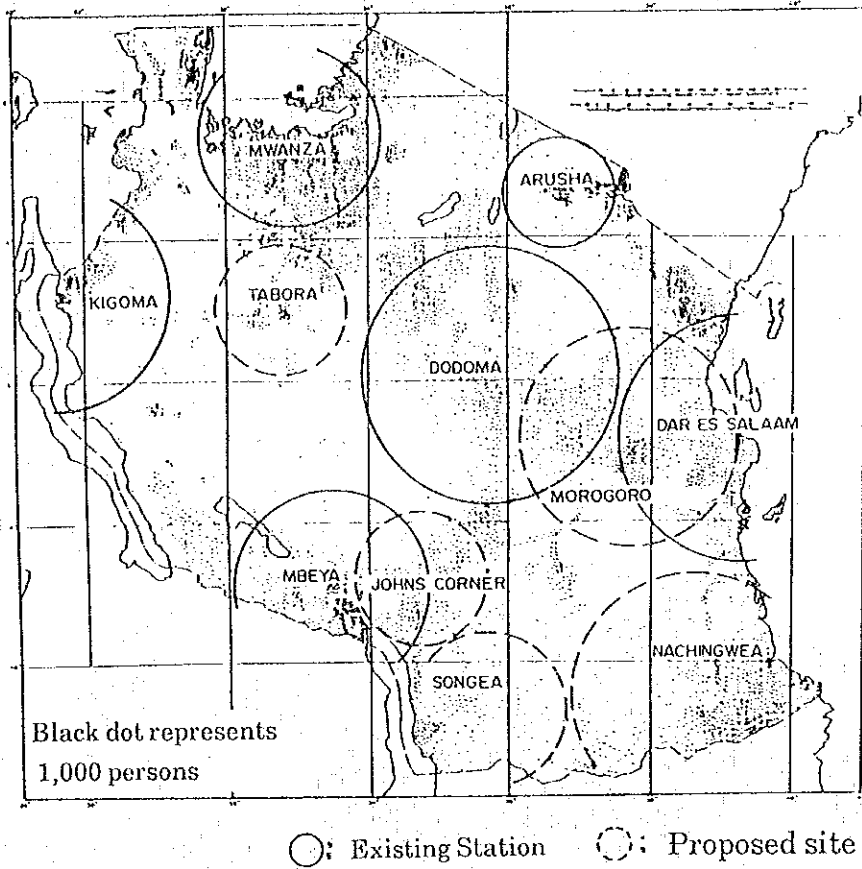


Fig. 2-4-10 Proposed Station Sites

Table 2-4-21 Installation Plan for Medium-Wave Radio Stations

Output power Station	Registered Frequency (kHz)				
	100kW	50kW	20kW	10kW	(5kW)/1kW
1) North-East Zone Aryusha Same Tanga Dar es Salaam Kibaha Morogoro Mafia	<u>531</u> , <u>657</u> 1035 <u>693</u>	<u>1215</u> 1413	1323 1359		1485 1602
2) South-East Zone Ifakara Mahenge Songea Tunduru Lwale Nachingwea Mtwara	990      <u>648</u>		1476     1188		1602  1485 1584
3) Central Zone Shingida Babati Kondoa Itigi Dodoma Iringa	<u>603</u> , 891		1089   1395		1485 1584 1602 1584
4) South-West Zone Sumbawanga Mieya Njombe Johns Corner	1467	<u>621</u>  945	972		(1170)
5) North-West Zone Musoma Maswa Shinyanga Mwanza Bucoba Biharamulo		<u>720</u> , 1337	1260  1341  837 1476		1584
6) West Zone Kibondo Tabora Kigoma Mpanda Karema	<u>711</u> , 1440	<u>1008</u>		1251	1485  1584
Total 43 stations	11 stations	7 stations	11 stations	1 stations	(1)/12 stations

Note: 1111 : Existing Stations      1111 : Stations in 5 years plan  
( ) : 5kW TX Station

(2) 5-year Plan for Installing Zonal Program Production Centers

During the 5-year plan, RTD would like to complete the installation of zonal program production centers in the 7 zones shown in Fig 2-4-11. Here, the production/recording of programs, such as interviews and event programs, will be carried out.

In three of the seven zones, three broadcasting stations (Dar es Salaam, Dodoma and Kigoma) have already been provided with studio-complex for program production and these studios are already being used. At the moment, however, the offices for the program gathering bases are in Arusha, Mwanza, Mbeya, and Songea cities in the remaining four zones. One staff member from each of the news, program production, and engineering departments is dispatched for program gathering activities.

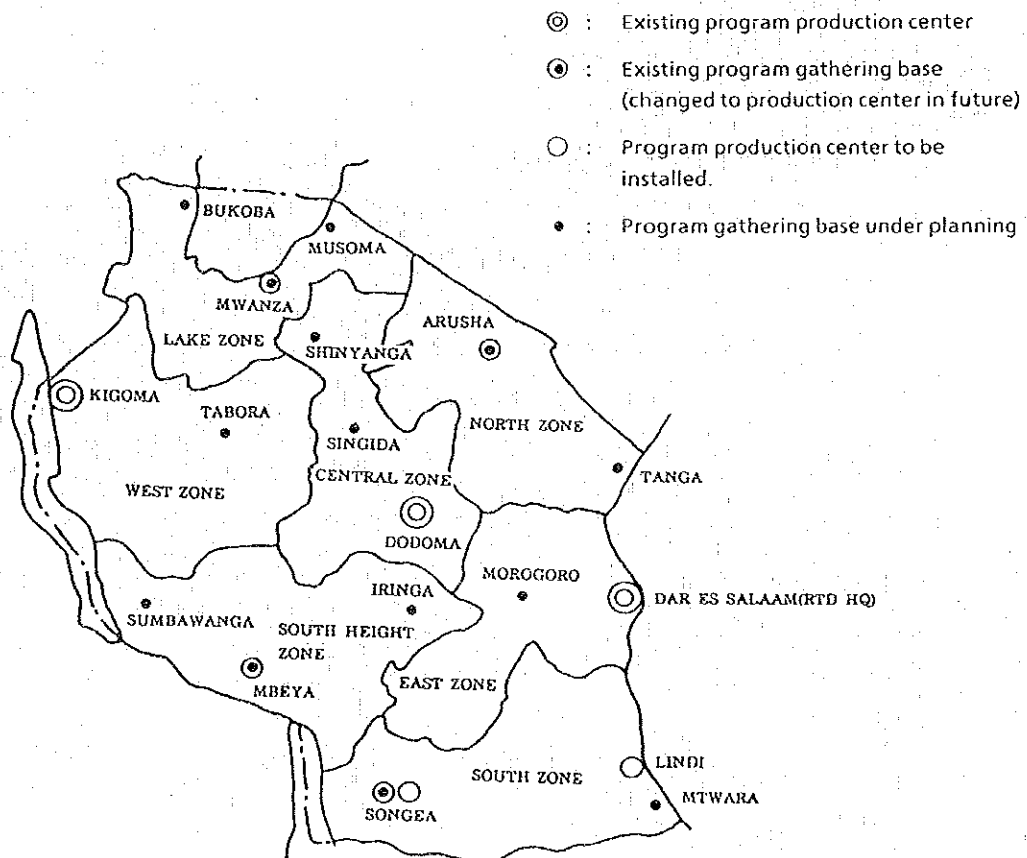


Fig. 2-4-11 RTD Zonal Program Gathering Network

Accordingly, RTD would like to install five program production centers, which will be the same scale as the Kigoma program production center, in these four zones during the 5-year Plan. These will be in the two cities of Lindi and Songea, planned sites of the Nachingwea and Songea Projects, and in the three cities of Arusha, Mwanza, and Mbeya near the existing transmitting stations.

The purpose of these zonal program production centers are to grasp regional needs, interests, and problems by having close contact with the local population. They provide correct news and give people and leaders a chance to participate in planning and production of programs concerning the socio-economic development programs in their zones.

Furthermore, when the centres have been completed, RTD intends to execute nationwide broadcasting by effectively using the micro-program transmission lines of TPTC and local broadcasting for people in each zone. At present, all programs and program material are sent to Dar es Salaam HQ first, and then they are sent to each station after compilation and examination.

(3) Plan for the Installation of Short-Wave Transmitters (100kW × 4)

RTD plans to install four 100kW short wave transmitters in the grounds of the Dodoma transmitting station during the 1989/90 ~ 1991/92 fiscal years. The reason is that short-wave transmitters deteriorate with long usage. Besides small power capacities, reception conditions are bad because of geographical conditions and interference from many radio stations in other countries.

(4) Plan to Increase the Office Block in the Dodoma Program Production Center and Construction Plan for Staff Houses

Following the movement of the Party and Government headquarters to Dodoma along with the transfer of the capital, it is important for RTD to have a permanent office to deal with increases in program resources in light of their future plans to move their headquarters so that all broadcasting activities can be conducted in the Dodoma

Program Production Center. This plan will be executed during the 1988/89 ~ 1990/91 fiscal years.

At the same time, RTD plans to construct staff houses inside each of the transmitting stations and program production centers. Those in Dodoma and Kigoma are under construction, and the budget for the construction of those in Nachingwea and Lindi has already been allocated. This construction of staff houses is important: welfare facilities for staffers will make them, especially the engineers, motivated to work permanently for RTD and reduce transportation costs.

(5) Maintenance Plan for Existing Buildings and Adjustment Plan for Transmitting Antennas

RTD had made a continuous budget appropriation for 5 years for maintenance of the buildings at the two existing transmitting stations and headquarters in Dar es Salaam, and for adjusting the transmitting antennas of five existing transmitting stations, including the regional transmitting stations.

(6) Purchase Plan for Outside Broadcasting (O/B) Vans and Vehicles for Broadcasting Activities

During next 5 years RTD plans to buy two O/B vans to make outside broadcasts more substantial, and a total of forty-three vehicles for broadcasting activities, because existing ones have become decrepit and they are few.

## 2-5 Background of the Request and Contents

The requirement this time is equivalent to the third stage plan. This is a long-term plan for expanding medium-wave radio broadcasting networks, established by RTD. It is to install 100kW transmitting stations both in Nachingwea City located in a granary region along the southeastern border, and in the suburbs of Songea City. In the Nachingwea project the studios will be constructed in Lindi, the capital city of Lindi region and a commercial city; in the Songea project the studio will be constructed in Songea city.

The Government of Tanzania has strongly requested the government of Japan to help with this 3rd stage project using Japan's Grant Aid to promote regional socio-economic development in these regions while the 3rd stage program is being executed. If this project is realized, the Government of Tanzania expects the following effects:

- \* Peasants in these regions will be able to get more information on modern farming techniques.
- \* Dissemination of farming information, guidance on farming techniques, and strengthening of education, will further increase agricultural production in these regions.
- \* Moreover, this program will be of great help in the country's drive towards health education and better hygiene in these regions.
- \* Facilitation of manpower development by improving the quality of school education and teacher training education.
- \* Wider adult education including women's education and living improvement.
- \* Expansion of zonal program gathering networks and people's positive participation in various kinds of zonal development programs.



\* Presentation of healthy entertainment programs, for which in these regions, radio is the only source.

And at this time the Government of Tanzania has requested Grant Aid from Japan for the purposes of offering new services to about 2.31 million people in this zone by installing two broadcasting stations, one of these is a transmitting station having an output of 100kW and a frequency of 648kHz in Nachingwea with the studio in Lindi city (about 150km from Nachingwea). The other is a transmitting station having an output of 100kW and a frequency of 990kHz in the suburbs of Songea city, with the studio also to be constructed in Songea.

An outline of the equipment at these two broadcasting stations is in Table 2-4-22.

Table 2-4-22 Outline of plan for requested Broadcasting Facilities

Items	Nachingwea Station	Songea Station	Remarks
Transmitting Station Building	1	1	
Transmitting Facilities	1 set	1 set	
Antenna Facilities	1 set	1 set	
Program Transmission Line between Transmitter and Studio Site*	1 set	1 set	*Note: A Repeater Station will be installed between Masasi and Nachingwea
Receiving Facilities of Program Transmission for an Emergency Set	1 set	1 set	
Studio Facilities	1 set	1 set	
Power Supply Facilities for Studio Site	1 set	1 set	
Maintenance Tools	1 set	1 set	
Spare Parts	1 set	1 set	
Installation Material	1 lot	1 lot	

