PN-ABM-946

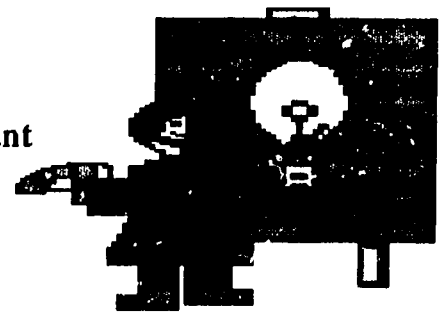
80107

SANRU: Lessons Learned (1981-1991)

SANRU / USA
Santé Rurale au Zaire

FRANKLIN C. BAER
MHS-TM, DrPH
Primary Health Care
& Management Consultant

326 Seventh Street
Harrisonburg, VA 22801
Tel/Fax: (703) 433-8652



BAERTRACKS
Creative Management Concepts

PREFACE

The SANRU Basic Rural Health project is an excellent example of cooperation between two governments (USA and Zaire) with a Non-Governmental Organization (the Protestant Church of Zaire) to mobilize resources for primary health care. In response to multiple "small" requests from church hospitals in Zaire for USAID assistance, SANRU (Basic Rural Health Project 660-086) was created in 1981 as a "project of projects" to assist 50 rural hospitals in establishing sustainable primary health care services. The Protestant Church of Zaire (ECZ) was chosen as the implementing agency on behalf of the Government of Zaire because of their pioneer primary health care efforts and their medical infrastructure existing throughout rural Zaire.

The successful SANRU I project (1981-1986) was expanded as SANRU II (660-107) into a $60,000,000 effort carrying through 1992. Since 1986 SANRU has assisted the development of 100 health zones throughout Zaire, half of which are managed in collaboration with NGOs.

An evaluation of SANRU completed in September 1991 concluded that:

> SANRU's raison d'etre is the initiation and strengthening of the health zones' ability to render primary health care to rural populations.
>
> SANRU has been dramatically successful in initiating or extending primary health care activities..."
>
> SANRU II's final year of activities will be significantly influenced by the current economic and political crisis in Zaire... In light of current and projected shortfalls in financial assistance, including the GOZ, SANRU should immediately develop a "survival" strategy that continues assistance to the current health zones at levels sufficient to maintain operations as long as possible".

The need for a "survival" strategy for SANRU took a new twist after the September riots and mass evacuation of nearly all USAID funded project personnel. Despite efforts by USAID to keep the SANRU project open, all USAID funded projects must be closed. SANRU, however, is still functioning and seeking new funding sources.

This report was requested by USAID to document the lessons learned from the SANRU project. Since I left Zaire rather hastily in September 1991, I was not able to bring many project documents along with me, except what I happened to have on diskette. The SANRU personnel and USAID have made an effort to send documents, but there will unfortunately always remain certain gaps in the story where a key document or date or list could not be located.

On the other hand, there is an over-abundance of some documents and information which have been generated by the SANRU project over the past ten years. Rather than dump documents into an "unreadable" annex I have chosen to summarize multi-page "annex documents" and into one page "Boxes". The 31 boxes of this report include information which is of a detailed technical, historical or anecdotal nature which the general reader may skip entirely, but which others may find to contain the real "meat" of the SANRU story.

TABLE OF CONTENTS

LISTING OF TABLES, FIGURES AND BOXES

Chapter I. THE MAJOR THEMES OF SANRU

In the 1970's we wondered, "Is primary health care technically feasible? And can we develop technology appropriate to basic health care in the rural third world?" The answer has been a resounding "YES". The development of a more stable measles vaccine, a low cost treatment for leprosy, oral rehydration therapy and the VIP (Ventilated Improved Pit) latrine are just a few examples of the appropriate technology that has been encouraged by primary health care.

During the 1980's we asked, "Is it possible to create health systems that can make essential health care available, accessible, acceptable and affordable to people where they live and work?" SANRU has clearly demonstrated that the answer is "YES", if we are willing to develop programs with the population rather than for them. Village development committees, village health workers, traditional birth attendants and community based health centers are all key elements of workable systems.

The question for the 1990s is, "Is it possible to sustain these health systems and their appropriate technology?" What will happen after donors terminate their assistance? What "lessons learned" might apply across countries? While Zaire would appear to be one of the last places in the world to test the question of sustainability, this section summarizes the five major themes from the SANRU experience which have contributed to establishing functional and sustainable primary health care systems in Zaire.

PRIMARY HEALTH CARE in Zaire has been well-defined and popularized within the conceptual framework of Alma-Ata.

DECENTRALIZED HEALTH ZONES become the key operational unit for primary health care development.

COMMUNITY PARTICIPATION AND FINANCING of primary health care is essential to program sustainability which should be encouraged but not exploited.

NON-GOVERNMENTAL ORGANIZATIONS (NGOs) provide efficient management and important contributions to health zones and primary health care.

THE PHC ASSISTANCE PACKAGE needs to include a broad yet prioritized balance of assistance to support the "horizontal" components of PHC development.

1.1 PRIMARY HEALTH CARE IN ZAIRE

The concept of primary health care in Zaire predates the Alma Ata conference and definitions of 1978 (See Box 1.1). It was then known as community medicine or integrated medicine, but already included the essential aspects and components as were later defined at Alma-Ata. During the period 1970-1980 a handful of programs like KISANTU, KASONGO, BWAMANDA, KATANA AND VANGA made special efforts to decentralize from the hospital to community based health work through health centers and village health workers. Each project developed a particular approach to community development of primary health care that firmly established a conceptual framework for comprehensive rather than selective primary health care.

Box 1.1

A SUMMARY OF THE TEN DECLARATIONS OF ALMA-ATA

1) Health, which is a state of physical, mental and social wellbeing, is a fundamental human right.

2) The existing inequality of health status is politically, socially and economically unacceptable and is, therefore, of common concern to all countries.

3) The promotion of health is essential to sustained economic and social development and contributes to better quality of life and to world peace.

4) People have the right and duty to participate in the planning and implementation of their health care.

5) Governments are responsible for the health of their people and should aim for acceptable levels of health by the year 2000.

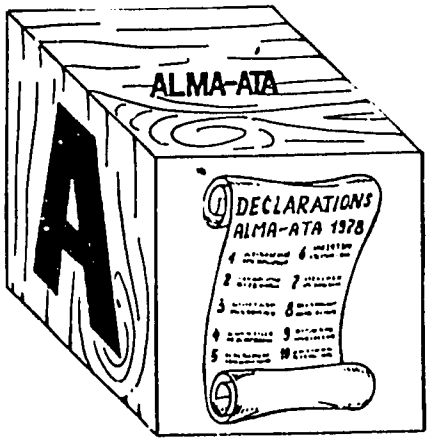
6) Primary health care is essential health care made available, accessible, acceptable and affordable to people where they live and work.

7) Primary health care (PHC) should address the main health problems while promoting maximum community involvement. PHC includes maternal child health, immunizations, nutrition, local endemic disease control, water and sanitation, health education, essential medicines and basic curative care.

8) All governments should formulate national PHC policies to mobilize internal and external resources rationally.

9) All countries should cooperate to promote PHC since the health in one country concerns and benefits every other country.

10) Health for all by the year 2000 can be attained by better use of the world's resources, a considerable part of which is now spent on armaments and military conflicts.



It's important to note that the Basic Rural Health I project was initially conceived by USAID as a project to promote primarily family planning. However, a survey of rural hospitals throughout Zaire during the project design phase conducted by Richard Thornton actually asked Zairians to determine the kind of assistance which the project should provide. USAID is to be commended on asking these questions **and** in using the results to define the mandate of the Basic Rural Health project to include comprehensive rural health programs and health zones.

During the first year of SANRU, a great deal of effort was devoted to defining primary health care in the context of Zaire and disseminating this information throughout the country. For instance, while the Ministry of Health (MOH) had defined the components of a health zone in a small annex to a much larger 1982-1986 health plan, this document was virtually unknown outside of Kinshasa. It was through the SANRU project that this annex was reprinted, illustrated and distributed throughout Zaire and became an important instrument in popularizing the concept of health zone. The fact that rural programs responded by insisting that the term "health post" used by the MOH be replaced by "health center" was a another victory for bottom-up development of national health policy.

SANRU also helped to define the integrated nature of curative, preventive and promotive health care (see Box 1.2). and to promote a better understanding of primary health care.

SANRU's efforts to define and popularize the concept of primary health care and health zones throughout Zaire was probable the least expensive and most effective activity of SANRU I. It firmly established SANRU's reputation in the area of PHC documentation and helped convinced many rural hospitals managed by NGOs to become involved in the national PHC strategy. Even the most isolated rural program learned that they were not working in isolation, but were an important geographical component of a much larger effort.

1.2 THE EVOLUTION OF HEALTH ZONES

The health zone is the district level decentralized structure for primary health care in Zaire. A health zone is a defined geographical area comprising a referral hospital, satellite health centers and community action groups (see Figure 1.1). Health zones are defined with respect to ethnic population, existing medical infrastructure and terrain. A typical health zone comprises 100,000 people, 20 health centers and 200 villages.

The health zone decentralizes the planning and management of primary health care to the local level where the involvement of community action groups and health centers are the building blocks for curative, preventive and promotive care. Decentralized health zones hold the key to translating primary health care theory into the practical and manageable implementation of accessible and affordable primary health care programs. The concept of health zones can best be understood by looking at its evolution during the past several decades.

1.2.1 BELGIAN COLONIAL ERA AND INDEPENDENCE

The medical infrastructure constructed during the era of the Belgian Congo was impressive. During the post-World War II period major investments (largely resulting from profits made from the sale of copper during the war) were made in the construction of over one hundred state hospitals and several thousand dispensaries. These combined with the already existing catholic and protestant network provided Zaire with one of the best medical infrastructures in Africa. This system was,

Box 1.2
THE THREE PILLARS OF PRIMARY HEALTH CARE

According to Alma-Ata and "The Story of the Village and the Lions" primary health care should include curative, preventive and promotive services.

Curative care can be simply defined as the treatment of persons after they become sick.

Preventive care is the treatment of persons before they become sick and strives to prevent the entrance of disease causing pathogens or to neutralize pathogens as soon as they enter the body. Vaccinations, drug prophylaxis, and water purification are good examples of preventive techniques which directly protect individuals or families against disease. Preventive interventions do not, however, usually eliminate pathogens from the environment.

Promotive care, on the other hand, is the effort to change environmental conditions and health habits so that the transmission of a pathogen is no longer possible. Health education and community-wide actions to improve sanitation and to control disease carrying vectors are concepts basic to promotive care.

Despite the logic of preventive and promotive care, allocation of resources has usually favored curative care. Understanding why promotive and preventive efforts traditionally take a back seat to curative care is a first step to developing a balanced primary health care program. The table below summarizes how curative, preventive and promotive activities compare with respect to several health service variables.

Table 1.1
THE PROS AND CONS OF PRIMARY HEALTH CARE

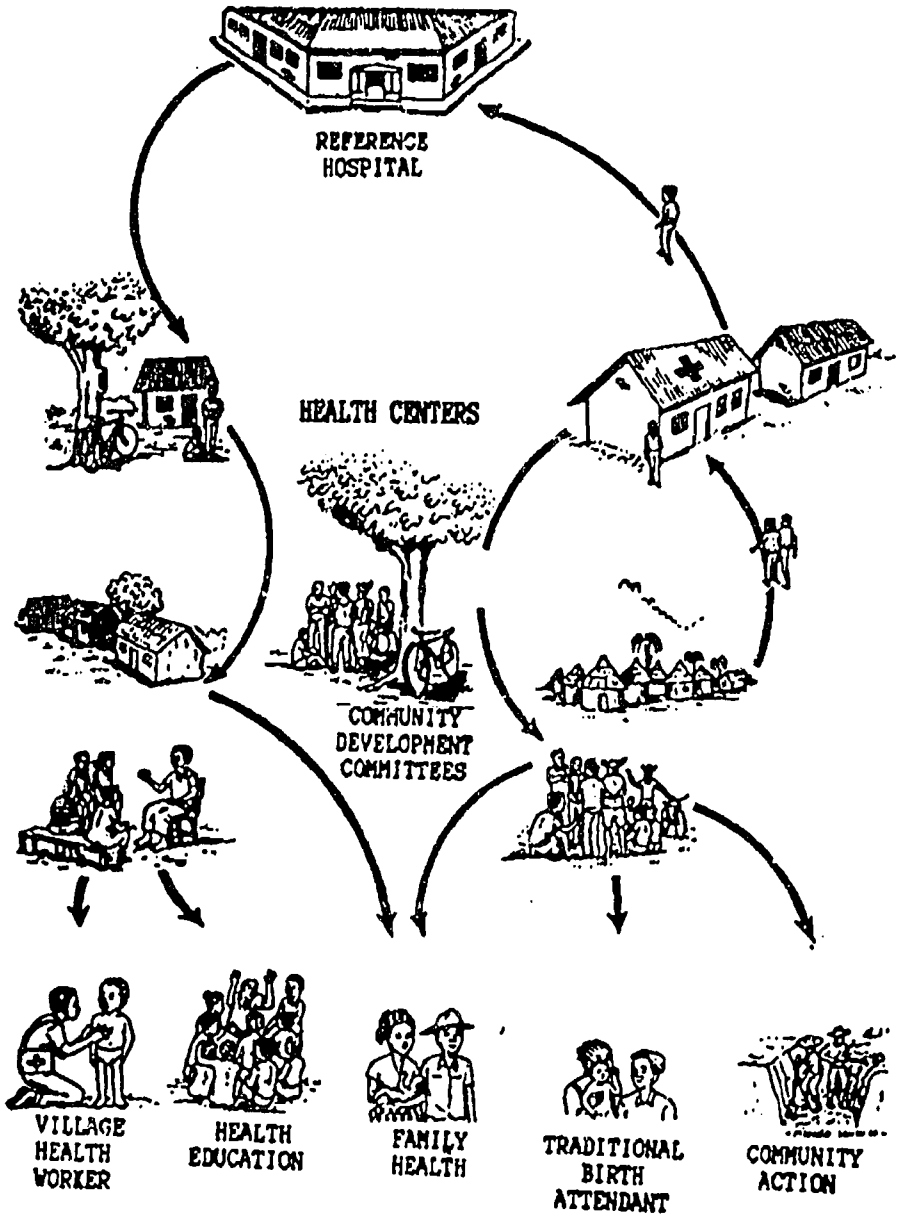
Degree to which each activity...	Curative	Preventive	Promotive
responds to felt needs	+++	++	+
creates willingness to pay	+++	++	+
results in high program visibility	+++	++	+
requires community involvement	+	++	+++
requires community based activities	+	++	+++
contributes to disease eradication	+	++	+++

Curative care possesses nearly all the advantages. Curative work responds to the urgent felt need of people to "treat the wounded" and is able to generate a ready willingness to pay for services. Curative care does not require a high degree of community involvement nor is it dependent on time consuming community based activities. Yet hospital based curative care also results in highly visible programs attractive to political and financial support.

Promotive and preventive care must work much harder to create and respond to felt needs and to generate a responsibility within the community to get organized and involved in village based activities. Even so the results are usually low visibility community programs.

Curative care is able to exist as a stand alone program, but its contribution to disease eradication is limited. While preventive and promotive care are more effective in producing long-term community health improvement, they do not "stand alone" very well. An integration of these three interventions to form "integrated medicine" or primary health care services to allocate money, time, materials and personnel rationally is the most effective weapon that we have to fight "lions" and promote good health. This is the basis on which integrated medicine began in Zaire before the Alma-Ata declarations about primary health care.

Figure 1.1
COMPONENTS OF A RURAL HEALTH ZONE IN ZAIRE



however, heavily centralized, dependent on expatriate doctors, curatively oriented (except for a few vertical programs) and with little coordination between state and NGO centers.

This system deteriorated rapidly after 1960 due to civil war and the lack of trained administrators. The result was a hodgepodge of services known locally as "debrouillez vous" (make do with whatever you can). Of the 400 hospitals which existed in 1960 few remained fully functional. Responsibility for rural health fell increasingly to mission hospitals who were setting up their own dispensaries. This resulted by 1970 in a motley of services. Within a given geographical area one might find state, catholic, protestant and private dispensaries each with an independent administration, supply line, financial control and statistical reporting system.

1.2.2 PILOT HEALTH ZONES

Since 1975 efforts have been made to reorganize the medical work in Zaire to standardize administration and to bring services in line with the concept of primary health care. During the period 1970-1980 a handful of programs like KISANTU, VANGA, KASONGO, BWAMANDA and KATANA made special efforts to decentralize from the hospital to community based health work through health centers and village health workers. While each project had its own particular approach the process of decentralization which ultimately resulted in the establishment of the health zone generally followed the following phases:

1. Hospital/dispensary based curative care
2. Hospital based selected preventive activities
3. Mobile teams from hospital to villages
4. Conversion of dispensaries into health centers
5. Informal collaboration between GOZ and NGO health centers
6. Definition of health zone and health center action areas

The health zone approach gained momentum during the late 1970's as projects like Kisantu were begun with funding provided by the Belgians and the MOH. Initiatives at Kasongo by the Antwerp Institute of Tropical Medicine, and at Bwamanda by CDI (Integrated Development Center) were other well funded efforts to develop health zones. OXFAM expanded its efforts by providing primary health care training for nurses at selected hospitals such as Vanga. The Vanga health zone became the second pilot health zone recognized by the MOH (see Box 1.3). USAID funded the PSSP (Projet des Soins de Sante Primaires) through the MOH with a pilot health zone at Kongolo, Shaba.

1.2.3 THE 1982-1986 FIVE YEAR HEALTH PLAN

In the early 1980's a combination of efforts really lit the fire under the health zone burner.

-The Kongolo project established the precedent of financial autonomy for GOZ hospitals to keep their receipts rather than turning them over the public treasury.

-PEV established an excellent training program in 1981 for medical directors of health zone which established the framework for the geographical definition of health zones.

-The MOH developed a detailed five year health plan (1982-1986) which called for the creation of 300 health zones and provided an early description of the parameters of a health zone.

Box 1.3

THE PILOT HEALTH ZONE OF VANGA

At Vanga (Bandundu region), hospital and dispensary based curative care had been active since the 1920's in collaboration with the American Baptists Foreign Missionary Society. It was in the late 1960's with the arrival of Dr. Daniel Fountain that a more active promotion of preventive activities at the hospital began.

In collaboration with OXFAM, who was the early pioneer partner agency for primary health care in Zaire, Vanga established in the early 1970s four mobile teams with pick-up trucks to visit 200 villages per month for under-fives clinics, and community sanitation work. This work included the promotion of community development committees, the training of village health workers and the concept of a "clean village" program combined with mass treatment for intestinal worms once the village met certain standards.

It was eventually concluded that the mobile team approach was too costly and consumed too much manpower and energy to be sustained as a long term effort. Vanga opted for the decentralization of the "integrated medical" work by converting and/or building 12 health centers. Each health center team of 2-3 people was provided bicycles to continue the village based promotion of PHC by monthly visits from the health center. By 1974 this decentralization from mobile teams to health centers was taking place.

In 1975, Dr. Fountain was invited by the Minister of Health to explain the Vanga community health program at a meeting of the Regional Medical Inspectors. The concept of collaboration rather than competition between government and private health services was discussed. A planning session that same year convened by the MOH established the framework for the CEBEC (Centre de Bien-Etre Communautaire) and rural health zone. Following this workshop Vanga was given the responsibilities for the technical organization and supervision of all government and church-related dispensaries and health centers in its zone of action. The Vanga Rural Health Zone became the second such zone in Zaire (Kisantu was first).

It required almost ten years, however, for the VANGA Rural Health Zone to be officially adopted, in part through the efforts of the MOH, PEV and SANRU to promote the concept of geographically defined health zones.

Health For All Through Community Involvement

-USAID completed the design and signed in 1981 the Basic Rural Health Project working through the ECZ network but expanded to include all primary health care efforts and the health zone concept.

The combination of a MOH national strategy with PEV training of health zone medical directors and SANRU resources provided directly to health zones encouraged a middle-out development of health zones that by 1984 resulted in 85 functional health zones (see Figure 1.2).

While the principle of geographical definition of health zone was firmly implanted by 1983, the definition of the boundaries of a health zone was accomplished by the hospital representatives. In 1983 the region of Kasai Oriental in collaboration with OXFAM held the first regional conference for delimitation of health zones.

In 1984 SANRU co-sponsored with OXFAM regional conferences for BANDUNDU and BAS ZAIRE and in 1985 a regional conference for KASAI OCCIDENTAL. These conferences included all hospitals of the region and were extremely successful in finishing the delimitation of health zones. During 1985 SANRU spearheaded (and co-financed with OXFAM and UNICEF) conferences for Kasai Occidental, Equateur, Shaba, Haut Zaire and Kivu. Dr Kalambay and Dr. Kahozi were the principle facilitators for delimitation conferences which quickly followed in all the regions, such that by the end of 1985 the whole country was delimitated into 306 health zones (see Figure 1.3).

1.2.4 THE 1984 ROUND TABLE FORUM

In December 1984, the Ministry of Plan organized a forum of health experts to respond in conjunction with the development of the five year health plan 1986-1990 and the President's seven year "septennat social" 1985-1991. It was one of the most successful planning exercises that ever took place in Zaire for within the pace of several days a consensus was achieved on:

-the manpower needs of a typical health zone
-the investment and recurrent costs
-identification of functional health zones (85 in 1984)
-the pace for development at which health zones and health centers

The manpower needs for a typical health zone were approximately 170 full-time paid employees and some 1500 community based health volunteer.

The investment costs for setting up a health zone were estimated at $470,000. This includes $10,000 for each of twenty health centers as well as some funds for limited rehabilitation costs of the reference hospital and central office of the health zone.

The functioning costs of the health zone were estimated at $185,000. This consists primarily of salary costs, medicines, supplies, and supervision.

The forum also proposed how quickly resources could be mobilized for Zaire. Thanks to the advent of the micro-computer (an Apple //c) and a simple spreadsheet program it was possible to present several scenarios from which one was chosen as the best fit for health zone development in Zaire. Scenario 30:3 (see Table 1.1) proposed 30 newly functional health zones per year and 3 health centers begun each year in each health zone. The scenario assumed that a health zone should complete its coverage in approximately seven to ten years (see Box 1.4) and that 100% PHC coverage could theoretically be attained by 1997.

Figure 1.2
85 FUNCTIONAL HEALTH ZONES OF 1984

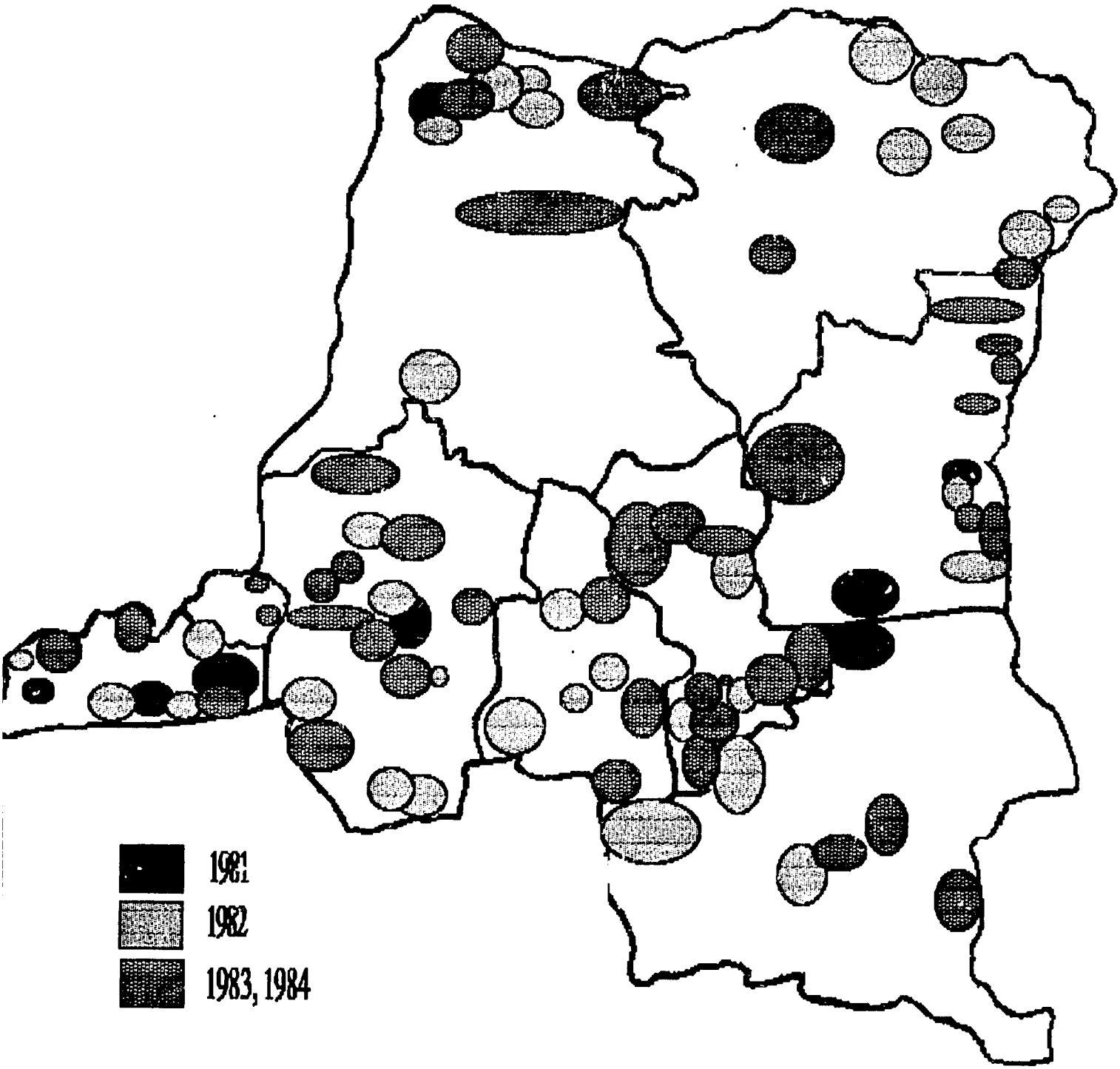
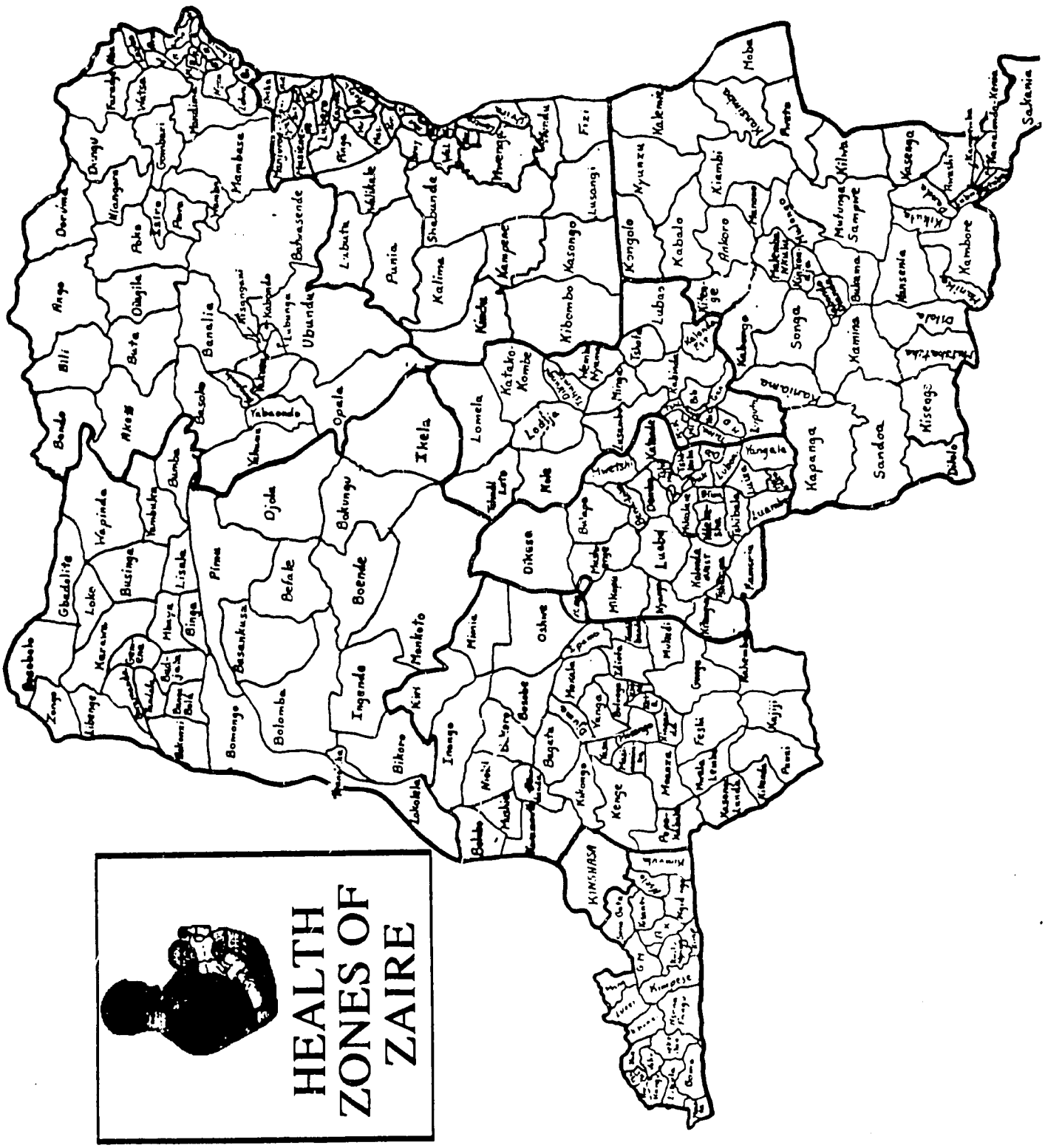


Figure i.3
DELIMITATION OF 306 HEALTH ZONES OF ZAÏRE



Box 1.4

IMPLEMENTATION PLAN FOR A MODEL RURAL HEALTH ZONE
(source: Activity Report SANRU-86, April 1984)

Year One:

- Reference hospital directors decide to develop RHZ.
- Initial contact at national level to obtain info on PHC, health zones and steps necessary in start-up of a RHZ.
- Meetings with other hospitals of the sub-region and med. director of the sub-region to tentatively define boundaries of the RHZs.
- Meetings with representatives of all existing dispensaries within the limits of the RHZ.
- Inventory assessment of existing and required ressources for development of the RHZ (personnel, equipment, training, PHC activities).
- Establish central office of the RHZ to coordinate PHC training and supervision.
- Establish PHC activities around the reference hospital as prototype for future activities of health zones.
- Village Development Committee organization and "concientisation".
- Establish map of RHZ with respective health circles (aires de santé) and identification of dispensaries scheduled for transformation into health centers.
- Training of initial group of nurses to head up health centers and work in central office administration.
- Identification of donor agencies to assist in RHZ development and of types of assistance to be provided.
- Opening of at least one health center.

Year Two:

- Refinement of implementation plan, RHZ map and health secteur planning.
- Limits of RHZ submited to regional medical inspector and the national direction of PHC.
- Training of group of nurses to open 2-3 health centers per year.
- Integration of some PHC activities into existing health centers usually beginning with health and nutrition education, vaccinations, under-fives clinics, prenatal clinics, sanitation programs and basic curative medicines.
- Organization of village development committees in villages attached to each health center.
- Pilot training of VHWs and/or TBAs as prototypes for future community based activities.
- Census of villages attached to each health center to identify population denominators.
- Specialized training for supervisory staff of the RHZ in management of PHC programs.
- Completion of an annual report of the RHZ providing statistical info on existing accessibility and coverage of PHC activities throughout the RHZ.

Year Three (and successive years):

- Integration of additional PHC activities into the health center such as family planning, tuberculosis control, maternity services and training activities.
- Transformation of 2-3 dispensaries into health centers per year.
- Active and ongoing training of village based health workers.
- Upgrading of select health centers to status of a reference health center to permit decentralization of supervision activities.
- Systematic centralization of health center reports providing accurate data on accessibility, coverage and impact of PHC services.
- Operational research activities to document select PHC approaches of the health zone.
- Assume auto-financing capability at the health center level.
- Continuing education of RHZ personnel

Table 1.1.
SCENARIO 30:3

YEAR	TOTAL POP. IN MILLIONS	NEW HEALTH ZONES	CUMUL PROJECTED HEALTH ZONES	CUMUL ACTUAL HEALTH ZONES	NEW HEALTH CENTERS PER YEAR	CUMUL TOTAL HEALTH CENTERS	PERCENT ACCESS TO PHC
	1.03	30/YR			3/YR/HZ	6300 HC	
1980	27	0					
1981	27	10	10	8	30	30	0%
1982	28	20	30	41	90	120	2%
1983	29	25	55	64	165	285	5%
1984	30	30	85	87	255	540	9%
1985	31	30	115	112	345	885	14%
1986	32	30	145	129	435	1320	21%
1987	33	30	175	145	525	1845	29%
1988	34	30	205	160	585	2430	39%
1989	35	30	235	175	615	3045	48%
1990	36	30	265	175	630	3675	58%
1991	37	30	295	175	630	4305	68%
1992	38	5	300	????	555	4860	77%
1993	39				465	5325	85%
1994	40				375	5700	90%
1995	41				285	5985	95%
1996	43				195	6180	98%
1997	44				105	6285	100%

1.2.5 THE RAPID INCREASE OF HEALTH ZONES

The 1984 Round Table also permitted the first assessment and agreement as to the number of functional health zones. This was done simply and effectively by considering region by region and asking the participants to propose which health zones should be considered functional based on the criteria of having a functional hospital, a health zone plan, and at least two functional health centers. Given the expertise that was present at that meeting this type of Delphi assessment was considered quite accurate.

The 1984 Round Table firmly established the health zone as the unit for development of primary health care and coordination of partner agency assistance. In 1985 the design of the SANRU II project was budgeted using the figures taken directly from the Round Table. This was a tremendous boost to the MOH to be able to say that USAID was developing projects based on in-country developed strategies.

This also led to a coordination of assistance in primary health care by health zone. The data base of 306 health zones along with the concept of principle (primary) and complimentary (secondary) partners established the framework for a coordination that provided, at least on paper, assistance to 280 (92%) of the health zones.

As a result of improved partner coordination, a clear definition of health zone boundaries, decentralized financial and management autonomy supported by a quasi-legal status of health zones, the number of functional health zones increased rapidly until there were about 175 functional health zones (see Figure 1.4).

Figure 1.4

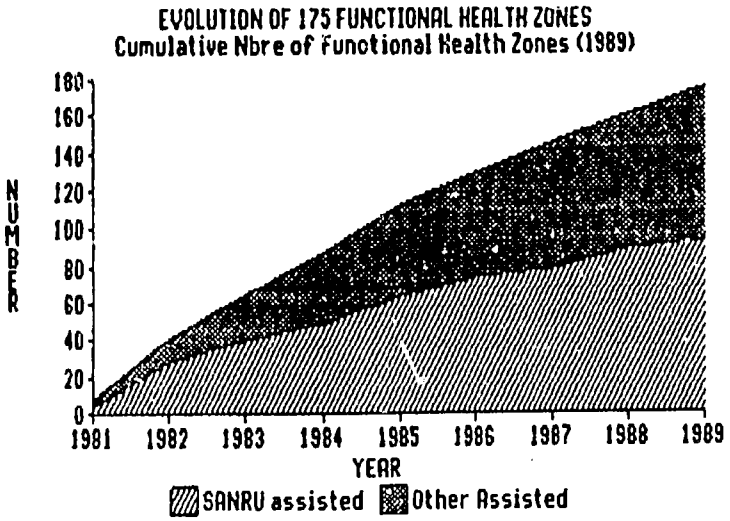
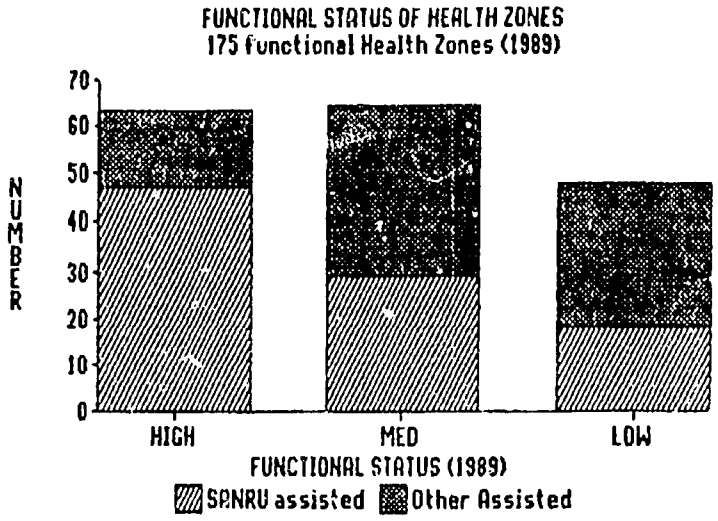


Figure 1.5



This period also corresponded to the start-up of the SANRU II activities which was assisting most (54%) of the functional health zones. Figure 1.5 indicates the degree of functionality of these 175 health zones. Figure 1.6 shows the Zaire map of regional distribution of the 175 functional health zones as well as those assisted by SANRU.

1.2.6 THE PLATEAU EFFECT OF HEALTH ZONE DEVELOPMENT

During the period 1987-1991 the momentum of the newly functional health zones and expansion of health centers within health zones began to falter due to the following:

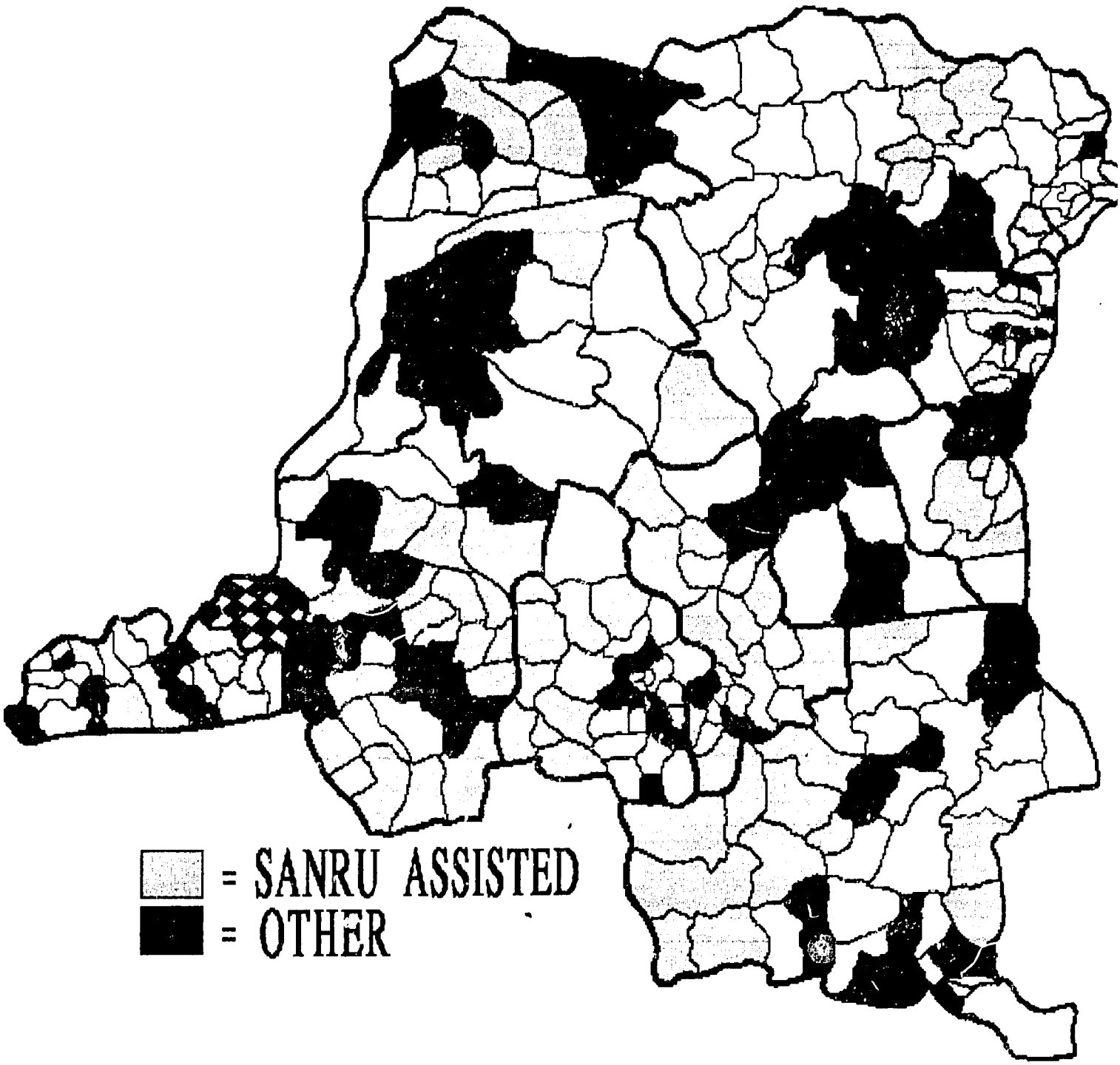
1) The national level training of MCZS by FONAMES placed too much emphasis on planning and management by the MCZS as the representative of the MOH rather than as a member of a health zone team. This resulted in increased management of resources by individuals and led to numerous mismanagement problems.

2) Conflicts of management (State vs NGO) developed within health zones that were previously considered well managed and insulated from MOH control. While SANRU proposed that a clear co-management of health zones be included in the proposed Health Zone Statutes this was never accomplished.

3) The strengthening of regional and subregional offices resulted in a tendency to centralize health zone planning and management. In some regions health zones were instructed that they could no longer contact partner agencies directly with proposals, but that all assistance must go through the sub-regional and regional offices. While SANRU successfully resisted this ploy it slowed down the expansion of health zones.

4) UNICEF's ambitious plan in 1987 to assist 184 health zones with an assistance package similar to SANRU was never realized. As a result many health zones to be assisted by UNICEF never became functional. This also led to discontent between health zones.

Figure 1.6
175 FUNCTIONAL HEALTH ZONES OF ZAIRE



5) USAID's unilateral decision to not permit any SANRU assistance (even baby scales) to be provided to non-SANRU health zones aggravated the UNICEF vs SANRU comparison.

6) FONAMES was restructured in 1985 to coordinate the partner agency assistance to health zones on behalf of the MOH but never realized this objective. As a result partner assistance was neither well coordinated nor as effective as it could have been.

7) The Belgian Cooperation's withdrawal from Zaire resulted in the suspension of technical and/or material support to more than 40 health zones about half of which were also assisted by SANRU.

8) MOH unilateral decisions to transfer MPH trained MCZS from functional health zones to regional offices that were marginally functional decreased the quality at the MCZS level. This was quite disruptive to SANRU who counted on those MCZS to serve as catalysts not only for their health zone but also for surrounding health zones.

9) The MOH decision to move (and even promote) problematic MCZS from health zone to health zone resulted in a mentality among MCZS that they had little or nothing to lose by mis-management of health zone resources. Some functional health zones soon became and remained non-functional.

10) The MOH did not fulfill its promise to support the supervision and salary costs of health zones. Health zones were forced to increase use of scarce local receipts to maintain supervision or supervise health centers only sporadically. The quality of health care decreased with a lack of medicines and/or lack of supervision.

11) Periods of high inflation followed by periods of hyper-inflation made it impossible for a health zone to keep prices of medicines and services at a level to permit maintenance of a revolving fund. As a result stocks of medicines became critically low and only health zones with strong support by a partner agency were able to maintain their level of activity and health care.

1.2.7 HEALTH ZONE SURVIVAL

The 1991 SANRU evaluation aptly summarizes ,a best case scenario for the future of health zones in Zaire:

> The concept of the health zone is a strong building block for the future development of the Zairian health system. By keeping this concept viable, SANRU can offer to a future, more development-minded GOZ a model, based on the health zone concept, on which to build a sustainable, effective, and efficient national health system.

On the other hand, with the closure of the SANRU project, and with no other funding sources yet identified, only the health zones assisted by well-organized and primary health care oriented partner agencies will have much chance of survival. Of the 175 functional health zones of 1989, I would project that only half will be still truly functional by the end of 1992.

1.2.8 LESSONS LEARNED FROM HEALTH ZONES

The concept of health zones has reshaped national and international health assistance for Zaire. The principle lessons learned from the health zone concept may be summarized as follows:

- o Boundaries of health zones are best determined with respect to population, existing medical infrastructure as well as ethnic and/or geographical areas.
- o The health zone provides uniformity of planning, supervision and statistical reporting of all medical activities within a defined geographical area.
- o Resources provided in adjacent health zones do not result in a duplication of services for the same population as they might if there were no health zone limits.
- o Coordination of government, non-government, and international donor organizations is possible by clearly identifying which donors are to assist which health zones or which assistance a donor might provide across all health zones.
- o The health zone concept permits the definition by the MOH of an assistance package for international donor assistance and project proposal development.
- o The health zone decentralizes the planning and management of primary health care to the local level where the involvement of community action groups and health centers are the building blocks of a health zone.
- o The inclusion of non-government organizations such as churches and private enterprise in the management of health zones encourages international health assistance directed at the private voluntary and private enterprise sectors.
- o A Health Information System based on geographically defined health centers and health zones provides the denominator for monitoring and evaluation of health care service activities.
- o The health zone provides a infrastructure for inter-sectoral development and the integration of other development activities such as agriculture, water and sanitation.

Health zones have been the key to the national strategy and promotion of primary health care in Zaire. This is probably one of the most successful lessons learned which could and should be shared with other countries.

1.3 COMMUNITY PARTICIPATION AND EMPOWERMENT IN PHC

Community participation is essential to the success of primary health care. However, community participation is not simply going to the health center, or taking your child to the under-fives clinic or mobilizing materials for spring capping. True community participation must result in community empowerment to discuss, plan, and organize actions to resolve health problems. In Zaire community participation/empowerment:

- utilizes health center primary health care services
- supports 90% of the costs of running a rural health center.
- builds health centers and housing for nurses
- set ups management committees for health centers
- achieves effective vaccination coverage.
- protects water sources and builds water delivery systems
- improves nutritional practices
- links village care by VHWs and TBAs to health centers and hospitals.
- promotes clean village programs including latrine construction
- provides community based health education
- trains village health workers and "Mama Bongisa"

Some of the lessons learned from communities in Zaire are the following:

o Community perception of development needs provide an excellent entry point to encourage community empowerment

o Community perception of improved health condition relate primarily to decreases in morbidity and mortality.

o Community financing through user fees has been the primary source for sustaining health centers and primary health care in Zaire.

o Creative motivation mechanisms to stimulate community empowerment are best designed at the health zone level rather than imposed by regional or national levels.

1.3.1 THE EXPRESSED NEEDS OF COMMUNITIES

The SANRU annual report always asks health zone personnel to rank the health problems, and each year the #1 problem was water and sanitation. A study conducted in 1989 with the Ministry of Plan polled 53 village development committees in 18 health zones about their perception of development problems. Table 1.2 summarizes the responses of this survey.

Table 1.2
EXPRESSED NEEDS OF COMMUNITIES FOR DEVELOPMENT PROJECTS
(Responses from 53 Development Committees in 18 Health Zones)

NBRE	EXPRESSED NEED FOR:	NBRE	EXPRESSED NEED FOR:
27	Improved water supply	5	Bridges
16	Corn/Manioc Mill	5	Ambulance
16	Transport of Ag Products	4	Agriculture machinery
15	Durable Housing	4	Solar energy equipment
12	Primary schools	3	Secondary School
12	Maternity	3	Health Center rehabilitation
12	Health post	3	Increase Community Awareness
9	Fertilizers	2	Cooperative Loans
9	Market or stores	2	Closer Health Center
6	Fish farming materials	15	Other (one suggestion each)

This perception was recognized in the design of the original SANRU project which included specific objectives for water and sanitation. SANRU I & II built on this perceived need for improved water supply by promoting the concept of spring capping, VIP (Ventilated Improved Pit) latrine construction and clean village programs. This approach had the triple advantage of

responding to the expressed need of the population, encouraging a development activity which required community empowerment and improving the water supply and sanitation system. Water and sanitation efforts provide a catalyzing effort in mobilizing community empowerment.

While the health center and health zone are essential in providing the framework and support activities for primary health care, it is ultimately activities at the community level which will have the most impact on the health of the population. Too often even with the best of intentions activities such as vaccination programs and well-baby clinics are "delivered" to the village who is then ask to participate. Water and Sanitation requires on the other hand community level initiative and collaboration.

Development committees play the fundamental role in the promotion of development activities at the community level. These activities may include preventive care, health education, water source protection, environmental sanitation, agriculture promotion, and infrastructure development. The term Development Committee rather than Health Committee was adopted at the SANRU national conference in 1983 to emphasize this interdisciplinary responsibility.

The number of water spring capping efforts financed by SANRU is also a good indicator of progress. During the three year period 1982-1985 the project financed 847 village springs capping initiatives. In comparison during the one year period of 1986 more than 850 spring caps were financed and by the end of 1991 over 3000 spring caps had been initiated. Community empowerment in this activity is also indicated in Table 1.3 which ranks water and sanitation projects just after community fields (which are often enforced by the government) and rehabilitation/construction of schools. Box 1.5 also describes the importance of community participation in the operations and management of rural water supply systems.

Table 1.3
EXISTING COMMUNITY PROJECTS
(Responses from 53 Development Committees in 18 Health Zones

NBRE	EXISTING ACTIVITIES:	NBRE	EXISTING ACTIVITIES:
27	Community fields	4	Bridge/road construction
11	Rehab/Construction Schools	3	Roofing houses
9	Spring Capping & Latrines	2	Individual fields
9	Fish Farming	2	Cooperative loan companies
8	Construct Health Post/Foyer	2	Small animal raising
7	Construct Health Center	2	Equipment for Health Center
6	Large animal raising/traction	6	Other (one suggestion each)
4	Making bricks		

1.3.2 THE PERCEIVED IMPACT OF PRIMARY HEALTH CARE

The importance of responding to expressed needs of communities does not mean that they are unappreciative of the health interventions available through health centers. On the contrary, as indicated by Table 1.4 the community perception of improved health condition relates primarily to decreases in morbidity and mortality. The fact that 85% of communities recognize that there has been a decrease in measles because of health center initiated vaccination programs is a confirmation that communities are aware of the impact of program efforts.

Box 1.5

OPERATIONS AND MAINTENANCE OF RURAL WATER SUPPLY SYSTEMS

(from a paper prepared by Kasongo Ntambue, et al)

Many community-based water provision systems have been built in Zaire. These include capped springs, dug wells, drilled wells, and adduction systems (gravity, pump and ram). Many of these systems, however, are no longer functional. The principle reason for failure appears to be the lack of community organization to take full responsibility for maintenance activities. In reality, however, the root problem is more often the failure of national technical services to empower the people.

In May 1989, the National Committee for Water and Sanitation Action organized a round table to discuss the problems involved in the maintenance of water systems. Participants included the major national programs involved in water and sanitation activities - the National Service of Rural Water (SNHR), the SANRU Basic Rural Health Project and the National Program for Sanitation. Governmental ministries who were represented include the Dept. of Health, Dept. of Rural Development, Dept. of Mines & Energie and the Dept. of Consevation of Nature. International organizations present included USAID, Peace Corps, UNICEF, UNDP, World Bank and WASH (Water and Sanitation for Health).

This round table prepared a list of 20 recommendations dealing with the operations and maintenance of water systems. Of these eight directly addressed issues related to the empowerment of the communities:

1) To assure community-based responsibility for maintenance of water systems, a structured program of animation is essential to promote community conscious raising and involvement before, during and after the construction of the water system.

2) The choice of the type of water system to be installed should take into consideration the capacity and the willingness of the community to accept responsibility for its operation and maintenance.

3) The community should be par a Village Development Committee whose members are chosen by the community from its own members.

4) A written definition of responsabilities in the form of a public contract should be established between the benefiting community and the technical service assisting in the installation of the system.

5) The community should be aware of the estimated costs for the construction, operation and maintenance of the water system well before the installation begins.

6) A program of training for key members of the Village Development Committee is necessary and should include not only the basic principals of community organization but also address issues such as methods for mobilizing community financial resources.

7) A community representative, preferrably a woman, should be designated par the VDC for each water supply unit of the water system (eg pump, water tap or capped spring) for surveillance of its correct operation and maintenance.

8) Regular supervision of the status of the water systems and the Village Development Committees should be the responsibility of the District Health Zones.

Base on these recommendations SANRU and SNHR in collaboration with WASH consultants and the National Training Team for Water and Sanitation (ENFEA) designed a training module specific to operation and maintenance of water systems for the training of health zone wate/sanitation coordinators.

Table 1.4
PERCEIVED IMPACT OF THE HEALTH CENTER
(Responses from 53 Development Committees in 18 Health Zones)

NBRE	PERCEIVED IMPACT	NBRE	PERCEIVED IMPACT
45	Decreased measles	4	Decreased tuberculosis
30	Improved childbirth	4	Decreased smallpox
26	Closer proximity to C.S.	3	Decreased polio
18	Decreased malnutrition	3	Increased spring capping
14	Decreased diarrhea	3	Increased community awareness
10	Decrease mortality	3	Decreased malaria
9	Decreased intestinal worms	3	Decreased tetanos
9	Decreased whooping cough	3	Improved growth monitoring
8	Decreased morbidity	2	Decreased sleeping sickness
5	Decreased Leprosy	7	Other (one suggestion each)

1.3.3 COMMUNITY FINANCING OF PRIMARY HEALTH CARE

To what degree could or should PHC programs depend on community financing for their sustainability? Community financing through user fees is often an untapped resource in countries with "free" health care. User fees or "in-kind" payments, can complete the funding required to maintain and sustain many primary health care activities. Community financing can also be an important factor in promoting community organization.

Yet community financing may become an "out" for governments to decrease MOH budgets or reallocate resources to non-PHC activities. There is a real temptation given limited resources and structural readjustment programs to count on community financing to sustain not only community activities, but also the district, regional and national administrative levels.

How many levels of primary health care burden can community financing support? A 1986 study conducted by REACH and SANRU of ten well developed health zones in Zaire indicated that community financing was covering around 60-80% of health zone operating costs, not including investment and depreciation. Table 1.5 provides an indication of the capacity of community financing to support various operating and investment costs.

Table 1.5
COMMUNITY FINANCING CAPACITY FOR OPERATING AND INVESTMENT COSTS

	Community level	Health Center	Health Zone Office	Regional Levels
Medicines and supplies	Excellent	Excellent	Good	Very Poor
Functioning Costs	Excellent	Excellent	Poor	Very Poor
Personnel Costs	Excellent	Excellent	Poor	Very Poor
Supervision Costs	Excellent	Good	Poor	Very Poor
Continuing Education	Good	Good	Very Poor	Very Poor
Building Investment	Good	Good	Very Poor	Very Poor
Equipment Investment	Good	Poor	Very Poor	Very Poor

1.3.4 MOTIVATION OF COMMUNITY INVOLVEMENT

What stimulates community involvement? The pride of being the village health worker is important, but the thrill of being "on call" can quickly wear off in the middle of the night. Voluntary participation is desirable, but care must be taken not to overburden volunteers with too many activities. Contributing to Health For All can be rewarding, but the time devoted to community involvement could perhaps have been used to plant another field of peanuts. We need to seek ways to compensate community workers for time lost from their regular income generating activities.

Community motivation and compensation should relate to the amount of time and effort devoted to the work. A village development committee member who devotes several hours per month to community activities need not receive the same compensation as a village health worker who puts in several hours a day. Finding the appropriate motivation is part of the challenge of primary health care.

SANRU encouraged rural primary health care programs to try varied types of compensation. Table 1.6 depicts various types of compensation often associated with community motivation in Zaire.

Table 1.6
MOTIVATION STRATEGIES FOR COMMUNITY EMPOWERMENT

LEVEL	TYPES OF COMPENSATION
VILLAGE DEVELOPMENT COMMITTEE MEMBER	-Village seminars -Member cards, badges, flags -Health posters/calendars -Regular supervision visits
PART-TIME VILLAGE HEALTH WORKER	-Equipment and supplies -Health Education materials -Free medical consultation -In-kind payment by community -Means of transport (bicycle)
FULL-TIME VILLAGE HEALTH WORKER	-Free Medical care -Means of transport (bicycle) -Income on medicines sold -Fee for services rendered -Salary

Village development committee members who spend several hours a week in primary health care related activities are encouraged by village seminars, Development Committee badges, certificates of participation, health posters/calendars and especially regular supervisory contact with health personnel from the health center and reference hospital.

Compensation for part-time Village Health Workers who may spend several hours per day in primary health care Activities would probably include most of the above and be expanded to include one or more of the following: use of equipment and materials, free medical consultation, in-kind payment by community, or perhaps a some means of transport such as a bicycle.

Compensation for full-time Village Health Workers who spend most of their time in promotion of primary health care the compensation could include the same compensation as for a

part-time Village Health Worker, but expanded to include free hospital care, a percentage income based on medicines sold or a regular salary.

Finding the appropriate motivation and compensation for the type of community health worker is part of the science **and** art of managing and promoting primary health care, and certainly leaves room for future improvements through effective operational research.

1.4. NON-GOVERNMENTAL ORGANIZATIONS AND PHC

Non-Governmental Organizations (NGOs) have played an extremely important role in the development and management of decentralized health systems and health centers. Within health zones of Zaire, for example, dispensaries are owned and managed some by the government, some by churches and some by private enterprise. A key factor to the successful coordination of activities within a health zone is that the organization managing the reference hospital accept to establish a central office to supervise all health centers within the geographical limits of a health zone.

In Zaire around 50% of the 306 Health Zones are managed by or in collaboration with NGOs, primarily those of the indigenous catholic and protestant churches. These churches take on a much larger responsibility for managing primary health care than is to be found in most countries.

The strengths of NGO involvement in primary health care include:

- o The medical work and infrastructure of NGOs in Zaire has evolved through three generations from hospital to community to health zone systems, and provided support for the development and sustainability of primary health care.

- o Church NGOs are particularly effective in their emphasis on community involvement that cares for the wholeness of individuals and families and not just medical ailments.

- o Health zones managed in collaboration with NGOs demonstrate significantly higher access to primary health care and utilization of services as demonstrated by vaccination coverage rates.

- o NGO management or co-management of health zones is a excellent example (although problematic) of church/state collaboration in the delivery primary health care.

- o NGO collaboration with national and international partner organizations is an important financial support for health zones and primary health care, including emergency relief efforts.

1.4.1 THREE GENERATIONS OF MEDICAL MISSIONS IN ZAIRE

Medical mission strategies in developing countries has been aptly described by David Korten as consisting of three generations as shown in Box 1.6. In Zaire these three generations correspond respectively roughly to three decades - the 1960's, the 1970's and the 1980's. However, some NGOs remain locked in first generation work, and have never participated actively in either community based or health zone based primary health care efforts. Fortunately in Zaire, these NGOs were few indeed.

Box 1.6
THREE GENERATIONS OF NGO MEDICAL STRATEGIES

	FIRST GENERATION	SECOND GENERATION	THIRD GENERATION
FEATURES	Mission Hospital	Community-based Primary Health Care	Health Care Systems
Problems Defined in Terms of:	Curative Care	Education & Prevention	Health Policies & Resources
Spatial Scope	Patients in Hosp.	Local Community	Districts & Nation
Time Frame	Immediate	Intermediate	Long-Term
Important Actors	Mission-aries	Indigenous Church Community Groups	Indigenous Church Ecumenical Partners Government Agencies
Capacities Required of Churches	Medical Leadership	Community Development	Strategic Management Facilitation Social Analysis Coalition Building

The first generation consists of hospital based curative care for in-patients and ambulatory care. Only a few public health related activities such as hospital based well baby clinics and nutrition rehabilitation centers were included.

The second generation of strategies moved from the hospital into the community with mobile teams to promote community development work and establish community-based health centers. Some missions remained in the mobile team phase while others moved more rapidly to establish health centers to promote integrated medicine and primary health care.

The third generation strategy is the strategic management of district and national health systems as a collaboration between church and state. Facilitation, coalition building and strategic management are key elements required for linking together independent second generations efforts into a third generation health care system. This is the vital contribution that SANRU made to primary health care in Zaire.

Many church hospitals were skeptical about becoming part of a nationwide health care system. Nyankunde hospital, for example, served as a reference hospital for church dispensaries scattered throughout Haut zZaire and Kivu regions, yet there were almost no church dispensaries or health centers in the area immediately surrounding Nyankunde. To get Nyankunde to accept the principle of concentrating their efforts on developing health centers within a health zone perimeter and accept that their church dispensaries would be supervised by other non-church health zone personnel was a major accomplishment of SANRU I.

After SANRU's credibility with the churches was firmly established during the first year of operation, it was possible to convince rural church hospitals to take the risk in collaborating with the GOZ to serve as the reference hospital for a health zone.

1.4.2 COMMUNITY LEVEL INVOLVEMENT

At the community level church NGOs are particularly effective in their emphasis on community involvement that cares for the wholeness of individuals and families and not just medical ailments. Development committees play the fundamental role in the promotion of development activities at the community level. These activities may include preventive care, health education, water source protection, environmental sanitation, agriculture promotion, and infrastructure development. The term development committee rather than health committee was proposed to emphasize this interdisciplinary responsibility.

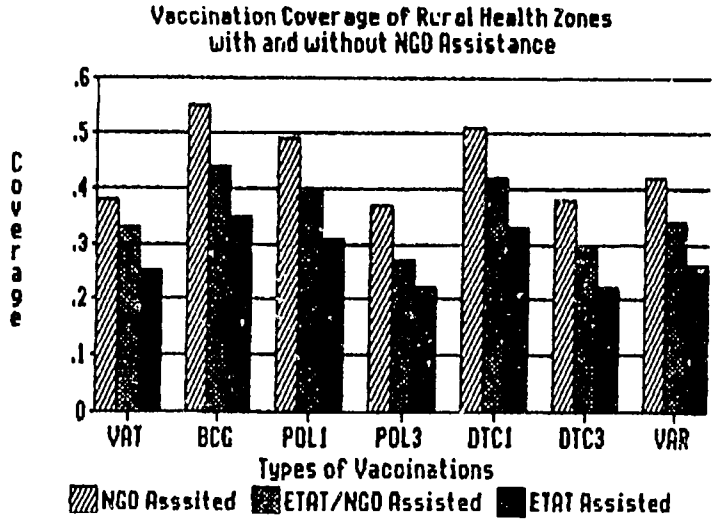
Getting people at the community level to accept responsibility for their own health is often difficult. However, the church can be particularly effective in this "conscience raising" process at the community level. Parallels between obedience to God's law and obedience to good hygiene can get across the basic premise of replacing bad health practices with good ones. Daniel Fountain's book "Health, the Bible and the Church" elaborates this theme both eloquently and pragmatically:

> Our concern is for the health of people. This is true both in community health and in the healing of individual persons. Therefore the people for whose health we are concerned must be involved at every level of health activity. Planning must be done with them and in the context of their particular community. They know many of their needs and the resources that are available. There may be other needs of which they are not aware and which must be addressed. But until they become aware of these needs and participate in the decisions and activities necessary to meet these needs, no health measures will be effective in meeting them.

1.4.3 NGOS AND VACCINATION COVERAGE

An impressive indicator of the effectiveness of NGO and SANRU assistance to health zones is found in vaccination coverage. An analysis of 1988 national vaccination data shows that vaccination coverage for all types of vaccines is consistently and significantly greater in rural health zones assisted by NGOs (Figure 1.7). Vaccination coverage in NGO assisted rural health zones is generally 17% higher than in rural health zones assisted by the GOZ alone. For example measles vaccination coverage was 42% in rural health zones assisted by NGOs as opposed to 26% in rural health zones assisted by the GOZ alone.

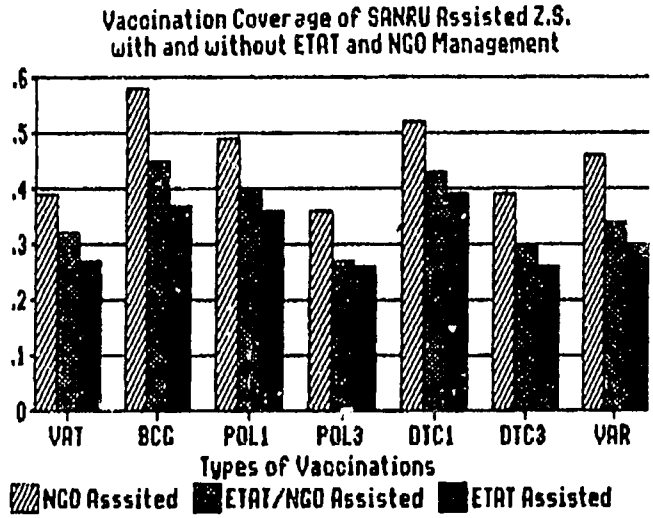
Figure 1.7



GROUP	NB ZS	POPULATION	VAT	BCG	POL1	POL3	DTC1	DTC3	VAR
RURAL-NGO	102	530,231	38%	55%	49%	37%	51%	38%	42%
RURAL-GOZ/NGO	22	96,549	33%	44%	40%	27%	42%	30%	34%
RURAL-GOZ	108	542,599	25%	35%	31%	22%	33%	22%	26%

A similar trend is observed in Figure 1.8 for rural health zones assisted by SANRU. Vaccination coverage in rural health zones assisted by SANRU with NGO management is an average of 13% greater than in rural health zones assisted by SANRU with GOZ management. For example measles vaccination coverage was 46% in rural health zones assisted by NGOs/SANRU as compared to 30% in rural health zones assisted by the GOZ/SANRU.

Figure 1.8



GROUP	NB ZS	POPULATION	VAT	BCG	POL1	POL3	DTC1	DTC3	VAR
SANRU-NGO	49	237,451	39%	58%	49%	36%	52%	39%	46%
SANRU-GOZ/NGO	15	79,081	32%	45%	40%	27%	43%	30%	34%
SANRU-GOZ	23	114,599	27%	37%	36%	26%	39%	26%	30%

While both NGO and SANRU are associated with increased vaccination coverage, the variable NGO appears to be more significant than the variable SANRU in explaining the difference in vaccination coverage. This is no surprise given the presence of the NGO within the health zone and the fact that their contribution is often much greater (financially and materially) than that of SANRU.

1.4.4 HEALTH ZONE MANAGEMENT

The 1982-1986 health plan called for the creation of 300 health zones. An inventory of existing hospitals at that time revealed a total of about 440 "hospitals" of which half were managed by the state and half by NGOs (both church and private enterprise). This meant that to establish 300 health zones around an existing hospital would require using the NGO infrastructure for at least 80 (25%) of the health zones.

In fact of the first 85 health zones to become functional during the 1982-1984 period, 88% were managed by NGOs or received important NGO management assistance. These health zones were "built" on the existing infrastructure of functional hospitals some of which were already making an effort to initiated primary health care activities. This meant that the health zone had immediate access to housing, office space, utilities, nursing schools and support services rather than starting from scratch. It was the NGOs infrastructure that really permitted the accelerated development of PHC and health zones during the early 1980's.

As of 1991 there were a total of 306 health zones. NGOs comprising catholic, protestant, private enterprise and philanthropic agencies assisted in the management of 62% of these health zones (see Figure 1.9). The geographical distribution of NGO assisted health zones is shown in Figure 1.10. SANRU assistance to 100 health zones throughout Zaire included 75% of which were managed in collaboration with NGO groups, including more than 40 separate NGOs within the Catholic and Protestant church.

Figure 1.9
NGO MANAGEMENT OF HEALTH ZONES IN ZAIRE

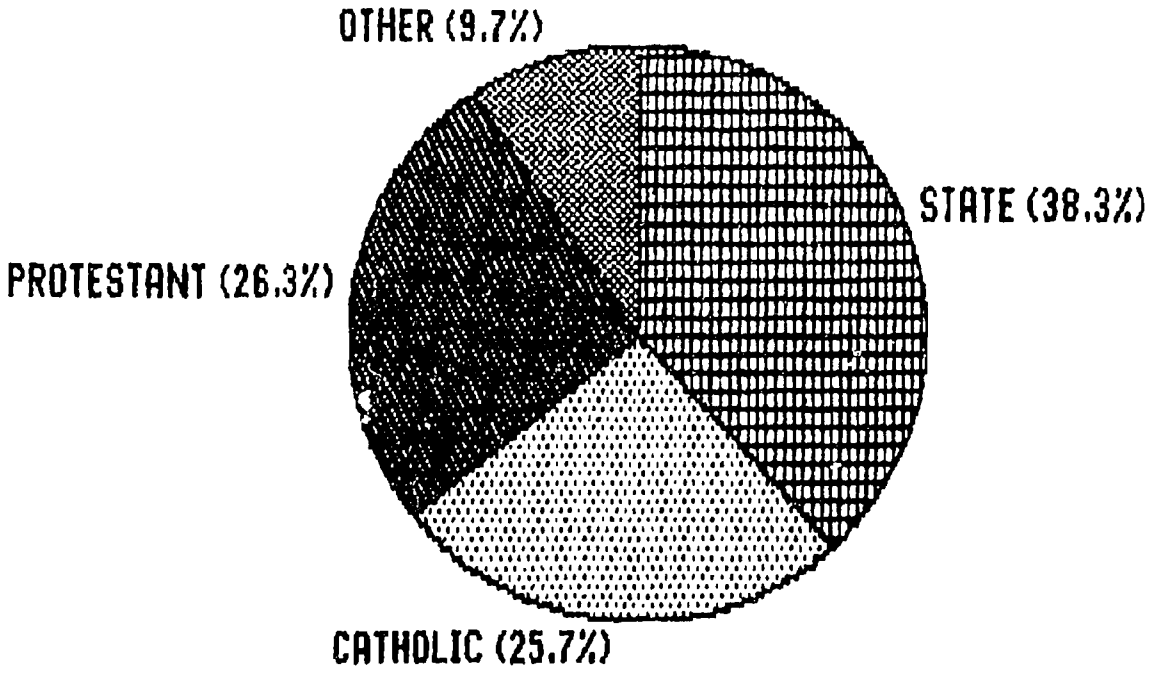
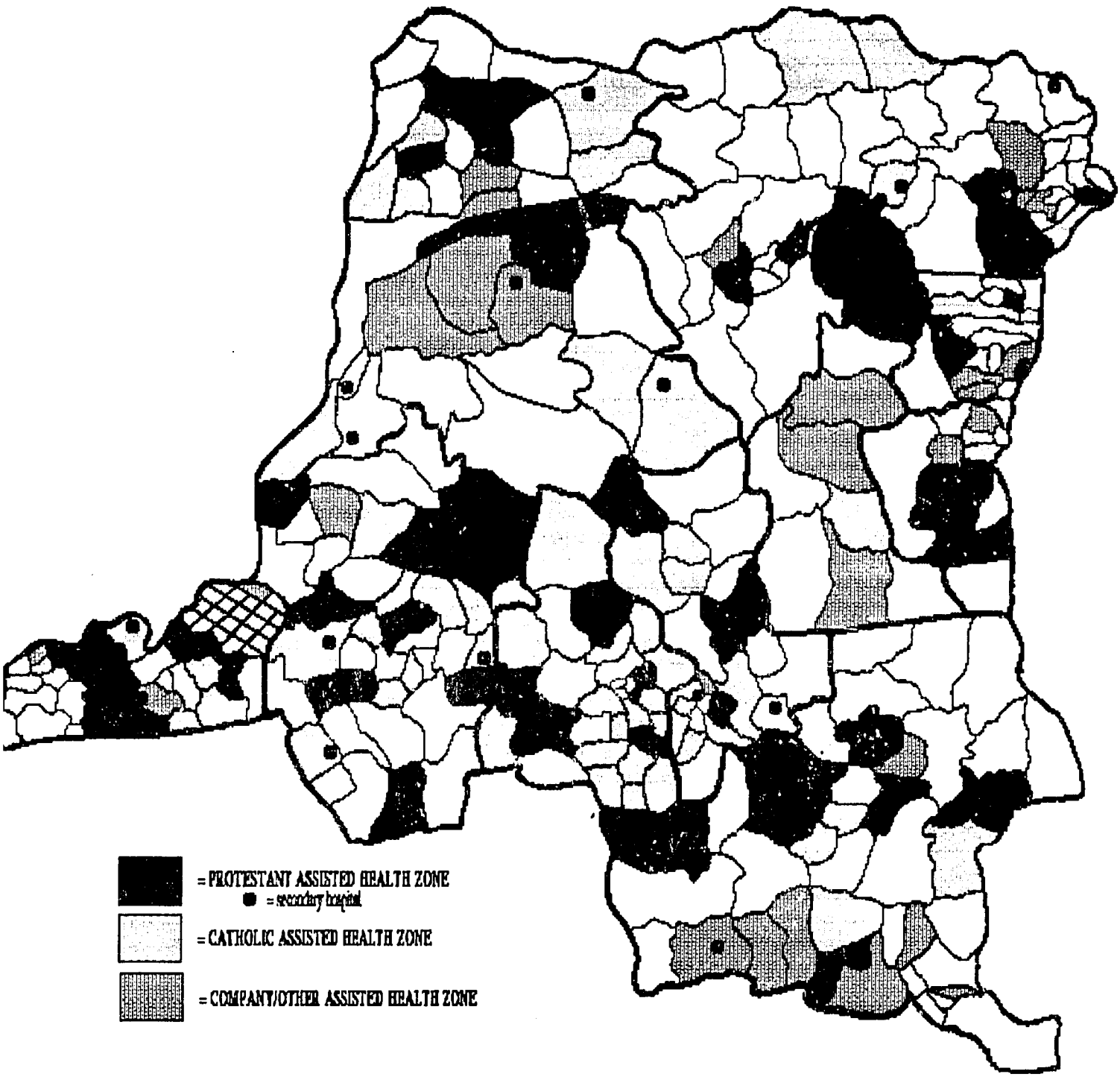


Figure 1.10
NGO ASSISTED HEALTH ZONES IN ZAIRE



Church communities are sometimes leery of becoming involved in a government recognized health zone, fearing that it could lead to the nationalization of their hospitals. They are even more dubious about accepting to manage a state hospital on behalf of the government. This lack of official management agreements for the health zones by NGOs led to problems of a tug-of-war between state and NGO authorities at the health zone level. The medical director of the health zone who is appointed by the MOH may insist that he is the manager of the health zone on behalf of the state and that the NGO's role is that of a donor to supply him with financial and material assistance. The NGOs feel, on the other hand, that medical directors should stick to the technical supervision and coordination of activities and leave the administrative management to them. To make these partnerships work a clear understanding of the responsibilities and rights of NGOs in managing primary health care services in collaboration with the government is required. That's easy to say, but very difficult to achieve.

1.4.5 NATIONAL AND INTERNATIONAL LEVEL INVOLVEMENT

At the national level the role of the church umbrellas for the catholics and protestants has already been mentioned. They are influential in the development of national policies and in supporting health zone activities. For example the national medical offices of the protestant and catholic churches assist health zones and hospitals in locating and hiring doctors or other health personnel. The national offices also serve as a distribution point for government subsidies in support of the functioning costs of hospitals and health zones. In addition they have become increasingly involved in the design and management of national programs on behalf of the government.

At the international level NGO contact with sister organizations and international donors is an excellent mechanism for mobilizing additional resources to support primary health care. There are approximately 100 different international NGOs assisting in the medical work of Zaire. Nearly all this assistance is channeled directly to the hospitals or health zones without coordination by the Ministry of Health or even the umbrella church. For example within the ECZ Protestant Church there are some 65 member "denominations" of which about half are receiving assistance for their medical work from sister churches overseas.

The SANRU/REACH cost financing study of ten health zones demonstrated that approximately 20% of the operational costs of health zones assisted by churches come from local or international NGOs.

This positive and constructive collaboration has not been without problems. During the past ten years of rapid expansion of the health zone system there has also been the development of some serious problems in collaboration which threaten the very survival of the system.

The government worries that primary health care may be exploited by the church as an evangelistic tool or that there may be a discrimination in access to health services based on religion. They feel that all health zones should be considered under state management, and that the role of the churches should be in "contributing to" but not in the "management of" health zones

While the high degree of decentralization assistance from overseas churches appeals to the donors it also may create problems. Developing countries often don't take the initiative to define a PHC assistance package tailored to their national program. Too often the decision of how much of what kind of assistance is left in the hands of donor church who sometimes lack a good knowledge of the local situation and of primary health care. The result can be assistance in the form of unnecessarily hi-tech

equipment, expensive "vertical" programs, or commodity drops of the wrong thing in the wrong place at the wrong time. The national medical office coordinating its member NGOs serves an important role as advocate of complimentary PHC assistance coming from international agencies.

Assistance through NGOs could potentially lead to duplication of assistance by two partners assisting in the same health zone. It is also possible that this strategy may leave gaps if several partners are willing to finance training programs but no one assists in sustaining the supervision activities. Coordination of such assistance without centralized control of NGOs requires mutual confidence and respect.

The medical work of indigenous NGOs is a permanent resource that will continue after international health assistance is withdrawn. Primary health care has come a long way along the road towards Health For All due in large part to cooperation rather than competition between the church and state in Zaire. Collaboration between the government and churches has been of particular importance in the development of health partnerships during the past twenty years in Zaire resulting in the creation of the existing health zone primary health care system. This collaboration will remain or become even more importance during the 1990's to promote survival and sustainability of the system. The role of the church in the investments and management of PHC services will continue to be important at all levels of the health care system: community, health zone, national and international levels.

1.5 SANRU PRIMARY HEALTH CARE ASSISTANCE PACKAGE

SANRU I assistance was designed around the concept of providing health zones with the resources which they required to implement their primary health care programs. SANRU established its reputation as "a doer" rather than as "a talker" by quickly responding to requests from health zones. The guiding principle was that no one who came to SANRU seeking assistance would leave empty-handed. If SANRU couldn't finance their health zone or project we would at least provide them with some hanging baby scales, growth charts, immunization equipment or health education materials that they requested. Box 1.7 lists a summary of project activities and assistance as of June 1984 as grouped by essential component activities of primary health care.

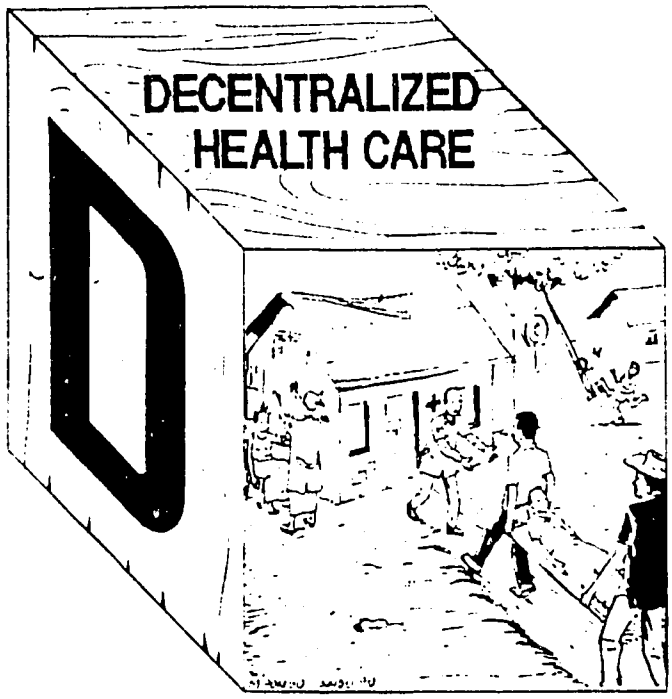
There was no separate training, supervision, infrastructure or research divisions during SANRU I. The structure of SANRU technical divisions evolved through parallel projects. For example, it was through the PRICOR I financial study that Cit. Munkatu began working with SANRU and eventually headed up the research division. Cit. Kasongo came on board as part of the ECZORT project to supervise the rehabilitation of health centers and hospitals and then joined SANRU II to head the Infrastructure division.

The SANRU assistance "package" evolved to provide a broad spectrum of assistance to health zones including national and local training, building rehabilitation, communication systems, medical equipment and medicines, and operations research. While details of this assistance are included in Chapter 2, the following Table 1.7 summarizes the four major assistance categories which evolved during SANRU and resulted in the creation of four technical and one administrative division.

Table 1.7
THE SANRU PHC ASSISTANCE PACKAGE

INFRASTRUCTURE DEVELOPMENT	TRAINING AND DOCUMENTATION
Building rehabilitation reference hosp.	Training national training teams
Construction/rehab. of health centers	Regional/national training programs
Solar-powered lighting and refrigeration	Finance health zone training
Village Sanitation & VIP latrines	Out-of-country specialty training
Water Systems-sources, wells, adductions	PHC conferences and workshops
EQUIPMENT, MEDICINES AND SUBSIDIES	**STUDIES AND OPERATIONS RESEARCH**
Equipment for health center & hospital	Measure PHC impact & viability
Start-up stock of essential medicines	Improve management of PHC subsystems
Vehicles for supervision	Operations Research problem analysis
Subsidies for supervision & maintenance	O.R. solution development
Operation subsidy health zone office	O.R. solution validation

SANRU assistance was always provided directly to the health zones with the sub-regional, regional and national GOZ authorities informed of the financial and material assistance provided by SANRU. This permitted SANRU to respond relatively quickly and specifically to requests. It also greatly decreased the possibility assistance being lost along the way. In comparison UNICEF, whose policy was to have health zone requests pass through the sub-regional to regional to UNICEF offices before funding could be considered, had difficulty in tailoring assistance to the specific needs and requests of health zones.



BOX 1.7
SANRU I ASSISTANCE TO DEVELOPING HEALTH ZONES

HEALTH EDUCATION:

- distribute flipcharts for TBC, Malaria, Worms, Nutrition, Alcoholism, Family Planning.
- distribute flanographs for growth chart and nutrtion
- distribute tapes of public health songs
- record radio program explaining PHC
- distribute reference books for health education methods
- distribute slide/filmstrip projectors
- development of flipchart for hygiene and water.

PROMOTION OF NUTRITION AND AGRICULTURE:

- collaboration with CEPLANUT
- presentation of paper "Role of Nutrition in PHC"
- distribute nutrition flipcharts and flanographs
- published programmed text "Manger Bien"
- printed nutrition course in "Mashi" for VHWs.

UNDER-FIVES CONSULTATION:

- distributed 198,000 Road to Health Charts
- distribute flanograph for Road to Health Chart
- distributed 410 baby scales to rural health centers
- distributed text "Enfant et Sante" to all health centers
- participated in national conference to uniformize growth charts.

PRENATAL CONSULTATION:

- distribute text "Maternité et Santé" to all health centers
- distribute instruments for CPN consultation
- distribute health education materials appropriate for CPN.

MATERNITY SERVICES:

- 3 training of trainers of TBAs - Karawa, Vanga, Nyankunde
- developed manual for training of TBAs
- provided OB kits to health centers with maternities.

FAMILY PLANNING:

- printed 25000 posters on 5 FP themes
- distributed FP commodities - pills, condoms, IUDs, foam
- participated in study group to develop FP mass media
- 2 seminars in Reproductive Health - Kaziba, Kimpese organized with JHPIEGO
- collaborate with CNND in monitoring family planning activities.

VACCINATIONS:

- distributed 450 bicycles to facilitate vaccine transport
- distributed 5 kerosene/12 v refrigerators
- required health officers of RHZs to participate in PEV training seminars.

CONTROL OF ENDEMIC DISEASES:

- promote subscription to "Diarrhea Dialogue"
- distribute health education materials for combatting diarrhea
- promotion of village sanitation to improve water quality
- collaboration with national office of tuberculosis in drafting national strategy for TB control.

WATER & SANITATION:

- financing tools, cement, pipe for spring capping
- development/printing of technical guide and training guide for spring capping
- development of Hydrological Water Resources Planning Map
- WASH workshop for rainwater harvesting & wells rehabilitation
- organized "Voix du Zaïre" radio broadcast series concerning water and sanitation from a village in ZSR Kasangulu.

BASIC CURATIVE CARE:

- distribute text "Treatment Strategies" to all health centers
- equipped health centers with basic curative equipment
- distributed AVS operating room equipment.

PROVISION OF ESSENTIAL SUPPLIES:

- participation in "Comité Pharmaceutique National" to plan system for drug procurement and distribution
- study to identify what essential drugs are available for local purchase.

Chapter 2. SANRU STRUCTURE

2.1 SANRU STRUCTURE

SANRU I began with a team of six persons in four tiny offices and a closet storeroom. Table 2.1 lists the names of the original SANRU staff, two of which were considered half-time.

Table 2.1
SANRU ADMINISTRATIVE PERSONNEL (1982)

Mr. Nlaba Nsona	Project Director	halftime
Dr. Miatudia Malonga	MOH representative	halftime
Dr. Frankin Baer	Project Manager	fulltime
Rev. Ralph Galloway	Planning Coordinator	fulltime
Mrs. Florence Galloway	Training Coordinator	fulltime
Mr. Dianzola Lufwakasi	Secretary	fulltime

By 1984 only two additional fulltime people had been added to the staff - a warehouse manager and an assistant administrator. By 1986 with the expansion of SANRU II activities the number of employees had increased to 36. By 1988 the staff had increased to around 45, but was still considered insufficient to provide adequate site visit supervision and monitoring to all the health zones assisted by the project. It was calculated that a staff of 80 would be required. By 1990 the project included a staff of around 60 persons with an anticipation of hiring an additional ten persons to strengthen the technical divisions. Table 2.2 shows the final organizational chart which was administratively structured according to the assistance that SANRU offered.

This increase has resulted in an internal re-organization of services by creating divisions and a subsequent delegation of activities by the project direction to the division chiefs. Five divisions were created:

- o Training and PHC Documentation Center
- o Infrastructure and Solar Energy
- o Studies and Operations Research
- o Supervision and Planning
- o Administration

2.2 TRAINING AND DOCUMENTATION

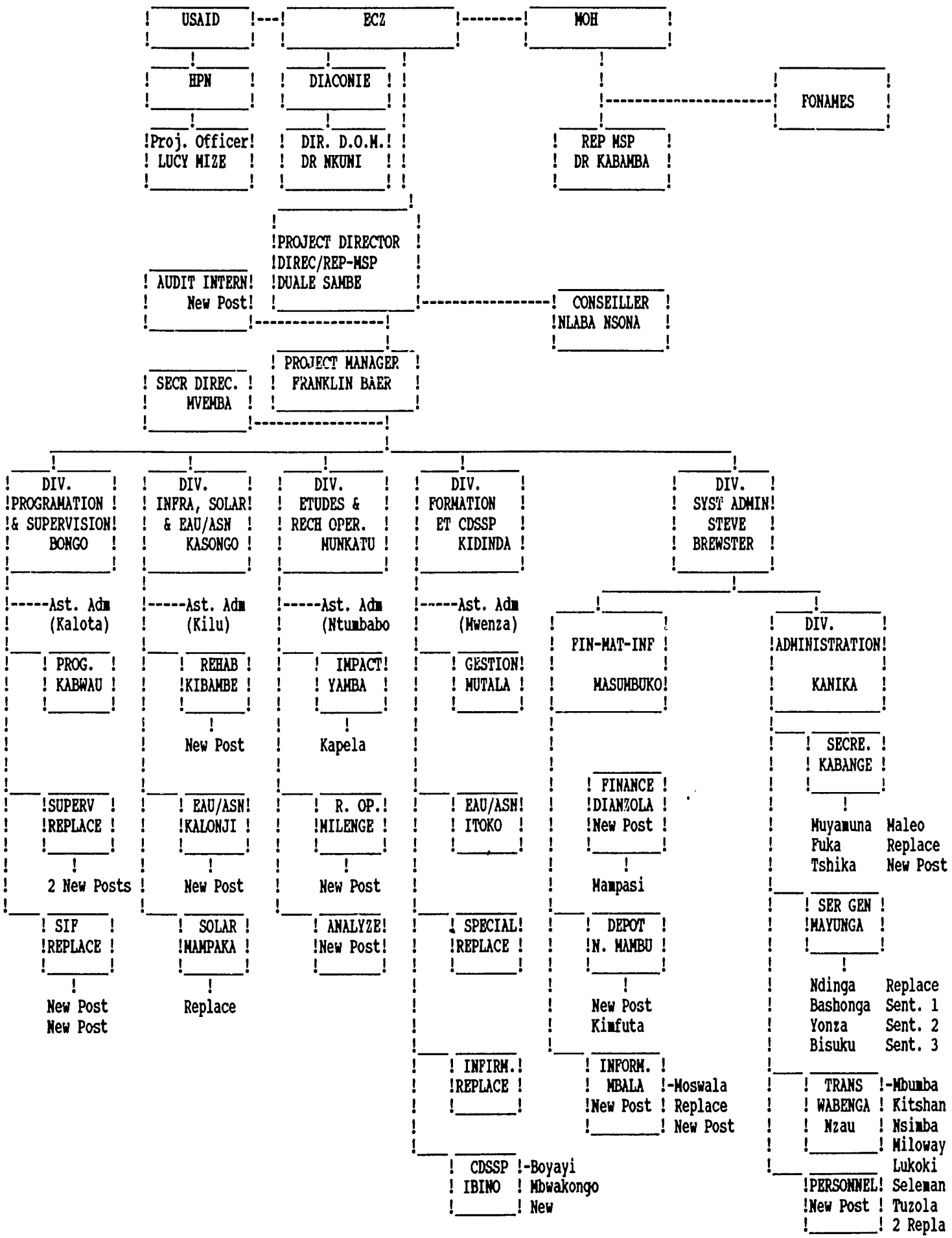
The SANRU Division of Training and Primary Health care Documentation Center was directed by Dr. Kidinda Shandungo. This division comprised the following areas of responsibility:

- o Regional/national training programs for health zone, subregional, regional and national personnel working in the field of PHC. This included out-of-country short-term training as well as long-term training at UNIKIN's school of public health.

- o Financing and providing health education materials for health zone training programs for which the health zone staff serve as the trainers.

- o Organization of the SANRU annual conference including collection and diffusion of primary health care documentation.

Table 2.2
ORGANIZATIONAL CHART OF SANRU (1991)



2.2.1 THE TRAINING OF TRAINERS STRATEGY

Training and continuing education of health workers promotes quality care and motivates personnel. Since curriculum revision for the formal education of doctors, nurses, and administrators usually takes years to achieve, retraining existing health care providers must be a priority activity for primary health care programs.

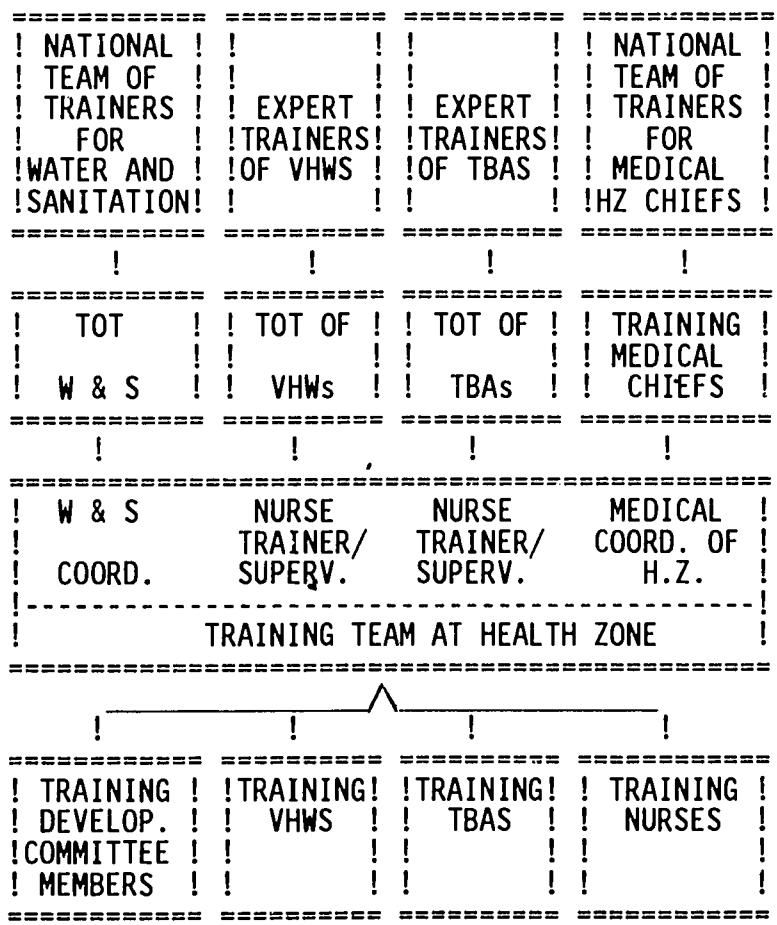
In a large country with hundreds of health programs the persons to be trained can be staggering. Table 2.3 illustrates the number of trainees for just one health zone.

Table 2.3
TRAINING NEEDS OF A TYPICAL HEALTH ZONE

Reference Hospital	(2 MDs, 20 nurses + 18 other)	=	40 persons
Health Zone Office	(1 MD + 4 nurses + 5 other)	=	10 persons
20 Health Centers	x (3 nurses + 3 other)	=	120 persons
200 Communities	x (8 members + 1VHW + 1 TBA	=	2000 persons

With a total of 306 health zones in a country like Zaire this means a six digit training objective. The training strategy in such a situation must depend on a layered and decentralized training system. The "QUI SE FORME FORME" approach (Who is trained trains others) which SANRU established aptly expresses this concept (see Table 2.4).

Table 2.4
SANRU TRAINING OF TRAINERS STRATEGY



Box 2.1
FINANCING LOCAL TRAINING IN ECZORT
(excerpted from a May 10, 1985 memo to Leslie Fox, ORT)

The ECZORT project includes training at the health zone, regional and national levels. Local training included nurses, Village Health Workers, and Village Development Committees. These same categories are also financed under the SANRU project.

SANRU and ECZORT strategy with regards to local training is that it should be executed by the staff of the health zone. The health zone staff itself is trained at the regional and/or national level in the development of training materials and sessions. This was in fact the major theme ('Qui se Forme Forme') of the 1983 SANRU national conference. Training of trainers seminars were also conducted for Traditional Birth Attendants and Village Health Workers.

Financing local training costs is straightforward. First, a health zone will identify its training needs and complete a three page form to request training funds. The same form is used for the proposal and the final report. After the proposal is reviewed by the SANRU training staff, additional info may need be requested before funding. The training form includes the following parts:

1) Description of the training session including:
   - type of training
   - level of training
   - location of training
   - number of training days per person
   - number of persons to be trained
   - training objectives (content)

2) Detailed budget proposal including:
   - Transportation
   - Food and Lodging
   - Didactic Materials
   - Personnel

3) List of participants including:
   - Trainers
   - Trainees (final report only)

The budget format includes contributions of the health zone, SANRU/ECZORT, or another donor. SANRU policy is that the health zone should cover the transportation of participants and the personnel costs of the health zone training staff. Often the health zone will also pick up part of the lodging costs. Usually the health zone contribution is around 20-40 % of the total costs. SANRU/EZCORT contribution is primarily for food and lodging, didactic materials, and transport/per diem of trainers brought in from outside the health zone to assist in the training.

Once accepted, we then forward the money requested to the health zone. A final report is submitted to specify how the training evolved. At that time the health zone may need request addtional funds to reimburse for cost over-runs, or may have money to turn back in or to be credited to a future training session.

We do not request a detailed report on the expenses incurred during the training program. We do ask that the health zone keep all relevant bills when available as part of their local bookkeeping system and that they be open to our inspection if required. As we are dealing more than a hundred training events a year, most of which are less than Z 40000 ($800) we do not attempt to audit these training events. The cost of the auditing procedure would in most cases surpass the expense of the training event.

Training events during the 1985-1986 calendar years which occur in health zones participating in the ECZORT project will be financed by EZCORT funds. SANRU will concentrate in the GOZ managed health zones. This strategy should permit us to expend the ECZORT training funds by the end of 1986.

The essential multiplying effect begins by first preparing expert training teams at the national level who in turn conduct training of trainers sessions for health zone personnel at regional levels
Sessions for medical directors of health zones, nurse supervisors, trainers of village health workers (VHWs) and traditional birth attendants (TBAs), and water/sanitation coordinators have been developed in Zaire. The health zone personnel, in turn, were responsible for organizing and conducting training within the health zone for nurses, nurse aids, village development committees, VHWs and TBAs. The result was a cost efficient training of thousands of health workers.

2.2.2 FINANCING LOCAL HEALTH ZONE TRAINING

Getting financial assistance to health zones in support of local training of health workers was a complicated procedure. Box 2.1 illustrates how this was handled in the ECZORT and SANRU projects.

2.2.3 THE SANRU ANNUAL CONFERENCES:

The first "annual conference", was held in March 1983 at the NGANDA Catholic retreat center in Kinshasa for representatives from the health zones assisted by SANRU. The theme of the conference was "Qui Se Forme Forme". Some of topics included were small group workshops on developing health zone training programs; revision of the health zone legal status document; discussion of the concept of community participation; and development of health zone action plans. The themes of subsequent SANRU annual conferences are shown in Table 2.5. Boxes 2.2 and 2.3 indicate the program outlines for the 1989 and 1991 conferences.

Table 2.5
THEMES OF SANRU ANNUAL CONFERENCES

1983: TRAINING OF TRAINERS (QUI SE FORME FORME)

1984/1985: REGIONAL CONFERENCES FOR DELIMITATION OF HEALTH ZONES

1986: HEALTH INFORMATION SYSTEMS
MANAGING/EVALUATING SANRU ASSISTANCE

1987/1988: DIX ANS DE PROGRESS EN SSP AU ZAIRE

1989: LA GESTION DES SOINS DE SANTE PRIMAIRES
L'AUTONOMIE DE GESTION N'EST PAS LIBERTE DE GESTION
(see Box 2.2 for the conference outline)

1990: AIDS (organized by Projet SIDA)
PRINCIPES DE CO-GESTION (preconference with SANRU participants)

1991: EDUCATION POUR LA SANTE ET SANTE FAMILIALE
(See Box 2.3 for the conference outline)

Box 2.2

SANRU CONFERENCE ANNUELLE 1989

DU 27 au 31 MARS 1989 A NSELE

THEME: LA GESTION DES SOINS DE SANTE PRIMAIRES

I. COMMENT ARTICULER LES ORGANES DE GESTION DE LA ZONE DE SANTE?
   1. IMPORTANCE DES ORGANES DE GESTION
   2. RELATION ENTRE HGR ET LA BCZS
   3. COLLABORATION INTER-SECTORIELLE
   4. AUTRES SUJETS

II. COMMENT MOBILISER ET GERER LES RESSOURCES?
   1. GESTION DU MATERIEL ROULANT
   2. POLITIQUE DE LA GESTION DE MEDICAMENTS
   3. STRATEGIE DE RENOUVELLEMENT DES RESSOURCES
   4. GESTION DU PERSONNEL
   5. GESTION DES FINANCES
   6. AUTRES SUJETS

III. POURQUOI UTILISER LA RECHERCHE OPERATIONNELLE DANS LES SSP?
   1. RECHERCHES POUR AMELIORER LA GESTION DES SSP
   2. PRESENTATION DES RESULTATS D'ETUDES
   3. AUTRES SUJETS

IV. QUELS SONT LES ELEMENTS DE LA VIABILITE DES ZONES DE SANTE?
   1. DEFINITION DE L'AUTOFINANCEMENT ET VIABILITE
   2. PARTICIPATION COMMUNAUTAIRE COMME BASE DE LA VIABILITE
   3. VIABILITE DES INTERVENTIONS EN SURVIE DES ENFANTS
   4. FACTEURS DETERMINANTS DE L' UTILISATION DES SSP
   5. ROLE DES ONG'S DANS LA GESTION DES ZONES DE SANTE
   6. IMPORTANCE DU SYSTEME D'INFORMATION FINANCIERE
   7. RECETTES NON-MEDICALES POUR AUTOFINANCEMENT
   8. AUTRES SUJETS

V. COMMENT SUPERVISER DES ACTIVITES LES SSP?
   1. SUPERVISION TECHNIQUE DES COMPOSANTS SSP
   2. STRATEGIE DE FINANCEMENT DE LA SUPERVISION
   3. DIFFERENTES APPROCHES DE SUPERVISON
   4. AUTRES SUJETS

VI. COMMENT INTEGRER LA LUTTE CONTRE LES MALADIES DANS LES SSP?
   1. SIDA
   2. TRYPANOSOMIASE
   3. LEPRE ET TUBERCULOSE
   4. PALUDISME
   5. CRETINISME
   6. SCHISTOSOMIASE
   7. AUTRES SUJETS

VII. AUTRES THEMES ET SUJETS A PROPOSER

Box 2.3

SANRU CONFERENCE ANNUELLE 1991

DU 12 au 17 AOUT 1991 A NSELE

THEME: EDUCATION POUR LA SANTE ET SANTE FAMILIALE

I. EDUCATION POUR LA SANTE ET DEVELOPPEMENT COMMUNAUTAIRE
1. QUELS LIENS ENTRE SANTE, MALADIE ET COMPORTEMENT?
2. E.P.S. ET LA SANTE INDIVIDUELLE
3. E.P.S. ET LA SANTE FAMILIALE
4. E.P.S. ET LA SANTE COMMUNAUTAIRE
5. E.P.S.: DISCOURS THEORIQUES OU CONSEILS PRATIQUES?
6. E.P.S.: APPROCHE VERTICALISTE OU HORIZONTALISTE?
7. E.P.S.: LIBERATEUR OU OPPRESSEUR DE LA POPULATION?
8. E.P.S.: POUR LA POPULATION ET/OU PAR LA POPULATION?

II. LES ACTEURS ET LEURS ROLES EN EDUCATION POUR LA SANTE
1. A LA FAMILLLE
2. AU NIVEAU COMMUNAUTAIRE
3. AU CENTRE DE SANTE
4. AU BUREAU CENTRAL Z.S.
5. A L'HOPITAL DE REFERENCE
6. A L'ECOLE
7. A L'ITM
8. AU NIVEAU SOUS-REGIONAL, REGIONAL, NATIONAL, INTERNATIONAL

III. LES TECHNIQUES D'EDUCATION POUR LA SANTE
1. FACE EN FACE: DIALOGUE OU CAUSERIE MORALE?
2. LA DEMONSTRATION: MOINS COUTEUSE OU TROP DE TRAVAIL?
3. CHANSONS: EFFICACES OU SIMPLEMENT UNE DISTRACTION?
3. LA BOITE A IMAGE: AIDE OU HANDICAP?
4. LE MASS MEDIA: Y A-T-IL UN ROLE EN MILIEU RURAL?
5. JEU DE ROLE: E.P.S. POUR OU PAR LA POPULATION?
6. VIDEOS: TECHNOLOGIE APPROPRIEE OU TROP SOPHISTIQUEE?
7. LES CONTES ET EDUCATION TRADITIONNELS: AUTHENTIQUES OU DEPASSES?
8. AUTRES TECHNIQUES DE VOTRE CHOIX

IV. LA RECHERCHE OPERATIONNELLE ET EDUCATION POUR LA SANTE
1. IDENTIFICATION DES PROBLEMES PRIORITAIRES EN E.P.S.
2. ETUDES DE CONAISSANCE, ATTITUDE ET PRATIQUE (C.A.P.)
3. ELABORATION DES METHODES ET SOLUTIONS D'E.P.S.
4. VALIDATION (COMMENT TESTER) DES SOLUTIONS D'E.P.S.
5. RESULTATS DES PROJETS DE RECHERCHES EN E.P.S.

V. L' E.P.S. ET L'ORGANISATION DE LA LUTTE CONTRE LES MALADIES ENDEMIQUES
1. SIDA
2. TRYPANOSOMIASE
3. LEPRE
4. TUBERCULOSE
5. PALUDISME
6. CRETINISME
7. SCHISTOSOMIASE
8. ONCHOCERCOSE
9. MALNUTRITION
10. AUTRES MALADIES OU PROBLEMES

VI. QUEL AVENIR POUR LES SOINS DE SANTE PRIMAIRES AU ZAIRE?
1. INTERVENTIONS PRIORITAIRES: QUI DOIT LES CHOISIR?
2. ZONES DE SANTE: COMMENT LES GERER ET SOUTENIR?
3. COLLABORATION ETAT/O.N.G.: REVE OU REALITE?
4. INFRASTRUCTURE: REHABILITATION OU CONSTRUCTION?
5. EAU ET ASSAINISSEMENT: INTERVENTIONS SIMPLES OU COMPLEXES?
6. FORMATION: RESOLUTION OU RESURGENCE DES PROBLEMES?
6. SUPERVISION DES SSP: PAR VEHICULE OU VELO?
7. MEDICAMENTS ESSENTIELS: QUEL SYSTEME DE DISTRIBUTION?
8. SANRU (1981-1991): QUE DOIT ETRE SON AVENIR?

2.2.3 ACHIEVEMENT OF PROJECT OBJECTIVES

The status of achievement in attaining SANRU II life of project (LOP) objectives (1986-1992) for the Training division as of the end of 1990 are shown in Table 2.6.

Table 2.6
STATUS OF TRAINING AND DOCUMENTATION OBJECTIVES

		OBJECTIVE	IN '86	IN '87	IN '88	IN '89	IN '90	CUMUL TOTAL	OBJEC 86-92	% OBJ 86-92
		UNIKIN	15	12	12	14	0	53	88	60%
		MPH (USA)	7	0	0	0	0	7	10	70%
		MANAGEMENT ZS	0	50	22	31	0	103	90	114%
F		TRAINING OF MCZ/ADMIN	0	NA	30	2	0	32	70	46%
O		COORDINATORS W/S	32	45	50	69	29	225	375	60%
R		TOT OF VHW/TBAs	39	44	42	17	0	142	150	95%
M		SUPERVISORS	0	32	47	41	0	120	200	60%
A		MECHANICS	0	0	0	29	15	44	70	63%
T		MANAGEMENT PHARMACIES	37	37	13	18	0	105	100	105%
I		NURSING INSTRUCTORS	0	0	0	10	30	40	100	40%
O		NAIS. DESIR. TRAINING	0	13	20	31	0	64	100	64%
N		NURSES	572	696	35	888	51	2242	2140	105%
		VHWs	802	644	53	745	233	2477	2000	124%
&		TBAs	690	175	40	313	245	1463	1000	146%
		DEVELOPMENT COMMITTEES	830	267	103	300	54	1554	3000	52%
C		SEMINAR W/S TRAINERS	2	1	1	1	0	5	8	62%
D		CDSSP Conferences			4	6	8	18	60	30%
S		SANRU CONFERENCES	1	1	0	1	1	4	7	57%
S		REGIONAL/SR CONFERENCE	0	2	1	5	2	10	24	42%
P										

2.3 DIVISION OF INFRASTRUCTURE

The SANRU Division of Infrastructure, headed by Cit. Kasongo Ntambwe, was active in the following areas:

- o Building rehabilitation projects for reference hospitals, health centers and offices of health zones and regional/sub-regional medical inspections.
- o Water/sanitation projects such as spring capping, wells construction, rainwater catchment, latrine construction and village sanitation programs.
- o Collaboration with SNHR (National Service for Rural Water) in financing complex water-related interventions such as adduction systems and drilled wells.
- o Solar-powered lighting and refrigeration systems.

2.3.1 BUILDING REHABILITATION AND CONSTRUCTION:

At the time of independence Zaire possessed one of the best medical infrastructures in all of Africa. Hundreds hospitals and dispensaries were constructed in Zaire during the 1950s. During the succeeding years of the 1960s, however, political turmoil, mass exodus of foreign technicians, deteriorating roads, and rupture of supply lines reduced many of these institutions to empty shells or to dispensaries offering the barest of rudimentary care. Rehabilitation of this existing medical infrastructure to provide an adequate base of operations for primary health care became an important part of Zaire's development program.

Community participation was seen as an essential part of the rehabilitation of health centers and hospitals. Technical assistance and local construction materials required for rehabilitation of buildings should be the contribution of the local community, health zone, and/or NGO collaborating in the management of the health zone (see Box 2.4).

SANRU assisted health zones by financing the cost of commercially available construction materials (including transport) required for a minimal rehabilitation of existing buildings. Where new construction was absolutely essential SANRU assistance was provided for the completion of a building whose construction has already been initiated by the health zone. Local materials such as sand, gravel, hand-labor and technical supervision of the actual rehab work were provided by the health zone and community. SANRU staff provided short-term technical assistance to health zones for the revision, final approval, and evaluation of their rehabilitation project.

2.3.2 WATER AND SANITATION INTERVENTIONS:

Water and sanitation activities are an important component of primary health care that can best be achieved as part of an integrated program rather than as a separated vertical program. The national strategy and proposed five-year water and sanitation plan reinforce this principal by stating that all interventions should be initiated at the community level through a village development committee and that a water/sanitation coordinator should be part of the health zone team (see Box 1.4).

SANRU's strategy was to assist the health zone in establishing an independent capacity for implementing simple water/sanitation interventions such as spring capping, shallow wells construction, rainwater catchment, latrine construction and village sanitation programs. More complex interventions such as adduction systems and drilled wells are to be done in collaboration with an SNHR (National Service for Rural Water) sub-regional stations or a recognized NGO water brigade.

2.3.4 SOLAR ENERGY:

The cold chain is an important link promotion of an immunization program, but that the effectiveness of kerosene refrigerators is often compromised by the high cost or lack of kerosene in the local market. Solar refrigeration has undergone extensive field testing in Zaire. Solar energy also serves as an important motivation to nurses to remain in "bush" health centers of Zaire when a simple solar powered light is provided to the health center and/or staff housing.

SANRU, through its sister project ECZORT, gained technical expertise in the installation of 40 refrigerator and lighting systems throughout Zaire. This process included training a pool of national and regional technicians (from over 1000 candidates!) for installation and maintenance of the systems. SANRU II had an objective to install 150 solar systems in project assisted health zones, but USAID dollar procurement of the solar systems was not achieved until mid-1991 (see Box 3.4).

Box 2.4

COMMUNITY AND NGO INVOLVEMENT IN REHABILITATION PROJECTS

(abstract of NCIH paper prepared by Steve Brewster and Franklin Baer)

ECZORT, a collaborative primary health care project between the Church of Christ of Zaire (ECZ), the Organization for Rehabilitation by Training (ORT), the Government of Zaire, and USAID financed between 1984-1987 the physical rehabilitation of 200 health centers across Zaire. The project evolved from the national strategy that physical rehabilitation of existing health centers and hospitals should take priority over the construction of new and sometimes redundant, structures. The ECZORT project channeled assistance through local churches to make modest yet important investments in building and equipment rehabilitation of health centers in 40 health zones throughout Zaire. The lessons learned from this multi-dimensional partnership could well serve similar projects in the coming decade.

- **Non-government organizations (NGOs) can provide an effective partnership for managing assistance to geographically dispersed public service micro-projects.** While the financial assistance of ECZORT for 200 rehabilitation projects was channeled through 8 catholic and 32 protestant church groups it is noteworthy that only one-third of the health centers rehabilitated belonged to the catholic (9%) and protestant (23%) churches. Community owned (41%) and government owned (27%) health centers benefited the most.

- **Rehabilitation micro-projects can be relatively inexpensive.** The cost of building materials financed by ECZORT for the projects ranged from $200 to $4000 with the average around $1350. Local materials and labor of an approximate equivalent value were supplied by the communities themselves. Basic equipment cost per health center was about $3000. The projects did not strive for a complete physical reconstruction of centers (which would have cost many times as much), but rather sufficient improvement to permit the establishment of primary health care services.

- **The ECZORT project promoted PHC development "by and with" the population instead of "for" the population.** Building rehabilitation in collaboration with community participation to supply local materials and labor reinforced the "buy-in partnership" of the community and encouraged their utilization and of primary health care.

- **Building rehabilitation helped improve the quality of primary health care.** These rehab projects improved the working conditions and the morale of the health center personnel. Improved rural health centers can be a significant motivation for trained health professionals to live and work in isolated rural areas.

2.3.5 ACHIEVEMENT OF PROJECT OBJECTIVES

The status of achievement in attaining SANRU II life of project (LOP) objectives for the Infrastructure division are shown in Table 2.7.

Table 2.7
STATUS OF INFRASTRUCTURE OBJECTIVES

		IN '86	IN '87	IN '88	IN '89	IN '90	CUMUL TOTAL	OBJEC 86-92	% OBJ 86-92
I	REHAB HGR	0	9	6	6	4	25	40	62%
N	REHAB/CONSTR BCZ	8	14	11	12	0	45	50	90%
F	REHAB/CONSTR CS/CSR	18	33	59	51	5	166	540	31%
R	REHAB/CONSTR PHARMACIE	1	0	0	1	0	2	6	40%
A	SPRING CAPPING	857	501	410	1000	304	3072	3000	102%
S	RAIN CATCHMENT	6	17	4	2	2	31	105	30%
T	WELLS	10	31	85	40	40	206	1600	13%
U	ADDUCTIONS	10	35	30	35	4	114	860	13%
C	VIP LATRINES	58	122	313	339	205	1037	2000	52%
T	VILLAGE SANITATION	NA	1438	1515	1252	NA	4205	1000	NA
	SOLAR SYSTEMS	1	0	0	18	18	37	150	25%
	NA= data not available								

2.4 DIVISION OF STUDIES AND OPERATIONS RESEARCH

The SANRU division of Studies and Operations Research was headed by Cit. Munkatu Mpese. This division organized the conception, coordination and analysis of studies to test alternative PHC strategies, evaluate their impact, and present study results to decision makers for establishing appropriate health policies. The major areas of study and research were as follows:

- o Impact of PHC services
- o Financing of PHC activities
- o Management of select PHC subsystems
- o Promotion of Community Participation
- o Health zone initiated studies

2.4.1 HEALTH EDUCATION AND OPERATIONS RESEARCH

Popularizing the concept of operations research as a management tool became a major focus of SANRU. Too often studies become theoretical and removed from the day to day reality of solving practical problems. The process of operations research may be seen as closely linked to the process of health education. Health education as shown in Table 3.4 comprises the process PICCA (Problem perception, Information transfer, Comprehension, Confidence in proposed solutions and Application). Operations Research as developed by PRICOR consists of a three step process of problem analysis, solution development and solution validation.

Table 2.8
OPERATIONS RESEARCH AND HEALTH EDUCATION

HEALTH EDUCATION	OPERATIONS RESEARCH
1- PERCEPTION OF PROBLEMS	PROBLEM ANALYSIS
2- INFORMATION ACQUISITION	PROBLEM ANALYSIS
3- COMPREHENSION OF INFORMATION	PROBLEM ANALYSIS
4- CONFIDENCE IN PROPOSED SOLUTIONS	SOLUTION DEVELOPMENT
5- APPLICATION OF SOLUTIONS	SOLUTION VALIDATION

For example, when Community leaders are active in discussion of problems, in obtaining new information, in helping others understand problems and proposed solutions, in convincing people to test possible solution, and in supervising their application, then primary health care has the best possible chance of success. An operations research mentality may provide a better conceptual framework for promoting community empowerment than does health education.

2.4.2 WATER IMPACT STUDY

One of the impact studies financed by SANRU in collaboration with CEMUBAC resulted in a paper entitled "The Epidemiologic Evidence for Reduction of Childhood Diarrhea in Rural Zaire From Improved Water Supply: a longitudinal study of 1223 children from Kirotshe (Northern Kivu)".

A strong relationship was noted between incidence proportion of under-fives diarrhoea and safe water consumption measured by quantity of provided water and by distance from the standpipe. Children in standpipe-using families are exposed to a lower risk of diarrhoea. This reduction of risk is related to age, and habitation (used as an indicator of socioeconomic status).

Children in the 2-3 yr age group whose household drew less than 25 l of water per day ran a 3.5 times greater risk of having a diarrhea episode than a child whose household drew more than 75 l/day.

Children of the 2-3 year age group whose household was more than 10 minutes from a standpipe ran a 3 times greater risk of a diarrhea episode than a child whose household was less than 5 minutes from the standpipe.

The study also noted that families of higher socio-economic status have better access to standpipes, draw more water, and have fewer episodes of diarrhea. This was due in part to the fact that the distribution system follows the main roads and that the "wealthier" families tended to build their houses closer to the road.

2.4.3 ORGANIZTION OF UNDER-FIVES' CLINICS

A study conducted in collaboration with PRICOR examined the queuing system for Under-Fives Clinics. The results are explained in Box 2.5.

Box 2.5

THE ORGANIZATION OF UNDER-FIVES' CLINIC

(from an NCIH presentation by Franklin Baer)

Under-Five (Preschool) (CPS) Clinics have become a popular activity of health centers throughout Zaire for promoting growth surveillance and immunization of young children. A systems analysis problem identification conducted in Zaire by PRICOR II identified, however, several weaknesses in the current CPS services. As the next step in operations research, i.e. solution development, visits were made to an additional 20 health zones to document CPS models currently in use as well as time and motion data.

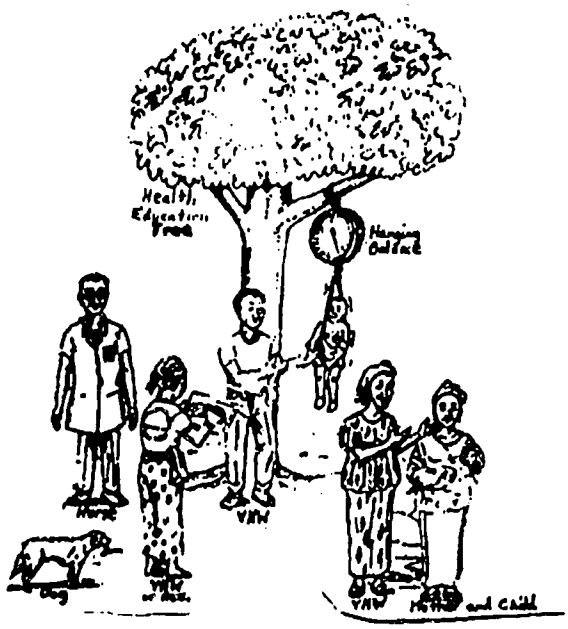
Ten different activities carried out during the CPS were identified at the 31 CPS sites surveyed. Permutations of order and number of activities resulted in 17 different CPS models although one model clearly predominated the others. The typical CPS consisted of five stations including health education, weighing, physical exam, vaccination and nutrition education. The average number of persons per station was 1.57 and the workload per person was 222 minutes. The average CPS session was found to last between five and six hours and used a combination of health professionals and community volunteers. Three configurations of service delivery were identified for validation testing.

The Under-Fives clinic is a good occasion to get across the message of primary health care. During the weighing of the children and the plotting of their weight on the growth chart, the health worker can provide positive reinforcement by commending (and even applauding) the mothers whose children are gaining weight properly.

There is also a time set aside for health education using songs, chants, demonstrations, role playing, story telling or illustrated lessons to teach the fundamentals of good health care.

During the physical exam, the nurse has an opportunity to counsel the mother about her child's health and to refer her, if necessary, to a co-worker for special instructions about preparing food or oral rehydration solution.

If you ever attend an Under-Fives' Clinic you may discover that you can not immediately identify who are the nurses and who are the VHWs, TBAs or other volunteers. If so this is a good indication that the activity is being conducted as a community effort of the people rather than as a health center activity delivered to the people. So it you have to ask "Who's who?", it's probably because they're doing something right.



2.4.4 FINANCIAL MANAGEMENT INFORMATION SYSTEMS

SANRU collaborated with REACH and Abt Associates in conducting a series of cost financing studies. The first was a study of ten well developed health zones which indicated that community financing was covering around 60-80% of health zone operating cost. The second was the design and implementation of Financial Management Information Systems (FMIS) (see Box 2.6). The third was the development of a computer simulation of health center and health zone cost-financing based on cost and demand studies conducted in several health zones.

2.4.5 ACHIEVEMENT OF PROJECT OBJECTIVES:

The status of achievement in attaining SANRU II life of project (LOP) objectives for the Studies division are shown in Table 2.9.

Table 2.9
STATUS OF STUDIES AND OPERATIONS RESEARCH OBJECTIVES

		IN '86	IN '87	IN '88	IN '89	IN '90	CUMUL TOTAL	OBJEC 86-92	% OBJ 86-92
E	IMPACT STUDIES	0	2	3	2	2	9	10	90%
T	PRICOR STUDIES	1	4	1	10	10	26	15	173%
U	REACH STUDIES	1	1	.5	0	0	2	5	50%
D	OTHER STUDIES	0	1	6	2	2	11	20	55%
E	MICROPROJETS	0	0	0	4	4	8	90	9%
							0		

2.5 DIVISION OF PLANNING AND SUPERVISION:

The Division of Planning ans Supervision is directed by Dr. Bongo. The principal activities of this division were to coordinate the planning of material and financial assistance (not covered by other SANRU divisions) to health zones, and to supervise the management of project resources by the health zone. These activities included:

- o Supervision visits to health zones
- o Medical Equipment and Essential Medicines for Health Centers
- o Annual Supervision Subsidies
- o Centralization of health zone Annual Reports
- o National Health Information System

2.5.1 ANNUAL SUPERVISION SUBSIDIES:

SANRU strategy provided health zones with annual supervision subsidies over a period of five years. During that period of time the SANRU subsidy was to be decreased annually by 20% as other subsidy supports from the MOH and self-financing increased. However, since MOH subsidies never increased SANRU continued the supervision subsidy system and even increased it to include subsidies for family planning promotion (see Box 2.7).

Box 2.6
FINANCIAL MANAGEMENT INFORMATION SYSTEMS

In an effort to identify and document the traits of successful financial management, the SANRU Basic Rural Health Project in collaboration with REACH (Resources for Child Health) surveyed in 1986 the financial management systems of four well developed health zones in Zaire. The results of this study have led to the development of a model health zone Financial Management Information System (FMIS) to help other health zones better monitor their financial activities and to achieve greater program sustainability.

The FMIS study identified at least three types of problems endangering the financial viability of health zones in Zaire.

The first category of problems are of a structural nature implicit to primary health care which are almost impossible to change. The fundamentally unbalanced feature of a population's felt need for curative health care overshadowing their real need for preventive and promotive care is a good illustration of this kind of problem.

The second category of problems includes difficulties relating to the state of the national or local economy. Solutions to such matters such as stabilizing an inflationary economy are really beyond the sphere of the health zone's responsibility.

The last set of problems involves the management and organization of health zones. These can and must be solved if primary health care is to become sustainable. The presence of good Financial Management Information System (FMIS) is the best starting point for putting the health zone's house in order.

The FMIS must assure clear and precise information about the relative influence and contribution of each budget category to the overall financial sustainability of the health zone. Therefore the FMIS must not be limited to accounting procedures but needs to cover the entire spectrum of health zone organization including procurement procedures, stock management, service output, internal control and manpower productivity. Finally, to be effective the FMIS must become the essential tool of daily health zone decision making and not simply an end-of-year tally of health zone expenses.

Box 2.7

HEALTH ZONE SUBSIDES 1991

(avis de credit for July 8, 1991 subsidies)

DE: Dr. Franklin Baer, SANRU Project Manager
AU: Médicin Chef de Zone de Santé de BOKORO,
Sous-Région MAI-NDOMBE, BANDUNDU
SUJET: SUBSIDES 1991 - MEDICAMAENTS, SUPERVISION
ET NAISSANCES DESIRABLES

Nous avons l'honneur de vous tenir informé du premièr virement 1991 des subsides suivantes pour votre Zone de Santé:

SUBSIDE DE MEDICAMENTS (6000000 Zaires): pour l'achat des medicaments essentiels pour renforcer la capacité de la pharmacie où tous les Centres de Santé viennent s'approvisionner.

SUBSIDE DE SUPERVISION (4000000 Zaires): pour renforcer la supervision des activités de SSP y compris la maintenance du matériel roulant affecté à la supervision.

SUBSIDE PROMOTION NAISSANCES DESIRABLES (4000000 Zaires): pour renforcer la supervision et promotion des activités des Naissances Desirables déja entamées dans votre Zone de Santé (par exemple, recycle des préstataires, séances d'animation, supervision et fournitures).

La copie du virement en annexe de 14000000 Zaires indique la date de virement et le numéro de compte dans lequel cet argent a été viré. Nous demandons au Comitè de Gestion de confirmer la réception de ces subsides en retournant une copie signée. Le deuxième virement de 1991 sera conditionné par votre accusé de réception témoignant que ces fonds seront soumises à une co-gestion rigoureuse des sous-signataires. Tous les documents et pièces comptables y afférents seront gardés au BCZS pour inspection par les envoyés de SANRU ou l'Inspection Médicale.

Veuillez agréer l'expression de nos sentiments de franche collaboration.

NOM DU MEMBRE DU COMITE DE GESTION ZS	MED. CHEF Z.S.	ADMIN. GEST. Z.S.	REP. D'ONG ou POPULATION
NOM (en caractères d'imprimerie S.V.P.)	.....	.....	.....
SIGNATURE	.....	.....	.....
DATE	.....	.....	.....

c.i. Médecin Inspecteur Régional BANDUNDU
Médecin Sous-Régional MAI-NDOMBE
Répresentant ONG du Comité de Gestion Z.S. de BOKORO

NOTE: The exchange rate in July 1991 was about 5000 Zaires/dollar as compared to 50 Zaires/dollar in July 1985. Six copies of the "avis de credit" were printed (two per page on triplicata forms) using AppleWorks Mail-Merge from the health zone data base.

2.5.2 SANRU ANNUAL REPORTING SYSTEM:

Statistical reporting has been a statistician's nightmare in Zaire. Prior to 1982 medical services (State, Catholic, Protestant) designed their own forms and reported only for their own medical services and principally only for curative activities. More often than not no regular reporting was done at all, and as a consequence no reliable national statistics have been available since early 1960s. An important step to solving this problem was taken in 1983 with the design of an annual reporting form for health zones based on the principal Primary Health Care activities and support functions. This health information system assists the health zone not only in identifying what information to collect but also in how to analyze data locally for immediate feedback in program monitoring. The objective was to collect information at three levels of increasing difficulty:

- o Accessibility of services:
  (e.g., What percent of health centers have Under-Fives Clinics?)
- o Utilization of services -
  (e.g., What percent of children attend the Under-Fives Clinics?)
- o Impact of services -
  (e.g., What percent of children have adequate growth curves?)

2.5.3 ISSUES IN MANAGEMENT OF HEALTH ZONES:

There exist various management models/strategies which are able to assure good (and bad) management of health zones. Mismanagement at the health zone level resulted in the loss of important resources.

The proposed statutes of health zones were one possible model which may be suitable to some (but not all) health zones. The failure of the statues was that it tried to impose one management model on all health zones. MCZS trying to implement this GOZ model are encountered conflicts with NGOs. See Box 2.8 for an example of the management problem that developed in the health zone of OSHWE.

Flexibility is required to permit the ZS to choose from a range of several good management tools. The INDICATORS DE GESTION DES ZONES DE SANTE (Box 2.9) suggests that there are several acceptable mechanism for each management structure from which the health zone may choose. The indicators listed come directly from the health zones that SANRU visited.

Box 2.8

MANAGEMENT PROBLEMS IN THE HEALTH ZONE OF OSHWE

(March 13, 1990 memo to USAID concerning an ELIMA newspaper article which criticized SANRU's policy of assistance to OSHWE)

The information for the ELIMA article most likely came from the MCZS, Dr. Ngokoso, who was not at all happy with the decision of the DSP to sign a convention with CBB for the hospital and ZS. He wanted the CBB to work only at the hospital while he alone continued to manage the ZS. Given the poor track record for that kind of arrangement (Bafwasende, Mwenga, Rwanguba, etc.) we (SANRU) encouraged CBB to follow the example of AVOMET (ZS Kamonia) and CDI (ZS Businga) to sign a convention for both hospital and ZS. This would be the first such convention signed with an ECZ community and a step to seeking a formula to resolve the frequent NGO/ETAT conflicts within a ZS. The convention was signed by the DSP and we received a complete copy (all 8 pages).

Based on this DSP approval, in Nov. 1989 we gave the equipment for 3 health centers and the vehicle to CBB. The equipment went via the CBB boat to their central depot at Bosobe. CBB is awaiting the remise and reprise of the HGR and ZS before transporting the equipment to Oshwe. The vehicle was to go directly to Oshwe as part of the remise and reprise, but since that process has been contested, CBB decided to not send it to Oshwe. Because of the numerous accusations initiated by the MCZ of misuse of the vehicle, Dr. Nkuni recommended that the CBB park the vehicle at ECZ until the convention problem was cleared up. SANRU did not confiscate the vehicle and we have not suspended assistance to Oshwe. We are simply awaiting the remise and reprise and clarification of the contested convention. Dr. Nkuni and the CBB legal rep. are to contact the DSP about this. Given the changes at the DSP, they have been unable to discuss the problem with the new commissaire d'etat.

No medicines were sent by SANRU to Oshwe via CBB. The last time medicines were shipped was in August 1989 when the MCZ himself purchased medicines in Kinshasa with the 1989 SANRU meds subsidy plus HGR money and transported them himself to Oshwe. (see attached fiche inventaire).

The last information I received was via the Commissaire du Peuple who told us that the remise and reprise had taken place, that Dr. Ngokoso was no longer MCZ and that we should have no further dealings with him as MCZ Oshwe. Dr. Ngokoso has fought this convention ever since it was signed. He has made accusations against CBB at the local, regional and national levels to annul the convention. I have had several "heated" encounters with him about this subject and am not surprised at his personal attacks which he has inserted in the ELIMA article. By the way, no one from ELIMA was ever in contact with us to substantiate any part of the article.

Box 2.9

INDICATEURS DE GESTION DES ZONES DE SANTE

RELATIONS BCZS ET HGR

MAUVAIS	NON-ACCEPTABLE	NON-ACCEPTABLE	ACCEPTABLE	ACCEPTABLE
PAS DE RELATION	HGR CONSIDERE COMME UN DEPARTEMENT DU BCZS	BCZS CONSIDERE COMME UN DEPARTEMENT DE L'HGR	HGR ET BCZS AU MEME NIVEAU ET GERE PAR DES CO.GE. ET CON. ADM. INDEPENDANTS	HGR ET BCZS SONT DES UNITES DEPENDANTES AVEC UNE STRUCTURE PARAPLUIE

COMPOSITION DU COMITE DE GESTION

MAUVAIS	NON-ACCEPTABLE	NON-ACCEPTABLE	ACCEPTABLE	ACCEPTABLE
PAS DE COMITE GESTION OU CO.GE. NON FONCTIONNEL	CO.GE. COMPOSE SEULEMENT DES MEMBRES DU BCZS	CO.GE. AVEC UN SEUL MEMBRE VENANT EN DEHORS LE BCZS	CO.GE. AVEC 2 MEMBRES VENANT EN DEHORS BCZS 1) REP. HGR ou ITM 2) REP. ONG ou POP	CO.GE. AVEC 3+ MEMBRES ENDEHORS BCZS

COLLABORATION ENTRE DES MEDECINS ET AUTRES SPECIALISTES SANITAIRES

MAUVAIS	NON-ACCEPTABLE	NON-ACCEPTABLE	ACCEPTABLE	ACCEPTABLE
PAS DE COMMUNICATION CONFLICT PERMANENT	ZS CONSIDERE COMME LE SEUL TRAVAIL DU MCZ	AUTRES MEDECINS NON-INFORMES OU NON-IMPLIQUES DANS LES SSP ET ZS	ENSEMBLE DES MEDECINS INFORMES ET IMPLIQUES AVEC UNE REPARTITION DE CERTAINES TACHES	TOUS LES MEDECINS PARTICIPENT A LA SUPERVISION DES CS/SSP

REPARTITION DES RESPONSABILITES DES ACTIVITES TECHNIQUES ET DE GESTION

MAUVAIS	NON-ACCEPTABLE	NON-ACCEPTABLE	ACCEPTABLE	ACCEPTABLE
MCZS NE RECONNAIT PAS LA DIFFERENCE ENTRE ACTIVITES TECHNIQUES & ACTIVITES DE GESTION	MCZS CONSIDERE COMME COORDINATEUR TECHNIQUE ET "LE" GERANT ZS IL GERE SEUL LE BCZS	MCZS CONSIDERE COMME COORDINATEUR TECHNIQUE & COORDINATEUR GERANT. IL DELEQUE TACHES AUX PARTENAIRES	MCZS CONSIDERE COMME COORDINATEUR TECHNIQUE GESTION PARTAGEE AVEC UN DES PARTENAIRES	MCZS CONSIDERE COMME COORDINATEUR TECHNIQUE GESTION JOURNALIERE PAR UN DES PARTENAIRES

GESTION DES VEHICULES

MAUVAIS	NON-ACCEPTABLE	NON-ACCEPTABLE	ACCEPTABLE	ACCEPTABLE
VEHICULE NON-IMMATRICULE ABSENCE DES REGLEMENTS D'UTILISATION	VEHICULE IMMATRICULE AU NOM DU MCZS UTILISE COMME VEHICULE PRIVE DU MCZS	IMMATRICULATION STA OK MAIS NON-RECOMMANDE UTILISE 50% POUR LES COURSES EN DEHORS ZS	VEHICULE IMMATRICULE AU NOM DE LA ZS UTILISE 75% POUR SORTIES DANS LA ZS	VEHICULE IMMATRICULE AU NOM D'UN ONG SORTIE BIEN PROGRAMMEE AVEC FACTURATION

2.5.4 ACHIEVEMENT OF PROJECT OBJECTIVES:

The status of achievement in attaining SANRU II life of project (LOP) objectives for the Supervision and Planning division are shown in Table 2.10.

Table 2.10
STATUS OF SUPERVISION AND PLANNING OBJECTIVES

S	SUPERVISION SUBSIDIES	62	71	54	81	80	348	450	77%	
U	MEDICINES FOR HGR	0	0	0	0	0	0	50	0%	
P	MEDS SUBSIDIES	57	80	92	143	80	452	720	63%	
E	MEDS/EQP S/R PHARMACIE	0	1	0	1	1	3	6	50%	
R	IMR EQUIPPED	0	8	0	2	0	10	10	100%	
V	IMS/R EQUIPPED	0	3	3	5	0	11	11	100%	
	HGR EQUIPPED	0	0	0	0	0	0	50	0%	
&	CS/CSR EQUIPPED	0	0	0	194	59	253	720	35%	
	BCZS EQUIPPED	0	27	31	9	9	76	50	152%	
P	VEHICLES	0	66	0	0	10	76	83	92%	
L	MOTOS	0	10	132	9	50	201	328	61%	
A	BICYCLES	29	71	385	0	600	1085	2160	50%	

2.6 DIVISION OF ADMINISTRATION

The SANRU Division of Administration was directed by M. Steve Brewster with two assistant division chiefs - Mr Masumbuko and Mr. Kanika. The administration furnished the support structures for the other divisions including the following areas of responsibility:

- o Local purchasing
- o Warehouse and Expedition of assistance to Health Zones
- o Finances
- o Project Information Management System
- o Protocol and Logistics
- o Secretarial Pool
- o Local Transport
- o Personnel

2.6.1 COMPUTERS AND PROJECT MANAGEMENT

Computers have become a valuable tool for project management, yet while becoming more widely available their potential is generally under utilized. Lessons learned from setting up a computer system for the management of the SANRU are that you need to complete an early information assessment to answer the following questions:

- o What kinds of information do you want to track?
- o How much of that information needs to be stored?
- o How many people need to access that information?
- o What kind of reports need to be generated?

The answers to these questions help determine the hardware and software system configurations as well as personnel needs. It is also important to have an in-house management information specialist and to conduct appropriate training in the use of specific programs **and** in management information systems.

So much attention is being given to increasing the power of computers that we lose sight of the many useful, simple and time-saving applications in the management of primary health care that can be carried out using computers. The following are examples of practical applications which were found useful by SANRU:

o Data collection in the field was greatly facilitated using solar powered laptops. Regular car batteries charged by two solar panels provided an operational autonomy of two weeks. Data was "cleaned" as it was entered in the field resulting in a savings of many weeks of work later on.

o Preparing budgets in third world countries with high inflation rates is often an exercise in frustration. However, by using real exchange rate data from a local bank it is possible to make reasonable projections for budgeting project activity costs.

o By combining a computer, printer and stencil duplicating machine the preparation of instructional materials requiring numerous revisions is greatly facilitated. Excellent stencils may be cut using an ordinary dot matrix printer.

o Using computer generated scenarios can be helpful in assisting decision makers in making long term health policy. The 1986-1990 national health plan of Zaire which planned the number of health zones and health centers to be created each year was developed by using spreadsheet projections of PHC coverage. It was then a half hour's work for a forum of health experts to choose which scenario they felt best fit Zaire.

2.6.2 DISTRIBUTION STRATEGY FOR PROJECT COMMODITIES

SANRU became an expert in getting commodities to their final destination with almost no losses in route. See Box 2.10 for an explanation as to how this system was organized.

2.6.3 BUDGET PREPARATIONS

SANRU also became an expert in the prepartion and revision of budgets for USAID, the MOH, the World Bank and the Ministry of Plan. At one World Bank meeting to discuss project proposals by the MOH I raised the question if NGOs were invited to submit projects. After I received an affirmative reponse I prepared a budget within an hour for a project to be submitted by ECZ (see Box 2.11). The $16,000,000 project was accepted by the World Bank for financing within a few days.

Box 2.11

1989 ECZ/SANRU PROPOSAL FOR A PROJECT FUNDED BY WORLD BANK/PASS

		40 Health Zones & Hospitals assisted by SANRU	10 Health Zones & Hospitals not assisted by SANRU	20 Hospitals who are not managing Health Zones	3 Regional Meds Depots managed by ECZ NGO	
	Unit Cost	Amount	Amount	Amount	Amount	TOTALS
SUPERVISION:						
Vehicule + 3 motos	$53,000	$1,060,000	$530,000	$530,000	$159,000	$2,279,000
2 Motos + 4 V{los	$11,000	$220,000	$110,000	$110,000	$0	$440,000
Subside Superv/Fonc. (5 ans)	$25,000	$1,000,000	$250,000	$250,000	$75,000	$1,575,000
REHABILITATION D'INFRASTRUCTURE						
Rehabilitation Hopital ou Pharmacie	$50,000	$1,000,000	$500,000	$500,000	$150,000	$2,150,000
Rehabilitation CSR/CS	$10,000	$200,000	$100,000	$100,000	$0	$400,000
SYSTEMES SOLAIRES						
Frigo Solaire + installion lumiere	$10,000	$400,000	$100,000	$200,000	$30,000	$730,000
Radio-Phonie Solaire	$6,000	$240,000	$60,000	$120,000	$18,000	$438,000
SYSTEME ADDUCT.D'EAU (ou 33 Puits)	$100,000	$1,000,000	$500,000	$1,000,000	$0	$2,500,000
APPUI EN EQUIPEMENTS						
Appui en Equipement Hopital	$30,000	$600,000	$300,000	$300,000	$0	$1,200,000
Equipement CSR	$10,000	$200,000	$100,000	$100,000	$0	$400,000
Equipement Depot en r{gion	$30,000	$0	$0	$0	$90,000	$90,000
FORMATION DU PERSONNEL:						
En Protection M{re et Enfant	$1,500	$60,000	$15,000	$15,000	$0	$90,000
En Developement Communautaire	$1,500	$60,000	$15,000	$15,000	$0	$90,000
En Gestion et Viabilit{ SSP	$1,500	$60,000	$15,000	$15,000	$0	$90,000
APPUI TEST SIDA						
Equipement Laboratoire	$2,000	$80,000	$20,000	$20,000	$6,000	$126,000
Produits et Tests (1000 tests)	$5,000	$200,000	$50,000	$50,000	$15,000	$315,000
APPUI EN MEDICAMENTS						
1er Stock Meds HGR et ZS	$25,000	$500,000	$250,000	$250,000	$0	$1,000,000
1er Stock Meds CSR	$5,000	$100,000	$50,000	$50,000	$0	$200,000
1er Stock Meds Depot en r{gion	$250,000	$0	$0	$0	$750,000	$750,000
RECHERCHE OPERATIONNELLE	$5,000	$100,000	$25,000	$25,000	$0	$150,000
FRAIS ADMINISTRATIVE (10%)		$708,000	$299,000	$365,000	$129,300	$1,501,300
		$7,788,000	$3,289,000	$4,015,000	$1,422,300	$16,514,300

PROJECTED UNIT COSTS AT KINSHASA:

Vehicule Tout-Terrain	$38,000	1 Sys. d'Adduction ou 33 Puits	$100,000
Moto + pieces	$5,000	Appui en Equipement Hopital	$30,000
Velos	$250	Equipement CSR	$10,000
Rehabilitation Hopital ou Pharmacie	$50,000	Subside Supervision Annuel ZS	$5,000
Rehabilitation CSR/CS	$10,000	Session de Formation (Niv. Z.S.)	$1,500
1er Stock Meds HGR et ZS	$20,000	Etude de Recherche Operationelle	$5,000
1er Stock Meds CSR	$2,000	Equipement Laboratoire	$2,000
1er Stock Meds Depot R{gion	$250,000	Produits et Tests SIDA (1000 tests)	$5,000

Box 2.10

ECZORT/SANRU DISTRIBUTION STRATEGY FOR PROJECT COMMODITIES

(excerpted from a May 13, 1985 memo to Leslie Fox, ORT)

1) ARRIVAL OF COMMODITIES: The ORT office will handle the arrival of commodities at Matadi (or Ndjili), their 'dedouanement' and transportation to an ECZ depot. All commodities of a like nature should arrive at the same time, i.e. all health center equipment.

2) RECEPTION OF COMMODITIES BY ECZORT: The ECZORT warehouse manager will sign provisionally for receipt of goods upon receipt of the bill of lading and inspection of the shipping containers. As it is not possible to complete an immediate inventory of goods this reception will be based on the number of cartons corresponding to the bill of lading. ECZORT will indicate if there are any missing or damaged cartons.

3) INVENTORY OF COMMODITIES: An exhaustive inventory will eventually be completed as the warehouse manager makes room for the new commodities. Each commodity will be registered on a inventory stock card.

4) REPACKAGING OF COMMODITIES: In the case of health center equipment and medicines it will be necessary to open all the cartons and then repackage as kits containing the standard list of equipment for a health center. Commodities arriving in partial shipments over a period of months or years, and requiring repackaging into a series of kits to be shipped to health zones at different times makes control on commodity distribution extremely difficult if not impossible. This is a problem which unfortunately occurred during the SANRU project and which should be avoided at all costs during the ECZORT project.

5) PREPARATION OF THE 'BON D'EXPEDITION': ECZORT project managment will determine for each project health zone the quantities of materials to be shipped. It most cases this is simply based on the number of Health centers to be assisted within a given Health Zone by ECZORT. The project administration will complete a 'Bon de Sortir' to authorize preparation and shipment of the commodities. The warehouse manager will be responsable to prepare the 'Bon d'Expedition' in four copies for inclusion in the shipment itself, for separate shipment by letter, for the Health Zone file, for the 'Bon d'Expedition' carnet.

6) SHIPMENT OF COMMODITIES: The ECZORT project management will determine the best route for shipment of goods which may be by road, boat, or air. The ECZORT project covers shipping costs to the bureau central of the Health Zone. It is thus possible that a shipement may require several transporters, example by air Kinshasa to Bunia, and by road Bunia to Rethy. In such cases the Health Zone is responsable for arranging the final leg of the trip, expenses to be reimbursed by the ECZORT project. In situations where an intermediate transportor is used a separate bill of lading will be completed to indicate the number of cartons and their weight without mention of the specific contents.

7) RECEPTION OF COMMODITIES BY THE HEALTH ZONE: An inventory of commodities is to be completed by the health zone. A representative of the NGO will sign one of the Bon d'Expedition for reception and return it to ECZORT. Mention will be made at that time of any missing items, cartons, and damage to the commodities.

8) LOCAL STOCKAGE AND DISTRIBUTION: ECZORT will supply the Health Zone with inventory stock cards for each commodity to set up their local control system. It is the responsability of the ONG to supervise and maintain this system. ECZORT reserves the right to inspect the stock cards and storage facilities during any visit to the Health Zone.

9) DISTRIBUTION OF COMMODITIES TO HEALTH CENTERS: ECZORT will supply the Health Zone with forms to facilitate the distribution and control of equipement sent to a health center. Forms will be of two types: an individual form for each health center (before and after receipt of equipment) and a summary form to indicate all ECZORT equipment that has been distributed.

Chapter 3. SANRU RELATES TO OTHER PARTNERS

The management of SANRU has always been a rather complex triangle between ECZ, USAID and The Ministry of Health. Given that each one of these structures has sub-structures which may relate directly or indirectly to SANRU, the result is a complexity of triangle within triangles. This chapter reviews those relationships during the past ten years.

3.1 RELATING TO THE MINISTRY OF HEALTH:

When SANRU I began Dr. Miatudila Maloriga was the GOZ/MOH representative to the project. Since he was also the director of CNND (the National Committee for Desirable Births), it was decided that he would be considered half-time at SANRU. He did not have an office in the SANRU building. He reported directly to the Minister of Health, though his contact was more sporadic than regular. Dr. Miatudila was one of the contributing authors of the 1982-1986 health plan and a keen promoter of health zones and working with NGOs.

3.1.1 THE FIFTH DIRECTION:

The administrative functions of the MOH at that time were divided into five "directions" including Hospitals, Personnel, Pharmaceuticals, Epidemiology and Nursing Schools. To give more importance to primary health care a new direction was created. It was called the 5th direction of Primary Health Care while the old 5th became the 6th direction of Nursing Schools.

The 5th direction was given the responsibility to supervise and coordinate activities of primary health care and health zones. Therefore SANRU was to report to the 5th direction who reported to the General Secretary who reported to the Minister of Health. We did not see this as a problem, and immediately began efforts to make the 5th direction as operational as possible.

One of the first and major accomplishments was to develop the format of the annual report for health zones through the 5th direction. This was completed before the end of 1983 after a series of meetings during which each national program was asked to propose a series of indicators for the primary health care components (e.g. PEV, CNND, and CEPLANUT). The other parts of the report evolved from a combination of existing report forms used by Belgian Technical Cooperation (CTB), SANRU and OXFAM. The report contains only a very minimum of information about hospitals and epidemiology because the 1st and 4th directions felt that we were infringing on their domain. SANRU accepted to pretest the report for a year or so, at which time a workshop would take place to revise and finalize the variables. Unfortunately, by that time the 5th direction was no longer quite so operational, so the report form was never accepted officially by the MOH, and was used primarily in SANRU assisted health zones.

The 5th direction reached its peak performance when Dr. Kalambay and Dr. Kahozi returned in from their MPH training at Tulane in early 1984. No one at the MOH had given much thought to where they would work so they were assigned to the 5th direction. They were eager to get things moving, yet had few resources at their disposal. What evolved was a dynamic collaboration between SANRU and the 5th direction that catalyzed the delimitation of health zones in a remarkably short period of time. Looking back, I'm amazed at how much we were able to accomplish with simply a few talented and energetic people.

The activity of the 5th direction seemed to threaten the other MOH directions who complained that the 5th direction was getting all the attention and all the resources. It

was even a greater threat to FONAMES, the sleeping giant, who the Minister of Health and the CTB envisioned as the structure best suited to coordinate PHC in Zaire. In 1985 SANRU sponsored a one day workshop, at the request of the 5th direction, to clarify their responsibilities. The workshop resulted in a concise clear document which, in retrospect was perhaps too clear, as it was perceived as a threat to the resurrection of FONAMES. Soon afterwards, the Minister of Health suspended the General Secretary for one month during which time Drs. Kalambay and Kahozi were removed from the 5th Direction and the power of the 5th direction was minimized allowing room for FONAMES.

3.1.2 FONAMES:

FONAMES was originally created during the Belgian colonial period as the institution to supervise the construction of dispensaries throughout the country. It also coordinated decentralized mobile teams for disease specific vertical control programs, e.g. sleeping sickness. By the mid 1970s FONAMES was virtually non-functional, yet possessed a large infrastructure and large staff that the MOH with support of the CTB felt could be revitalized as a para-statal organization to coordinate and fund primary health care in Zaire.

On the request of the MOH SANRU funded a conference in mid-1985 at Nsele specifically to discuss the FONAMES issue. The conference came up with a concrete proposal to make FONAMES operational which would involve multi-lateral support. The proposal called for a complete change of image including a new name (FONDS: Fonds National de Devloppement Sanitaire) and new streamlined administration. While the proposal was accepted by the MOH with minor modifications, the implementation of the project was stalled for several years due to political infighting about who would be the Director of FONAMES.

The 1986 Evaluation of the SANRU project recommended that SANRU should "encourage FONAMES to call inter-program meetings" and "integrate FONAMES into the health zone selection process". SANRU made a commendable effort to assist FONAMES with rehabilitation of their building, a vehicle, a computer and office supplies. FONAMES had every possible chance to fulfill its role as national coordinator of primary health care but never realized its potential (See Box 3.1).

3.1.3 THE LEGAL STATUS OF HEALTH ZONES:

The proposal to establish a legal status for health zones was to recognize the para-statal nature of the health zones which were rapidly developing and to assure an autonomy of management and planning. It was the story of a great idea which began with the management structures of early health zones, but got bogged down by the desire to design one model which could fit all health zones. The more work that was done on the document to try to include all contingencies, the more it became increasingly inflexible and centralized. In fact, we reached a point at which GOZ official approval would have been more of a hindrance than a help to health zones. See Box 3.2 for a year by year evolution of the legal status of health zones.

3.2 RELATING TO USAID:

SANRU's general relationship to USAID evolved with the expansion of the project, with the expansion of USAID HPN office, and with the leadership of USAID. In general there were three eras:

3.2.1 THE PODOL/THORNTON ERA (1982-1985)

Because USAID was dissatisfied with the implementation of the PSSP project (1979-1982) through the MOH and its management by a Washington-based consulting firm influenced AID, this reinforced a strategy to provide assistance through NGOs and to involve an indigenous NGO in the day to day management of the Basic Rural Health

Box 3.1
GOING THE SECOND MILE WITH FONAMES
(excerpted from Status of 1986 Evaluation Recommendations)

OBJECTIVE: ENCOURAGE FONAMES TO CALL INTER-PROGRAM MEETINGS

March 87- At SANRU initiative a meeting of FONAMES, UNICEF and SANRU took place in Feb. 87 to propose principles for coordination of donor assistance and to propose 280 Health zones are to be assisted by SANRU (100) and UNICEF (184). Assistance by SANRU or UNICEF does not exclude other assistance. In particular the status of Belgian assistance to Health Zones also assisted by SANRU remains to be specified.

Sept. 87- At SANRU initiative FONAMES called a meeting of various agencies to discuss the development of sub-regional pharmacies. However, what began as a SANRU effort to create decentralized depots managed by NGOs resulted (by 1989-1990) in a DCMP/FONAMES effort encouraged by the UNICEF "Bamako Initiative" to revive DCMP state managed regional depot pharmacies. The result was a complete disaster and set back SANRU efforts several years. It was this kind of impulsive action on UNICEF's part and their general unwillingness to collaborate with SANRU experience and/or work through NGOs, that made SANRU skeptical of UNICEFs capabilities.

April 88- We have received official and unofficial complaints from Health Zones about the "repartition" of health zones that was done between UNICEF and SANRU. Most of the complaints made to SANRU were naturally from health zones targeted for UNICEF assistance, but who say that they are receiving little or no UNICEF support and/or that the UNICEF package of assistance is not nearly a well balanced as that of SANRU. Our response to such complaints was that the health zone should contact FONAMES who has the responsibility of coordinating donor assistance. SANRU encouraged FONAMES to call more meetings for coordination of activities in the areas of:

- supervision of health zones
- coordination of training programs
- identification of health zones intervenants
- identification of regional/sub-regional intervenants
- types of assistance to be provided to health zones
- identification and assistance to "sub-regional" pharmacies

A meeting was called in 1988 with all intervenants to review who was assisting which health zones. UNICEF proposed at that meeting that the SANRU package of assistance should be the model on which all intervenants develop their program assistance. Hope ran high, that an equitable assistance to health zones would result (but it never did).

July 1990- With Dr Tshibasu as the new PDG of FONAMES, hope was renewed for activating FONAMES, but this proved to be short lived. While the World Bank (PASS) indicated that FONAMES would play the leading role in planning and distributing assistance, this was never given a chance to happen. It was apparent that there was a complete lack of confidence by major donors, including USAID, to collaborate with FONAMES.

July 1991- With the Ministry of Health and FONAMES non-functional and faced with mis-management in many health zones, SANRU pushed for the co-management of health zones. SANRU insisted that FONAMES call a meeting during which there was general agreement that donors should condition their assistance on improved health zone management. A commission was appointed which resulted in specific recommendations to strenghten the co-management of health zones by appointing an NGO (ususallly the NGO based at the HGR) as co-gerant of the health zone. This report received strong support of USAID, UNICEF and the MOH. SANRU began to implement these recommendations as part of the "Health Zone Forums" strategy.

Box 3.2

THE LEGAL STATUS OF HEALTH ZONES

(excerpted from 1984 and 1986 Status of Evaluation Recommendations)

1983: The first draft of the legal status of health zones was presented at the 1983 SANRU conference where participants made written comments and suggestions which were included in the second revision.

1985: SANRU financed a conference at Nsele to revise the health zone legal status proposal which included participants form the national and health zone level as well as the three major church groups. The result was too "heavy" in its administrative structure and did not really address the key issue of managment of health zone resources.

1987- ECZ expressed its concerned that the health zone statues specify the working relationship between the GOZ and ECZ member communities in the management of Health Zones. A Mbanza Ngungu Charter conference between representatives of organizations (including church and state) assisting in the management of health zones raised some hope of finalizing the legal status.

1988- The issue was discussed at the SANRU annual conference and a formal recommendation to the MOH was made requested action to recognize the legal status of health zones. Later, a rash of health zones with management problems developed in which the MCZS was in conflict with the HGR direc and/or the NGO designated to manage the hospital/ZS. Some ECZ leaders would like to see a convention signed between the ECZ and GOZ to turn over the management to the church with the MCZ under contract to the church. Some DSP leaders would like to see the MCZS as the manager of a GOZ ZS with the church playing a role is logistical support services.

1989 - The SANRU annual conference dealt with management issues as the central theme. The problems of health zones statues, NGO/GOZ collaboration and the principle co-management were discussed.

1990- SANRU developed and pre-tested the idea of INDICATORS DE GESTION DES ZONES DE SANTE as the basis of an "accord" that health zones assisted by SANRU must respect in order to continue receiving assistance in 1991. The message is this.

a) There exist various management models/strategies which are able to assure good (and bad) management of health zones.

b) The proposed statues of health zones are one possible model which may be suitable to some (but not all) health zones. The failure of the statues has been that it has tried to impose one (heavily centralized) management model on all health zones.

c) Flexibility is needed within in our SANRU "accord" to permit the ZS to choose from a range of several good management tools. The INDICATORS DE GESTION DES ZONES DE SANTE suggests that there are several acceptable mechanism for each management structure from which the health zone may choose.

1991- SANRU managed to get the co-management principle approved by at a meeting of partner agencies. A commission was appointed which resulted in specific recommendations to strenghten the co-management of health zones by appointing an NGO (ususallly the NGO based at the HGR) as co-gerant of the health zone. This report received strong support of USAID, UNICEF and the MOH. SANRU began to implement these recommendations as part of the "Health Zone Forums" strategy.

(SANRU) project. Things were much simpler in those days, i.e. prime schedules were determined by the projects rather than standardized by USAID and each project developed its own accounting system which was inspected an approved by USAID. I prepared the Project Status Report and presented it at the quarterly meeting at USAID. There was in good communication between USAID and SANRU since there were not so many people involved. I was considered the USAID representative to the SANRU project as well as the SANRU project manager.

3.2.2 THE CHANDLER/POST ERA (1985-1989)

This period corresponded to a period of increased expansion and centralization and management by USAID. The USAID SANRU project officer became the spokeswoman for USAID at the SANRU committee meetings. The USAID project officer prepared the extremely detailed quarterly Project Implementation Report with less input from SANRU. Project personnel were no longer invited to attend the quarterly meetings at USAID. CPF prime schedules and accounting procedures were standardized and revised every several months. With regards to SANRU, USAID placed more emphasis on its bilateral partnership with the MOH rather than the tri-lateral collaboration with the MOH and ECZ. These actions resulted in a general attitude of "we" (project) versus "they" (USAID) that made communications and collaboration more difficult.

3.2.3 JOHNSON/MARTIN ERA (1989-1991):

By this time it was apparent that the increased emphasis on FONAMES and the MOH was bearing little positive fruit, so there was once again an emphasis on getting things done through SANRU rather than through the MOH. This permitted SANRU to resolve the power struggle with the Minister of Health, and remain in control of the day to day management of SANRU. A SANRU representative was invited to participate occasionally at the quarterly project reviews, and there was an effort to get project personnel together on a regular basis with USAID staff to discuss cross-cutting issues such as health education. See Box 3.3 for the SANRU activities reported in the Project Implementation Review for April 1991. Collaboration between SANRU and USAID improved remarkably except in the area of procurement and salary payments which only became increasingly frustrating as other divisions within USAID got involved.

3.2.4 COMMODITY PROCUREMENT BY USAID:

Management of dollar funds was always the responsibility of USAID. SANRU would formulate a request and specifications for a certain type of assistance (commodities, training or technical assistance). It was then USAID's role to complete the paperwork and make the arrangements for delivery of the commodity to SANRU or travel of the participant for a training program.

SANRU I procurement problems were primarily with the commodity rather than with the procurement procedure. Specific problems that existed were:

- o Four Wheel drive US produced vehicles (Chevys and Jeeps) are inappropriate to rural conditions of Zaire
- o American coaster brake bicycles (Ross) are sturdy but difficult to repair because of lack of spare parts locally
- o US purchased medicines are inappropriate in dosages and packaging for use in Zaire
- o UNICEF TBA midwife equipment took years to arrive.
- o Back ordering and split shipments results in receiving equipment in dribbles rather than all at once. This prevents a rational repackaging and distribution of commodities.

The SANRU II project included waivers for vehicles, bicycles, medicines, and dollar conversion for local cost financing in order to resolve the procurement problems.

Box 3.3
SUMMARY OF A SANRU REPORT TO USAID
(excerpts from the April 1991 Project Implementation Review)

An expansion of HIV TESTING from 5 to 25 hospitals has been proposed. The health zones have confirmed their participation. The project is on hold because AIDSTECH funding ends in Sept 1992 and no salary for the SANRU countepart (who is a GOZ MD) is available.

SANRU/TECHNOSERVE teams completed the draft manual for the financial information systems which SANRU served for an in-service Peace Corps training. We discussed with Health Financing Systems representatives (Bitran and Barker) possibilities for collaboration, however, we must first assure the salary of the SANRU counterpart, A GOZ MD.

A proposal for DECENTRALIZED DEPOTS was prepared by SANRU for integrating and closely monitoring contraceptive distribution, but the funding mechanism, either Population Council or cooperative agreement with ECZ or CPF needs to be clarified.

GRAVITY-FLOW ADDUCTION projects in collaboration with SNHR which were begun in 1990 have not yet been terminated. $100,000 worth of plastic pipe for the Bokoro adduction is needed NOW, but has not yet to be ordered by USAID.

SUPERVISION AND MEDICINE SUBSIDIES were disbursed to health zones late in 1990. The original value of the assistance which was programmed in the 1990 budget was $416,000 (Z650 Z/$). The value of the assistance at the time we sent it was $160,000 (Z1700/$). The value of the assistance by the time the ZS received and processed it was probably around $100,000. Had we received and disbursed that assistance to the health zones in March 1990 as programmed, our assistance would have been four time more effective.

Two IMPACT STUDIES are programmed for 1991. However, the absence of an approved budget and the slow release of CPF does not permit us to go ahead with this work.

TEAM BUILDING SEMINARS and to promote operations research and co-management at the health zone level have been successfully field-tested. These seminars are the best hope for straightening out the major management problems that have been provoked in many health zones because of poor GOZ/NGO collaboration.

An IVERMECTIN DISTRIBUTION PROPOSAL was prepared with the MOH national Oncho office and the International Eye Foundation, however, funceing is blocked by the Brook Amendment. River Blindness Foundation is another possible funding source.

The SANRU NATIONAL (ANNUAL?) CONFERENCE is scheduled for August 12-17, 1991 around the theme of Health Education. This will also be a celebration of the 10th anniversary of the signing of the original Basic Rural Health Project (August 13, 1981).

BUDGET PREPARATIONS have been in great demand. In addition to revising the 1991 BI proposal and the 1990 CPF budget on several occassions, we went through several revisions of a 1991 BI proposal and at least ten scenarios for the CPF 1991 budget.

The WATER/SANITATION FLIPCHART has been completed and distribution to health zones and Peace Corps volunteers has begun.

CPF CERTIFICATION of SANRU has been completed by USAID. In conjunction with this, SANRU has implemented a change in its organigramme which subdivides the Administration into two subdivisions: Administration/Personnel and Finance, Materials, Informatique.

FSN SALARY COMPATIBILITY for SANRU was a bold move by USAID which got bogged down by USAID internal debate about "ZNPS", "ZIPS" and "HOPS".

Box 3.4

PROCUREMENT OF SOLAR REFRIGERATORS/LIGHTING SYSTEMS

(excerpted from a Jan 6, 1988 memo to USAID)

The SANRU II project paper established the objective of installing 150 solar refrigeration/lighting systems in reference hospitals and reference health centers. By the end of 1987, according to the PP schedule, we should have already installed 51 systems (see table below). Actually we have installed to date one system (in 1986) which was purchased with CPF contingency funds. This means that only 2% of the 1986-1987 target has been achieved.

	1986	1987	1988	1989	1990	1991	1992	LOP
Install. solaire	22	29	26	28	18	17	10	150
Cumulative	22	51	77	105	123	140	150	150

SANRU has a full-time solar technician on its staff to supervise the installaTion of solar systems, and a second technician who is already trained and scheduled to be hired in 1988. The skilled manpower to install the systems is therefore not lacking. What is lacking is the equipment.

The vaccination (PEV) program is one of the pillar activities for the startup of primary health care within a health zone. The lack of a vaccine conservation system means, therefore, that not only the vaccination program but the development of the whole health zone may be delayed.

Each solar installation system is intended to provide vaccine storage at a reference health center to make vaccinations accessible to a catchment population of around 10,0000-20,000 people. This includes about 4,000-8,000 children and women of child-bearing age who are the immediate target group for the vaccinations. The fact that we do not now have solar refrigeration systems in the 50 centers planned for 1986-1987 means that between 200,000-400,000 women and children do not now have ready access to vaccinations as planned by the project. The result is inevitably deaths of children which could have been avoided.

Delaying the procurement of solar commodities another year will mean a worsening situation in which 300,000-600,000 women and children would not have the ready access to vaccinations. We should recognize that the cost of delayed procurement will be include additional lives lost.

The ECZORT project installed 40 solar refrigeration systems and found the FNMA locally produced refrigerator to be superior to the Marvel system produced in the U.S. The local production, availability of spare parts, and excellent back-up service provided by FNMA certainly argues for a local procurement of the whole solar system. FNMA imports ARCO (American made) solar equipment and is the official dealer in Zaire for ARCO.

The SANRU project cannot afford additional delays of up to one year or more before beginning its solar installation program, delays that will keep us from attaining project objectives and result in unnecessary deaths. I recommend that USIAD make an immediate local procurement of solar equipment through FNMA.

[Despite this memo, previous memos, and tremendous efforts on part the USAID SANRU Project Officers, procurement of FNMA solar systems did not occur until three years later in mid-1991. Almost all of these refrigerators and solar panels were lost during the September 1991 looting of Kinshasa.]

Despite these efforts and the addition of a procurement officer at USAID, certain types of procurement (solar refrigerators and plastic pipe) were strangled by internal USAID politics and/or a monthly change in the procurement regulations (see Box 3.4). This became even more frustrating after procurement through the ECZORT project which was handled by ORT went relatively smoothly. This demonstrated that it wasn't the procurement procedure that was so difficult, but rather USAID approach to procurement.

3.3 RELATING TO ECZ:

The medical infrastructure of the ECZ has always been strongly decentralized. The role a small ECZ medical before SANRU was to distribute GOZ subsidies if/when they were provided and in obtaining MOH approval for incoming medical missionaries. ECZ's role in the early promotion of primary health care, family planning and design of the Basic Rural Health project is described in Box 4.1.

Bishop Bokeleale considered ECZ ties to the U.S. as historically strong. Many of the current ECZ leaders grew up in rural protestant missions affiliated to Americans missions. Many were taught by American missionaries. Approximately 50% of the 60+ ECZ member communities are affiliated with sister churches in the U.S. This is in contrast to about 25% affiliated to European churches and 25% with no specific affiliation outside of Zaire. These strong ties to U.S. churches is the principle reason why ECZ was open to a project funded through USAID.

ECZ gave SANRU a free hand in the organization and management of the project. The SANRU director attended the weekly meetings of the ECZ staff at which time any concerns or problems relating to SANRU were discussed. There was naturally some jealousy within ECZ as the rapid expansion of SANRU created an infrastructure that was nearly as large as ECZ itself. There were also infrequent complaints that ECZ wasn't getting anything from SANRU, but SANRU's monthly contribution to paying part of the ECZ water/electricity bill and occasionally providing vehicles when ECZ cars were in the garage kept such complaints to a minimum.

Some observers felt that ECZ wasn't really managing SANRU. Ministry of Health officials would ask "What is ECZ doing to manage SANRU, anyway?" Our response, especially to the MOH, was that Ecz's greatest contribution as the manager of SANRU was as long list of things they did **not** do. ECZ did not:

- o force SANRU to work with non-functional ECZ hospitals
- o request SANRU pay for trips home to make "supervision" visits
- o request SANRU to cover ECZ budgetary expenses
- o prevent SANRU from hiring non-Protestants
- o prevent SANRU from collaboration with Catholic managed health zones
- o request cash contributions for ECZ activities
- o try to centralize decision making with an ECZ committee

3.4 RELATING TO CENTRALLY FUNDED PROJECTS:

SANRU was asked over the years to collaborate and even "buy-in" to numerous centrally funded projects such as REACH, PRICOR II, HEALTHCOM, MEDEX, SIDA/PSI, WASH, INTRAH, MSH, PATHFINDER, AVS, etc. Given the diverse nature and objectives of these centrally funded projects the extent of SANRU collaboration varies considerably between projects, i.e. SANRU input into WASH project activities in Zaire was considerably greater than that with AVS or INTRAH.

SANRU involvement in the in-country project design and implementation of centrally funded projects would and should vary with the specificity of the centrally-funded project to SANRU objectives. SANRU always tried to avoid buy-ins with centrally-funded projects whose objectives and/or project design (including SANRU's input) were unclear. There were three types of relationships established with centrally funded projects.

3.4.1 SANRU BUY-IN FOR SHORT-TERM TECHNICAL CONSULTANCIES:
In response to the completion of a specific SANRU objective it might be decided that outside technical assistance from a centrally funded project would be desirable. A scope of work was drawn up by SANRU and USAID would contacts the appropriate centrally funded project to determine consultant availability. Consultant costs were covered either by the centrally funded project or SANRU, or in the case of a series of consultancies by shared costs. The consultant was provided office space and logistical support relating to the consultancy by SANRU. The preparation of a final report was the responsibility of the consultant who provided a draft for review by SANRU and USAID before departure. Such consultancies were specific to SANRU and did not generally involve collaboration with other USAID projects. Such consultancies generally required the full-time input of one SANRU staff person and part-time input in supervision of the ongoing work. There were no long-term in-country technicians supported by these activities.

Collaboration with centrally funded projects that fell into this category have included:

ACNM - Development of the TBA training program
WASH - TOT for National Training Team Water/Sanitation
PRITECH - Develop impact study protocol and data analysis

3.4.2 PROJECTS WITH NO SANRU BUY-IN:
SANRU was occasionally requested to collaborate with centrally funded projects while the coordinating role was through another USAID project, with objectives not specific to SANRU. SANRU's inputs in this case were minimal and generally limited to participation in meetings for needs assessment and/or proposing possible interventions. There was no SANRU buy-in. In-country logistics and supervision of the consultant were covered by the coordinating USAID project. SANRU did not provide full-time staff for the consultancy and did not review the final report. SANRU participated as requested in select activities of the project as they relate to SANRU objectives. Examples included:

INTRAH - Various training programs coordinated through PSND
MSH - Various training programs coordinated through PSND
AVS - TOT program for mini-lap
JHPIEGO - regional family planning seminars financed by JHPIEGO
PCS - Consultant for mass-media strategy development in family planning

3.4.3 LONG-TERM PROJECTS WITH SANRU BUY-IN:
An increasing amount of SANRU time and money was being directed to participation in centrally funded projects whose activities carried over a period of several years. The projects were usually organized as a series of mini-projects without the presence of a long-term technician from the centrally funded project (REACH) or as a continuous ongoing in-country "project" with long-term part-time or full-time in-country technicians (PRICOR II). The projects encompasses a scope of work that was very specific to SANRU objectives (REACH, PRICOR II) or in which SANRU objectives were of a more marginal interest (HEALTHCOM) to those of other collaborating projects/agencies. The in-country logistical support and supervision was through SANRU (REACH) or through another project/agency. Full-time SANRU staff

participation were usually required during specific project phases and often in the preparation of final reports. Projects included were:

REACH -series of three cost financing studies
PRICOR II - series of operations research studies with health zones
HEALTHCOM -training of trainers for health education
MEDEX - proposed curriculum development with the 6th direction

3.4.4 THE BEST CENTRALLY FUNDED PROJECT:

If I were asked to choose the centrally funded project which was most helpful to SANRU and the easiest to work with, I would nominate WASH (Water and Sanitation for Health) assistance as the very best.

WASH always placed a priority on meeting our projects needs rather than imposing activities and ideas from their agenda. This was not been the case with some centrally funded projects who come with a predetermined game plan that they expect us to adapt to.

WASH emphasized continuity of consultant assistance by having repeat visits by the same consultant. The three TOT sessions were a good example of this approach where a team of two consultants were supplied - one, a Zaire veteran, who had worked previously with SANRU and the other, a new consultant, to supply fresh ideas and approaches.

WASH consultants adhered to the planned scope of work and work schedule, yet been flexible to respond to unexpected project needs. They were always willing to go the second, and third mile to assist us in evaluating, revising, and planning SANRU assistance.

WASH modified its assistance with respect to the developing capacity of SANRU. Where WASH provided trainers of ZS personnel during SANRU I, they changed (when we were ready) to providing trainers of trainers of ZS personnel for SANRU II, and in the future would probably have limited assistance to program evaluation and continuing education for TOT. SANRU I/WASH I and SANRU II/WASH II collaboration could be a case study as to how centrally funded projects can best be supportive of bilateral projects.

3.5 RELATING TO INTERNATIONAL AGENCIES:

Most international agencies working in Zaire would eventually get in contact with SANRU for one of the following reasons:

- o SANRU was the best source of documentation for primary health care and ministry of health documents
- o SANRU was active in all component areas of primary health care
- o SANRU could provide a good overview of PHC in Zaire
- o SANRU had a historical memory of strategies tried and lessons learned

To provide a sampling of the kinds of organizations which contacted SANRU and the topics of discussion for possible collaboration Box 3.5 relates the contacts made during the month of December 1988 with various international agencies and consultants.

Often the interest of an international agency (Eg. River Blindness Foundation) might be focused on a specific component of primary health care (Ex. endemic disease control) or even on a specific disease (Ex. Onchocerciasis). Their interest would be to use the infrastructure of SANRU to integrate their "vertical" interest into the "horizontal"

Box 3.5

CONSULTANT SEASON

(excerpted from the SANRU December 1988 report to USAID)

A combination of an end-of-the-year rush and cold weather in the North appears to have resulted in a deluge of consultants from USAID, World Bank, UNICEF, OXFAM and OMS during the past two weeks. Each consultant/visitor to SANRU required at least two hours in order to provide an overview of SANRU and primary health care in Zaire as well as a discussion of topics pertinent to their particular terms of reference. Here follows a list of persons contacted and topics discussed during the past month.

Dr. Amadou Barry - UNICEF expert/consultant:
- o Plans for the "Bamako initiative" in Zaire
- o Need to review the number of "sub-regional" pharmacies
- o Need to give management of pharmacies to ZS representatives
- o Possible revision of ZS to be assisted by UNICEF
- o Need for training of health center committees
- o UNICEF vs. SANRU strategy/assistance to Health Zones

Claudio Garcia Moreno - evaluateur OXFAM:
- o Evaluation of OXFAM assistance since 1978
- o Organizational structure of health zones
- o OXFAM emphasis on community development

Friedhelm Peel & Annie Manou-Savina - World Bank/UNDP for water/sanitation:
- o Development of didactic materials for W/S
- o Concept of "Village Assaini" for national W/S plan
- o Role of ZS in W/S activities
- o SANRU experience with VIP latrines
- o SANRU experience in TOT ENFEA and Coord. W/S
- o Promise to send more WB documentation

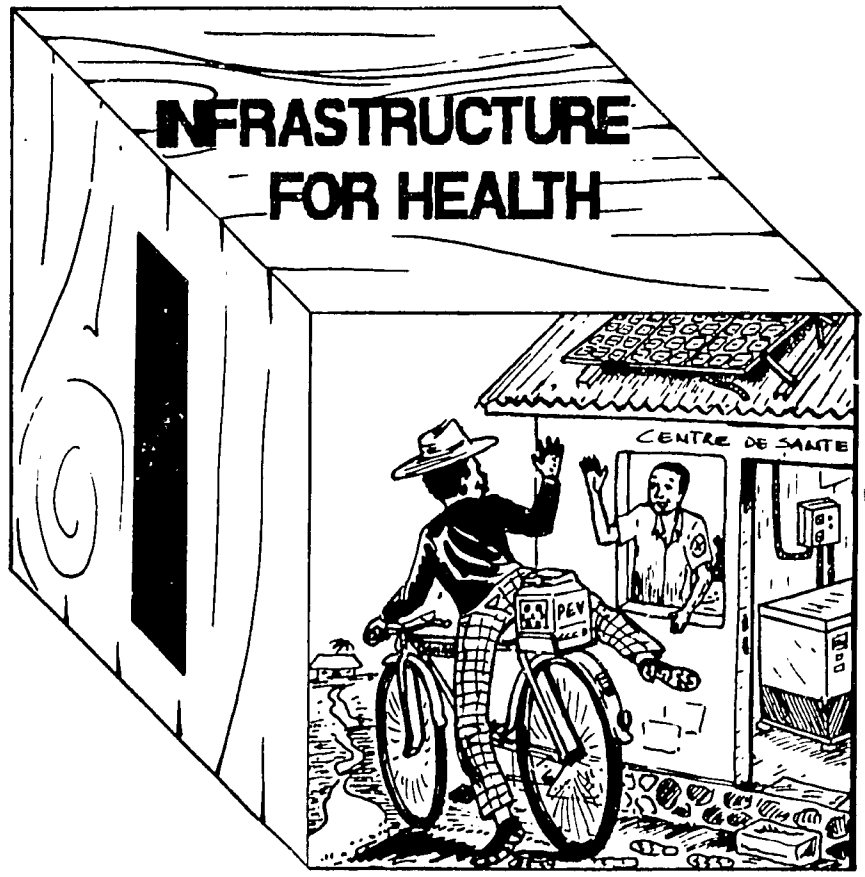
Tom Bossert and Nancy Mock - USAID consultant for sustainability study:
- o comments/revisions on their draft report
- o comments/evaluation of terminated AID health projects
- o a detailed summary of my remarks is annexed

Mme. Le Doux - consultant OMS for ITM reinforcement:
- o SANRU efforts to work with 6eme direction
- o need for technical guide for curriculum application
- o OMS objective to set up task force to work with 6eme direc.
- o OMS priority to reinforce CCCD activities in the ITM curriculum

Jacques Baudouy - World Bank team
Jean Claude - Sociologist with World Bank
M. J Marc Guimier - Economiste with World Bank
Ricardo Bitran - Economiste with World Bank
- o SANRU strategy to reinforce supply line for medicines
- o Need to review the number of "sub-regional" pharmacies
- o Need to give management of pharmacies to ZS representatives
- o DCMP vs subregional vs NGO management of pharmacies
- o WB proposes to ask for revision of statutes with more NGO input
- o Mechanisms for getting WB assistance from Plan to the ZS
- o WB vs B.A.D. investment projects

integrated efforts at the health zone level. SANRU's data base of health zones facilitated an assessment of the extent of the problem and permitted developing various intervention scenarios. Box 3.6 provides an example of a project which was developed for the distribution of Ivermectin in rural health zones endemic with River Blindness.

SANRU played an important role in the development of several projects to be financed by international donors such as the World Bank, PNUD, and River Blindness Foundation, even when SANRU was not directly implicated in the management of the project. A good example of this is the Radio Phonie project to establish a network of radios at the health zone, subregional, regional and national levels. The issue was discussed at a SANRU annual conference. When I learned that World Bank might give serious consideration to such a project if it were proposed by the MOH, I sent a memorandum to FONAMES (see Box 3.7) outlining the objectives and justificatic for such a project, and requesting FONAMES to ask SANRU to provide a consultant for a feasibility study. The feasibility study was done quickly and efficiently, and within the space of several months a concrete project proposal was submitted to World Bank for funding.



Box 3.6

IVERMECTION DISTRIBUTION PROGRAM

(excerpted from a 1991 Project Proposal to River Blindnes Foundation)

Onchocerciasis is endemic to more than 60 of the 306 health zones of Zaire and affects a population of 6 million people. Distribution of Invermectin has been limited to a handful of health zones for clinic based treatment of infected persons. Community based distribution programs are non-existent.

Zaire's health zone structure as the organizational unit for implementing primary health provides an excellent potential for integrating the distribution of Ivermection, but few health zones have the resources to implement a mass distribution.

This project will assist rural health zones endemic with Onchocercaisis to implement community based Ivermection distribution. Assistance provided to the health zones and their health centers will include bicycles, motorcycles, fuel/vehicle maintenance support, office supplies, small equipment, medicines, and training of health zone, health center and community health workers.

In the first project year assistance will be provided through five functional health zones and four health centers per health zone per year. By the end of the project the Ivermection coverage in these Group A health zones will be around 60% of their total population. Health zones neighboring to those of Group A will subsequently implement Ivermection distribution beginning year two. By the end of year three the Ivermection coverage in these health zones should be about 40% of their total population. In all a population of 500,000 inhabitants will directly benefit from this project. Lessons learned will be shared with all health zones.

TENTATIVE LIST OF CANDIDATE HEALTH ZONES

REGION	HEALTH ZONE	ENDEM-ICITY	POPUL-ATION	POP. TO TREAT	AREA KM²	POP. DENSITY	HOSPITAL MANAGER
BANDUNDU	MOANZA	.40	150055	45016	7357	20	PROTESTANT
EQUATEUR	KARAWA	.40	318000	95400	12000	26	PROTESTANT
HAUT ZAIRE	YAKUSU	.40	80000	24000	7200	11	PROTESTANT
KASAI OCC.	DEKESE	.60	63000	28350	25000	3	CATHOLIC
KASAI OR.	KABINDA	.60	120000	54000	18000	7	CATHOLIC
KASAI OR.	LUSAMBO	.80	72408	43445	12000	6	GOVERNMENT
KASAI OR.	MINGA	.80	40000	24000	13000	3	PROTESTANT
KASAI OR.	KOLE	.40	67700	20310	17000	4	CATHOLIC
KASAI OR.	WEMBO NYAMA	.60	110000	49500	12540	9	PROTESTANT
KASAI OR.	TSHILUNDU	.60	106251	47813	11310	9	GOVERNMENT
			1,127,414	431,834	135,407		

YEAR ONE PARTIAL BUDGET FOR 5 HEALTH ZONES AND 20 HEALTH CENTERS

ASSISTANCE FOR HEALTH ZONES (HZ) AND HEALTH CENTERS (HC)	4 HC /YR	5 RHZ YR 1	UNIT COST	TOTALS
BICYCLES	8	40	$200	$8,000
MOTOTCYCLE	1	5	$2,000	$10,000
FUEL AND VEHICULE MAINTENANCE	1	5	$2,400	$12,000
OFFICE SUPPLIES	1	5	$500	$2,500
EQUIPMENT AND MEDICINES	4	20	$600	$12,000
TRAINING HEALTH CENTER PERSONNEL	8	40	$100	$4,000
TRAINING COMMUNITY WORKERS	20	100	$50	$5,000
HEALTH ZONE SALARIES (10%)	3	15	$1,318	$19,773
HEALTH CENTER SALARIES (10%)	8	40	$120	$4,800

Box 3.7

RADIO/PHONE COMMUNICATION SYSTEMS

(Memo to FONAMES that began the Radio/phonie project)

OBJECTIF: Améliorer la communication sanitaire au Zaire en établissant un système de communication par radio-phonie pour relier les niveaux Zones de Santè, Inspection Sous-régionale Médicale, Inspection Régionale Médicale, et Nationale.

JUSTIFICATION: Avec 306 Zones de Santé à travers le "continent" du Zaire la communication est rendue encore plus difficile par manque d'une infrastructure rurale téléphonique et par un système de poste trop lent. Le résultat de cette situation est un ralentissement des programmes des Soins de Santé Primaires et un gaspillage des ressources limitées. Voici quelques examples de l'amélioration des activités qu'on peut espérer.

- o Déclaration rapide des épidemies et d'autres urgences médicales
- o Mobilisation plus rapide des interventions d'urgences.
- o Assurer que le MCZS sera sur place avant une voyage de supervision des Z.S.
- o Reconfirmer des dates de formation avant de quitter la Zone de Santé
- o Surveillance réguliere des indicateurs sanitaires sélectionnés

Voici l'example de trois autres projects de communication par radio-phonie qui étaient déja realisé en Afrique:

1) Département de Santé Publique de Mali: Un système de 34 radio-phonies solaires (HF SSB radios) financé par la USAID, l'Italie, la Suisse, et l'Hollande.

2) Communication Inter-Agence de Mali: Un système de 60 radio-phonies solaires (HF SSB radios) pour rélier les agences de l'Eglise et les autres ONGs à travers 7 régions de Mali.

3) Communication Inter-Pays de 'OMS: Un système de 48 radio-phonies solaires (HF SSB radios) pour faciliter les contacts entre dix pays en Afrique de l'Ouest. Six unites possede aussi les machines telex. Le cout de ce projet était à peu pres $220,000 USD ($5,000 par radio).

Toutes les radios dans les trois projets ci-dessus ont la capacité de communiquer entre eux, mais le plus souvent ils passent par un centraliste. Le cout estimé par installation pour un projet semblable au Zaire est 6000 USD par installation avec panneau solaires, antennes, etc.

Tous ces trois projets a été executé par Mission Aviation Fellowship (MAF) y compris l'achat, transport, installation, et système de maintencance. MAF est un ONG de l'Eglise qui specialize en transport par petit-porteur. Ils sont déja bien établit au Zaire dans presque toutes les règions avec une vingtaine des avions. Le technicien qui a été responsable pour la conception et execution des trois projets est M Finnely Houston de MAF/Angleterre. Il est pour le moment à Mali, mais peut etre disponible pour venir au Zaire en mois de mai 1989 comme consultant pour l'étude de faiabilité.

ACTIONS PROPOSEES:

1) Finaliser un avant-projet pour proposer au Banque Mondiale en mois de fevrier. Il existe déja un interet exprimé par le Banque Mondiale de financer ce projet.

2) Inviter M. Houston de venir pour quelques mois de faire l'étude de faisabilité et preparer le projet détaillé. Cette activité peut etre financé par le projet SANRU vue que le financement du Banque Mondiale ne sera pas encore disponible.

Chapter 4. SANRU EVOLVES

4.1 THE EVOLUTION OF SANRU

Chapter 1 of this report described the evolution of health zones in Zaire which was one of the developing themes which created the need for the Basic Rural Health project. However, the story behind the design of SANRU I and its evolution through the years should be examined project by project:

BASIC RURAL HEALTH
!
SANRU I
!
SANRU/ECZORT
!
SANRU II

4.1.1 BASIC RURAL HEALTH AND SANRU I:

The Project Paper which was written by Richard Thornton, the USAID public health officer provides a good description as to how the Basic Rural Health Project was designed.

> The Protestant mission hospitals in recent years have become aware of the limitations of their hospital-base curative approach. The dispensaries have servied mainly as extensions of the hospital system and have been dispensing medicines in a largely curative mode. In the past several years a few of the hospital systems have begun to concentrate more on preventive and promotive activities, including family planning. Most hospitals have accepted this orientation but have not yet begun implementation, and it is to this task that this project can lend some timely assistance.
>
> As a result of these requests from individual ECZ hospitals, the ECZ and UASID entered into a dialogue on the possibility of USAID's funding one large project which would meet the needs of these ECZ member hospitals with their initiation and/or expansion of community health activities. This dialogue resulted in the joint preparation of a preliminary PID-like document for an OPG (Operational Project Grant) to the ECZ. This document was delivered to AID/Washington for review on August 4, 1980.

Within several weeks however, the project environment changed as:

> The GOZ/MOH recognized its limited absorptive capacity and the heavy demands on its system due to the large number of projects already underway. However, by participating in this project BRH§ the MOH also has recognized that it could gain much needed experience in the provision of primary health care. As a result, a dialogue was initiated between the GOZ/MOH, ECZ, and USAID which resulted in a modification of the project.

The modification which resulted was that Basic Rural Health became a bilateral project and that a few GOZ hospitals were to be included among the 50 rural hospitals assisted by the project. It was this modification that opened the way for SANRU to become a

project of national scope working with GOZ, Protestant and even Catholic hospitals. The pre-history of SANRU has also been described by Ralph and Florence Galloway who were working as Presbyterian medical missionaries assigned to the ECZ medical office (see Box 4.1).

4.1.2 ECZORT:

The SANRU I project provided funds for the transformation of 250 dispensaries into health centers. However the estimated needs for 50 health zones was for 1000 health centers. After the successful mid-term evaluation of SANRU, USAID asked what SANRU could do to expand activities if additional funding was available. Our response was, that more funds could permit the transformation of additional dispensaries into health centers.

The extra funding available was from a funding pot designated for NGOs. This resulted in AID making a $5,000,000 grant to an NGO (in this case ORT) to manage a series of development projects to be implemented through Zaire NGO groups. Three major projects were included in the grant - a hydroelectric plant at Rethy, Haut Zaire; a bridge building program through the Catholics in Idofa, Bandundu; and assistance through ECZ/SANRU to fund equipment, medicines and rehabiliation of 200 health centers.

This resulted in the design of the ECZORT project (which is simply ECZ + ORT). In ECZORT we were able to include and/or expand areas of assistance which had been overlooked in the design of SANRU I. These included more emphasis on the rehabilitation of health centers, solar refrigeration and lighting, solar pumps for water adduction systems, and medicine and equipment kits for health centers.

ECZORT proved to be a very successful project and accomplished nearly all of its original objectives. It provided SANRU with an opportunity to improve and document it's operational procedures in areas such as distribution of project commodities (see Box 2.10) and financing health zone based training programs (see Box 2.1). ECZORT also demonstrated that procurement of commodities in a timely fashion is not impossible. It's greatest contribution, however, was serving as a pre-test of strategies to be inlcuded in SANRU II.

4.1.3 SANRU II:

The design of the SANRU II project build on the experience of SANRU I, including certain types of assistance which had been already proven successful in ECZORT, and added new areas of assistance including:

- o collaboration with SNHR to fund complex water systems including gravity flow water adduction systems and drilled wells
- o switching MPH training from the U.S. to the School of Public Health project at UNIKIN
- o providing logistical and equipment assistance to regional and sub-regional medical offfices
- o reinforcing FONAMES as the national coordinator for agencies working in primary health care
- o micro-computer systems for regional offices and selected health zones
- o solar refrigeration and lighting systems

Box 4.1

EVENTS LEADING TO THE CREATION OF SANRU 86
(as excerpted from a Feb. 1992 letter from Ralph Galloway)

1972: Ralph and Florence Galloway arrive to serve with the Church of Christ in Zaire in family planning and the "Project of Family Health" (PFH) which held maternal and child-health clinics in 19 parishes in Kinshasa. Women who wanted contraceptives were asked to come to the ECZ building on Friday afternoons. President Mobutu's famous Naissances Desirable speech of Nov. 24, 1972 quiets internal opposition within ECZ to family planning promotion. Contraceptives are purchased from Church World Services but many are stolen in customs.

1973: Pathfinder Fund finances printing family planning brochures. The PFH project moves to an ECZ health center. Contraceptives are available any day of the week.

1974: Family planning demand increases by commodity supply is difficult.

1975: Mr. Roberts, the USAID population officer, and former Methodist medical missionary to Wembo Nyama, contacts the Galloways about providing contraceptives which arrive via Pathfinder.

1976: ECZ begins depending on USAID for contraceptives. A new Pathfinder project is funded for travel to Shaba and the two Kasais to studis in contraceptive practise.

1978: ECZ medical office begins working with JHPIEGO training of doctors in laproscopy. James Conway of Church World Service is assigned to work with the ECZ development office.

1980: Mr. Richard Thornton becomes the USAID population officer. Thornton and Conway, both Irishmen, become friends and contact the ECZ medical office. USAID bringd out a Mr. Wilson to survey family planning in Zaire. His visits to ECZ hospitals in the Kasais recommend that USAID consider using the network of ECZ for increasing family planning in Zaire. Thornton meets with ECZ leaders, including Nlaba Nsona, to discuss a possible family planning project. A PID design team including Thornton, Conway and the Galloways make a tour of nearly all major ECZ hospitals to assess their expressed needs a family planning and public health project.

1981, Mar-May: The initial draft of the Project Paper is prepared by Conway and undergoes considerable revision by Thornton. Conway is interested in becoming the project manager as his term with CWS/ECZ terminates in June. Meanwhile Frank Baer happens to come through Kinshasa. He had worked in the rural health zone of Vanga and is completing his doctoral program in International Health at Tulane. ECZ feels he is well qualified for the position of project manager.

1981, Aug 13: The Basic Rural Health Project is signed by the USAID director Norman Sweet, the Minister of Health, Dr. _____ and Bishop Bokeleale of ECZ.

1981, Oct-Nov: USAID brings Frank Baer to Zaire for one month to develop an implementation plan for the project. Frank signs a contract with USAID to serve as project manager.

1982, Jan: Frank and his family arrive in Kinshasa. SANRU-86 project begins activities with Nlaba Nsona (director), Dr. Miatudila (GOZ representative), Dr. Franklin Baer (project manager), Rev. Ralph Galloway (Accounting), Florence Galloway (training) and M. Dianzola (secretary).

4.2 THE FUTURE OF SANRU

In SANRU II the project evolved from being a national project to a national program. People began to recognize that SANRU represented a channel through which assistance to health zones could be managed efficiently. Unfortunately the effort to transform SANRU from a USAID funded project to a PVO with a diversified funding base began too late (see Box 4.2) In retrospect, this concept should have been included in the design of SANRU II, rather than putting so much emphasis on reinforcing FONAMES and the regional/sub-regional medical inspections.

4.3 THE GOOD NAME OF SANRU

Over the years the name SANRU became synonymous not just with a project but with the whole rural primary health care effort throughout Zaire. This provided an important common denominator for health personnel scattered across the country to feel that their efforts were contributing to a global Health For All and SANRU strategy that was adapted to the specific circumstances of Zaire. The choice of the name SANRU was the starting point for creating this unity.

4.3.1 THE SANRU NAME AND LOGO

During the first few weeks of the project it was decided that the Basic Rural Health Project (660-086) needed a name that would be easily identifiable to health zone personnel as a Zairian effort. We decided to hold a naming contest within among the project staff. The winner was to receive a free dinner at the Intercon. Sheets of newsprint were taped onto the office wall, and over the period of a week the list of proposed names grew. While the list has been lost, there were over 50 names proposed among which were the following:

PSSPMR: Projet des Soins de Santé Primaire en Milieu Rural
SANMIRU: Santé en Milieu Rural
PRS: Projet Rural de Santé
PRSSP: Projet Rural des Soins de Santé Primaire
PROSAN: Projet Santé

SANRU, which was one of my own propositions, quickly emerged as a clear favorite. SANRU I was actually known as SANRU-86 which was a play on the project number (660-086) and the life of project (1981-1986).

We eventually encountered problems with the Háns Siedel group in Northern Equateur who, unknown to us, were financing a project which they had named "SANTE RURALE". They were convinced that we had stolen the name from them. Because of this we were always cautious to explain that SANRU did not mean "SANTE RURALE" but rather was an abbreviation for "Projet des Soins de SANte Primaires en Milieu RUral".

The SANRU I Logo was a hasty attempt to come up with something to put on a letterhead. The design was intended to show a father, mother and baby configured from the letters "SR-86". While it served its purpose, it was never well deciphered by many people, and aptly described by one Peace Corps volunteer "as a bunch of Ascaris Worms". We continued the search for a better logo.

Box 4.2
SANRU AS A PRIVATE VOLUNTARY ORGANIZATION
(excerpted from a September 19, 1991 memorandum)

The SANRU 1991 evaluation recommends that SANRU should consider becoming a Private Voluntary Organization (PVO). Here are some reasons why a PVO status might be of interest.

1) A SANRU PVO affiliated with ECZ could diversify donor sources and mechanisms for receiving funds - via a bilateral project with the GOZ, via a cooperative agreement between USAID and ECZ/SANRU or via direct grants/donations to SANRU.

2) Recognition as a PVO in the U.S. (or other countries) would permit people to make **tax-deductible** contributions to SANRU (even if it's simply a P.O. Box).

3) More funding agencies want to work through PVOs. PVOs with an U.S. administrative base and an in-country operational capacity will have the best chance to obtain funds.

4) Donors like UNICEF may hesitate to give to ECZ since they think (wrongly) that this supports only Protestant health work. Giving to SANRU is easier because we have a reputation of working with everyone.

5) There would be more interest in giving to a SANRU PVO that is in direct contact with the health zones rather than to an national umbrella agency like ECZ.

6) Recognition as a PVO in the U.S. would permit SANRU to bid directly on projects that are awarded only to U.S. PVOs.

7) A SANRU in the U.S. might be structured as a foundation to build up funds from which the interest could finance/supplement the administrative costs of SANRU.

8) PVO status would permit flexibility in designing a fair salary structure which is more independent of USAID or ECZ rates.

9) A SANRU PVO could establish an overhead which could cover GOZ primes and some operational/administrative services shared with ECZ, e.g. FAX/Telex system, cellular phones, utilities, rent (?), internal auditing service, etc.

10) A SANRU affiliated in the U.S. with a larger primary health care oriented PVO (like SAVE THE CHILDREN or WORLD VISION) could avoid the necessity of a big SANRU administrative structure in the U.S.

11) Agencies bidding on the next "Integrated Family Health Project" would want to work with a SANRU PVO. It may even be that the new Project Proposal would specify that the institutional contractor should work with ECZ/SANRU. A U.S. SANRU would get a much larger share of the pie than would an indigenous ECZ.

12) Affiliation of SANRU with a U.S. PVO procurement agency (along with a revitalized ZPRA?) could provide a greatly improved procurement system.

13) Incorporation of SANRU as a PVO in the U.S. isn't very expensive or complicated. It seems there's nothing to lose and quite a lot to gain.

One of the early project objectives was to print family planning posters. A missionary artist, Mrs. Washburn had prepared a series of drawings in consultation with Mrs. Florence Galloway. These included four images:

1) A Pregnant Malnourished mother
2) A Mother breast-feeding her child
3) A healthly well-spaced family of three children
4) A father holding a child

When we prepared for our 1983 annual conference, our local office supplier, TRACODI, proposed that we create a SANRU T-shirt. Since we had already decided to phase out the SANRU logo, we looked to the four images, and logically chose the Father with child as the best to put on a T-shirt along with the name SANRU. The T-shirt was a great success (except that the printing job was so poor that the image almost disappeared after two washings).

From that point on, SANRU became associated with the Father/Child Logo, and the next time we printed letterhead we made the change official. The SANRU logo appeared on flags, pins, buttons, calendars and helped make SANRU not a project but a national program.The ECZORT project logo was also conceived as a team effort, and even though the project only lasted two years, remained a popular design

4.3.2 BADGES, BUTTONS AND ETC

Primary health care programs sometimes take themselves too seriously. They tend to shy away from "Madison Avenue" promotions by rationalizing that such "frills" do not represent good management of limited resources. As a result there are few mass media methods, particularly in rural areas isolated from radio and TV, that give primary health care the good name it deserves. However, with a little creativity SANRU has shown that it was possible to develop appropriate promotional strategies through the use of basic visual media.

At the community level, 5 cm round metal pin badges and cardboard attestation cards are eagerly sought by community development committee members. The badges are worn proudly to meetings and ceremonies, and confer to these hard working volunteers the well deserved respect of their neighbors.

Health For All cloth flags (50 x 65 cm) are presented to communities as part of an official ceremony to recognize their completion of a village sanitation program which includes construction of latrines and protection of the water source.

Health centers providing PHC services are easily identified by a "Health For All" sign on the door, while inside, poster-calendars promote health messages and permit graphing monthly activities. Health For All T-shirt "uniforms" are also in great demand by the health personnel.

Other materials include a notebook with the "Ten Commandments of Health" and discrete "Health For All" pins for formal attire. All these items help get across the message and the good name of primary health care.

In preparation for the 10 year celebration of SANRU (1981-1991) a new line of SANRU promotional materials were developed with the SANRU logo including wrist watches, hats, and special award flags for health zones and individuals who had made a special contribution to primary health care in Zaire. Unfortunately the calling of the national conference in July 1991 forced us to postpone the SANRU annual conference which was scheduled for mid August.

4.3.3 THE SANRU CALENDAR

Despite the best of intentions, intensive training and quantifiable objectives, statistical reporting somehow inevitably becomes over-complicated, under-utilized and rarely understood.

For a health information system to be useful it must permit and encourage data analysis by the person collecting the information rather than waiting for feedback from a higher level. This is especially true at the level of the health center nurse who usually is the person most burdened with monthly reporting responsibilities. The information system should help nurses in setting program objectives, identifying what information to collect, analyzing the collected data and applying corrective feedback.

A good information system should to permit an evaluation of program accessibility, utilization and impact. Using the Pre-Natal Clinic (CPN) as an example the statistics collected should permit the nurse to answer the following questions.

- o What percent of women in the catchment area have access to the CPN? (Accessibility of services)
- o What percent of pregnant women are registered and attend the CPN? (Utilization of services)
- o What percent of women deliver babies of low birth weight? (Impact of services)

One idea for getting the message across to nurses about the importance and usefulness of statistics is by graphing program activities on a monthly basis. A useful tool to facilitate this work is a wall calender poster such as the one on the facing page. The actual size of the poster is 24" x 33" (61cm x 84cm). The poster should include blank graphs labeled by month and detailed instructions of how to prepare bar graphs. It is also a good idea to take devote some space to getting across the message about special health themes for the year (See Box 4.3 for the SANRU health education messages).

The simple visual presentation of monthly data in the form of bar graphs permits the nurse, and anyone else visiting the health center, to see developing trends. By establishing a monthly goals it also encourages an on-going evaluation of the performance of the health center.

4.4 SANRU EVALUATIONS

Hardly a year went by without some sort of evaluation taking place. These generally fell into the following categories:

Project evaluations specifically for the SANRU project
Program evaluations which included evaluating SANRU activities, e.g. family planning evaluation, child survival evaluation
Regional management audits which could be project or program specific
Local counterpart fund audits, e.g. by Price Waterhouse
Internal (to USAID) evaluation conducted by USAID/HPN office
Internal (to SANRU) evaluation of assistance provided to health zones

Box 4.3
HEALTH MESSAGE THEMES OF SANRU CALENDARS 1985-1991

8 COMP	COMPOSANTES DES SOINS DE SANTE PRIMAIRES	ABRV	ANNEE TRAITEE	SUJETS TRAITES
	CONCEPT SOINS DE SANTE PRIMAIRES	SSP	1986,1988	PARTICIP COMMUN. / TOUS EN AVANT POUR SPT
1	EDUCATION SANITAIRE	EDC SAN	1988, 1991	QUI SE FORME FORME
2	EAU ET ASSAINISSEMENT	EAU/ASN	1987,1990	EAU POTABLE / VILLAGE ASSAINI
_	MATERNITE SANS RISQUE/CONSULT. PRE	CPN/MAT	1989	PROTECTION DES FEMMES ENCEINTES:
3	CONSULTATION PRESCOLAIRE	CPS	1988	SURVEILLON PAR LA PESEE REGULIERE
_	PLANIFICATION DES NAISSANCES DESIR	PND	1985, 1991	ASSURER LA SANTE/ BONHEUR DE LA FAMILLE
4	VACCINATIONS	PEV		NOTE: SANRU distributed PEV posters
5	CONTROLE DES MALADIES ENDEMIQUES	MAL END	1985,1989,1990	DIARRHEA / SIDA / MALARIA
6	NUTRITION	NUTR	1991	SEUL TRAITEMENT DE LA MALNUTRITION
7	MEDICAMENTS ESSENTIELS	MED ESS	1985, 1990	SERUM ORAL / TRAITEMENT PRECOCE MALARIA
8	SOINS CURATIFS	CUR	1985, 1990	SERUM ORAL / TRAITEMENT PRECOCE MALARIA

ANNEE	SUJET	MESSAGE
1985	1) Family Planning	AVOIR DES ENFANTS, C'EST AGREABLE. LEUR ASSURER LA SANTE, C'EST ENCORE MIEUX
1985	2) Oral Rehydration	SAUVONS LES ENFANTS QUI ONT LA DIARRHEE AVEC LE SERUM ORAL
1986	1) Primary Health Care	SANTE POUR TOUS PAR LA PARTICIPATION COMMUNAUTAIRE
1986	2) Water Protection	DE L'EAU POTABLE POUR UNE MEILLEURE SANTE
1987	1) Training of Trainers	MAMAN BOSUKU SE FORME COMME AGENT DE SANTE COMMUNAUTAIRE
1987	2) Health Education	MAMAN BOSUKU FORME A SON TOUR D'AUTRES PERSONNES
1988	1) Under Fives Clinic	SURVEILLONS LA SANTE DE NOS ENFANTS PAR LA PESEE REGULIERE
1988	2) Primary Health Care	TOUS EN AVANT VERS LA SANTE POUR TOUS
1989	1) AIDS	COMBATTONS-LE PAR UNE INFORMATION CORRECTE ET COMPLETE
1989	2) Pre-Natal Clinic	PROTECTION DES FEMMES ENCEINTES: BASE DU BIEN-ETRE FAMILIAL
1990	1) Malarial Treatment	LA MALARIA TUE: UN TRAITEMENT CORRECT A TEMPS PEUT SAUVER LA VIE DE VOTRE ENFANT
1990	2) Village Sanitation	UN VILLAGE ASSAINI - FONDATION DE LA SANTE COMMUNAUTAIRE
1991	1) Family Plan/Hlth Edc	ESPACEMENT DES NAISSANCES: DECISION DU COUPLE POUR LE BONHEUR DE LA FAMILLE
1991	2) Nutrition/Hlth Edc	LE SEUL TRAITEMENT DE LA MALNUTRITION: UNE ALIMENTATION SUFFISANTE, COMPLETE, EQUILIBREE ET VARIEE

Three major external evaluations took place during SANRU I and II. The major recommendations of these evaluations are summarized in Boxes 4.4-4.6

EXTERNAL EVALUATION 1984: See Box 4.4

EXTERNAL EVALUATION 1986: See Box 4.5

EXTERNAL EVALUATION 1991: See Box 4.6

4.5 THE STATUS OF HEALTH ZONES OF ZAIRE

The future of the health zones and primary health care in Zaire is certainly in doubt given the political turmoil of 1991-1992. The data base of health zones shown in the following pages includes a column "FUNC" to indicate the functional status of the health zone:

HOK = Highly functional
MOK = Moderately functional
LOK = Marginally functional
\- = non-functional

Box 4.4

MAJOR RECOMMENDATIONS FROM THE 1984 SANRU EVALUATION

1. The SANRU project should increase the number of rural health zones to be developed from 50 to 100, and the rural health centers to be converted from 250 to 650. The project should be extended 4-5 years, with new funds starting in Fiscal Year 1986.

2. The target outputs of the project should be revised as recommended by the project direction, with exceptions noted in the narrative.

3. Nursing instructors from rural health zones should be sent to appropriate institutions in francophone countries for advanced training in primary health care.

4.The project should stress regional training trainers centers for supervisors, nurses, and village health workers.

5. Study tours to other african countries should be organized for SANRU staff, GOZ and medical chiefs of rural health zones to examine approaches to self-financing, family planning and training. They should also visit between rural health zones in Zaire.

6. SANRU should diversify the us schools of public health selected for mph training of physicians and administrators.

7.The annual national health conference should be continued without fail and should be a USAID priority budgetary priority. Other agencies should share the cost if necessary. Regional conferences should also be considered.

8.SANRU evaluation strategy should focus on a few indirect indicators of improved health service such as accessibility. coverage and participation of villages in health programs: the health information system should be reduced to a few key items.

9. SANRU staff should be expanded in order to maintain quality of performance and to take on recommended new activities. A Zairian health information system manager is particularly needed.

10. SANRU should offer help to rhz in improving regional supply systems.

11. USAID/Zaire should engage a procurement officer instead of technicians to purchase project commodities.

12. Pharmaceuticals purchased with USAID funds should be limited to one basic effective drug per category (ex. one antibiotic, one antimalarial).

13. Technical assistance in financial management should be given to health centers.

14. SANRU should furnish more technical expertise to rural health zones for improved latrine construction and water source protection.

15. USAID should enter discussions with the GOZ to resolve issues about the legal status of health zones.

16. Assistance should be provided to the Fifth direction of the MOH in coordinating primary health care in Zaire.

Box 4.5

MAJOR RECOMMENDATIONS FROM THE 1986 SANRU EVALUATION

1. Review the project organigram
2. Clarify building ownership
3. Arrange periodic audits and assessment of accounting system.
4. Review standard curricula
5. Reinforce PHC training and supervision
6. Emphasize qualitative criteria for PHC performance
7. Assure regular supplies of contraceptives to health zones
8. Incorporate communication strategies into pnd program
9. Help develop fp/aids training modules
10. Improve health center based cold chain
11. Upgrade accounting procedures at health center level
12. Express concern to goz over absence of health zone legal status
13. Establish project implementation plan
14. Study/evaluate approaches for community participation
15. Encourage FONAMES to call inter-program meetings
16. Integrate FONAMES into health zone selection process
17. Plan assistance to health zones according to availability of human and material resources
18. Strengthen SNHR stations with equipment and staff

Box 4.6

MAJOR RECOMMENDATIONS FROM THE 1991 SANRU EVALUATION

SANRU has been dramatically successful in initiating or extending primary health care activities in rural health zones. SANRU has done good long-term work and it is regrettable that factors beyond the control of the project force the formulation and adoption of "survival" recommendations.

1. The concept of the health zone is a strong building block for the future development of the Zairian health system. By keeping this concept viable, SANRU can offer to a future, more development-minded GOZ a model, based on the health zone concept, on which to build a sustainable, effective, and efficient national health system.

2. SANRU should immediately develop a "survival" strategy that continues the SANRU "package of assistance" at levels sufficient to maintain operations as long as possible in health zones currently served but not to extend operations to new zones.

3. SANRU should assist each zone in the development of a written agreement that defines the autonomy, responsibility and authority of the managing partners. SANRU should promote the "zone forum" methodology to help local governing boards to fulfill their roles in setting policy and overseeing zone activities.

5. SANRU should institute procedures en ensure that requests and reports received from the zones are immediately acknowledged and feedback provided within two weeks. SANRU should immediately use available CPF to reimburse the zones for courses already given and to underwrite courses that they have scheduled bu postponed.

6. SANRU should use the opportunity of the national or regional conferences to encourage the prompt submission and analysis of the Annual Report by the medicins chef de zone and to provide feedback on the reports received.

7. SANRU staff should make an all-out effort to recruit the full quota of candidates for the 1991-1992 and 1992-1993 classes at the School of Public Health.

8. SANRU should disseminate the recent research findings on village organization and turn them into appropriate training materials.

9. SANRU should include a family planning element in every training activity.

10. SANRU should continue to provide the zone subsidy for training in family planning. SANRU should give extra supplies, training, and encouragement to any health facility which demonstrates initiative in providing family planning services.

11. SANRU should provide a minimum quantity of rapid HIV test kits (100 kits per zone per year) to every assisted health zone.

12. SANRU should immediately review the commodity list and select essential items for USAID Zaire to order before the end of the current fiscal year (September 30, 1991) and to take measures to ensure that all items arrive in Zaire no later than April 1992.

13. USAID should initiate a brief audit to ensure that items procured are used primarily, not necessarily exclusively, as intended and that abuses are recorded and kept to a minimum.

14. The SANRU project officer in USAID/HPO should immediately call a meeting of the SANRU Project Committee at the Mission. In collaboration with SANRU representatives, the members should develop a workplan that approaches all tasks with a creative "can-do" attitude that facilitates implementation within A.I.D. guidelines and procedures.

File: ZS.306.MASTER TABLE 4.1
Report: LIST OF 306 Z.S.

REGION	SOUS-REGION	ZONE DE SANTE	Nbr	HOP MGT	FUNC	POPULATION	SANRU
BANDUNDU	BANDUNDU	BANDUNDU	1	ETAT	MOK	90000	-
BANDUNDU	KIKWIT	KIKWIT-NORD	1	ETAT	MOK	126002	-
BANDUNDU	KIKWIT	KIKWIT-SUD	1	ETAT	MOK	125896	-
BANDUNDU	KWANGO	FESHI	1	ETAT	-	107075	-
BANDUNDU	KWANGO	KAHEMBA	1	ETAT	MOK	60000	1986
BANDUNDU	KWANGO	KAJIJI	1	PROT	HOK	71961	1982
BANDUNDU	KWANGO	KASONGO-LUNDA	1	ET/CATH	HOK	120000	1983
BANDUNDU	KWANGO	KENGE	1	ET/CATH	LOK	160000	-
BANDUNDU	KWANGO	KITENDA	1	ETAT	-	79704	199?
BANDUNDU	KWANGO	MWELA-LEMBA	1	ETAT	-	59049	-
BANDUNDU	KWANGO	PANZI	1	ETAT	LOK	100000	1984
BANDUNDU	KWANGO	POPOKABAKA	1	ETAT	LOK	124018	-
BANDUNDU	KWILU	BAGATA	1	ETAT	MOK	62346	-
BANDUNDU	KWILU	BULUNGU	1	ETAT	-	150705	-
BANDUNDU	KWILU	DJUMA	1	CATH	HOK	104000	1983
BANDUNDU	KWILU	GUNGU	1	ETAT	LOK	261000	-
BANDUNDU	KWILU	IDIOFA	1	ETAT	LOK	185555	1986
BANDUNDU	KWILU	IPAMU	1	CATH	HOK	140000	1987
BANDUNDU	KWILU	KIKONGO	1	PROT	HOK	70817	1983
BANDUNDU	KWILU	KINGANDU	1	CATH	HOK	90000	-
BANDUNDU	KWILU	KOSHIBANDA	1	CATH	MOK	76038	1988
BANDUNDU	KWILU	MASI-MANIMBA	1	ETAT	-	126000	-
BANDUNDU	KWILU	MOANZA	1	PROT	MOK	150055	1984
BANDUNDU	KWILU	MOKALA	1	CATH	HOK	170025	1987
BANDUNDU	KWILU	MOSANGO	1	ETAT	MOK	87400	-
BANDUNDU	KWILU	MUKEDI	1	PROT	LOK	136239	1984
BANDUNDU	KWILU	VANGA	1	PROT	HOK	217830	1982
BANDUNDU	KWILU	YASA-BONGA	1	CATH	HOK	120000	-
BANDUNDU	MAI-NDOMBE	BOKORO	1	CATH	HOK	100000	1986
BANDUNDU	MAI-NDOMBE	BOLOBO	1	PROT	HOK	77500	1986
BANDUNDU	MAI-NDOMBE	BOSOBE	1	PROT	MOK	65000	1984
BANDUNDU	MAI-NDOMBE	INONGO	1	ETAT	-	145000	-
BANDUNDU	MAI-NDOMBE	KIRI	1	ETAT	-	79000	-
BANDUNDU	MAI-NDOMBE	KWAMOUTH	1	ETAT	-	29219	-
BANDUNDU	MAI-NDOMBE	MIMIA	1	PROT	LOK	26000	199?
BANDUNDU	MAI-NDOMBE	MUSHIE	1	ETAT	LOK	50000	-
BANDUNDU	MAI-NDOMBE	NIOKI	1	z.FORESCOM	HOK	70000	-
BANDUNDU	MAI-NDOMBE	OSHWE	1	ET/PROT	LOK	44060	1990
			38			4057494	
BAS ZAIRE	BAS-FLEUVE	KANGU	1	CATH	-	94000	-
BAS ZAIRE	BAS-FLEUVE	KINKONZI	1	PROT	HOK	55100	1982
BAS ZAIRE	BAS-FLEUVE	KIZU	1	CATH	MOK	53300	-
BAS ZAIRE	BAS-FLEUVE	KUIMBA	1	CATH	-	61645	-
BAS ZAIRE	BAS-FLEUVE	LUKULA	1	ETAT	-	87000	-
BAS ZAIRE	BAS-FLEUVE	SEKE-BANZA	1	ETAT	LOK	66478	-
BAS ZAIRE	BAS-FLEUVE	TSHELA	1	z.SCAM	-	53847	-
BAS ZAIRE	BAS-FLEUVE	VAKU	1	CATH	-	57000	-
BAS ZAIRE	BOMA	BOMA	1	ETAT	-	190000	-
BAS ZAIRE	BOMA	KITONA	1	ETAT	LOK	100000	-
BAS ZAIRE	BOMA	MOANDA	1	ETAT	MOK	60000	-
BAS ZAIRE	CATARACTES	BOKO-KIVULU	1	ETAT	-	91000	-
BAS ZAIRE	CATARACTES	GOMBE-MATADI	1	ETAT	MOK	70000	-
BAS ZAIRE	CATARACTES	KIBUNZI	1	PROT	-	30000	-
BAS ZAIRE	CATARACTES	KIMPANGU	1	CATH	HOK	65000	-
BAS ZAIRE	CATARACTES	KIMPESE	1	PROT	HOK	103000	1982

File: ZS.306.MASTER TABLE 4.1 (continued)
Report: LIST OF 306 Z.S.

REGION	SOUS-REGION	ZONE DE SANTE	Nbr	HOP MGT	FUNC	POPULATION	SANRU
BAS ZAIRE	CATARACTES	KWILU-NGONGO	1	z.CIZA	LOK	90000	-
BAS ZAIRE	CATARACTES	LUOZI	1	ET/PROT	-	38500	-
BAS ZAIRE	CATARACTES	MANGEMBO	1	CATH	HOK	58500	-
BAS ZAIRE	CATARACTES	MBANZA-NGUNGU	1	ETAT	-	115569	-
BAS ZAIRE	CATARACTES	NSONA PANGU	1	PROT	MOK	120000	1982
BAS ZAIRE	LUKAYA	KIMVULA	1	ETAT	MOK	53185	1987
BAS ZAIRE	LUKAYA	KISANTU	1	CATH	HOK	138960	1984
BAS ZAIRE	LUKAYA	NGIDINGA	1	CATH	HOK	60000	1989
BAS ZAIRE	LUKAYA	NSELO	1	PROT	HOK	30000	1986
BAS ZAIRE	LUKAYA	SONA BATA	1	PROT	HOK	75000	1982
BAS ZAIRE	MATADI	MATADI	1	ETAT	LOK	190000	-
			27			2207084	
EQUATEUR	EQUATEUR	BASANKUSU	1	z.ET/MSF	HOK	111072	-
EQUATEUR	EQUATEUR	BIKORO	1	ETAT	LOK	149350	-
EQUATEUR	EQUATEUR	BOLOMBA	1	z.ET/MSF	LOK	98902	-
EQUATEUR	EQUATEUR	BOMONGO	1	ETAT	-	52024	-
EQUATEUR	EQUATEUR	INGENDE	1	ETAT	-	90122	-
EQUATEUR	EQUATEUR	LUKOLELA	1	CATH	-	50739	-
EQUATEUR	MBANDAKA	MBANDAKA	1	ETAT	LOK	183452	-
EQUATEUR	MONGALA	BINGA	1	z.SCZ	HOK	74000	1988
EQUATEUR	MONGALA	BUMBA	1	ETAT	-	150000	-
EQUATEUR	MONGALA	LISALA	1	ETAT	-	137000	-
EQUATEUR	MONGALA	PIMU	1	PROT	HOK	135000	1984
EQUATEUR	MONGALA	YAMBUKU	1	CATH	MOK	100000	-
EQUATEUR	NORD-UBANGI	BOSOBOLO	1	ETAT	MOK	101922	1983
EQUATEUR	NORD-UBANGI	BUSINGA	1	ETAT	MOK	106347	1983
EQUATEUR	NORD-UBANGI	GBADOLITE	1	ETAT	MOK	67266	-
EQUATEUR	NORD-UBANGI	KARAWA	1	PROT	HOK	318000	1982
EQUATEUR	NORD-UBANGI	LOKO	1	PROT	HOK	100000	1982
EQUATEUR	NORD-UBANGI	WAPINDA	1	CATH	MOK	128330	-
EQUATEUR	SUD-UBANGI	BANGA-BOLA	1	CATH	-	80000	-
EQUATEUR	SUD-UBANGI	BOKONZI	1	CATH	-	76000	-
EQUATEUR	SUD-UBANGI	BUDJALA	1	ETAT	-	90000	-
EQUATEUR	SUD-UBANGI	BWAMANDA	1	CATH	HOK	110000	-
EQUATEUR	SUD-UBANGI	GEMENA	1	ETAT	LOK	140000	-
EQUATEUR	SUD-UBANGI	LIBENGE	1	ETAT	LOK	100000	-
EQUATEUR	SUD-UBANGI	MBAYA	1	z.PLZ	-	80000	-
EQUATEUR	SUD-UBANGI	TANDALA	1	PROT	HOK	167252	1982
EQUATEUR	TSHUAPA	BEFALE	1	z.ET/MSF	-	61861	-
EQUATEUR	TSHUAPA	BOENDE	1	ETAT	-	155847	-
EQUATEUR	TSHUAPA	BOKUNGU	1	ET/CATH	-	120832	-
EQUATEUR	TSHUAPA	DJOLU	1	ETAT	-	119254	-
EQUATEUR	TSHUAPA	IKELA	1	ET/CATH	HOK	150969	1986
EQUATEUR	TSHUAPA	MONKOTO	1	ETAT	-	43457	-
EQUATEUR	ZONGO	ZONGO	1	ETAT	-	52930	-
			33			3701928	
HAUT ZAIRE	BAS-UELE	AKETI	1	ETAT	-	97351	-
HAUT ZAIRE	BAS-UELE	ANGO	1	ETAT	-	52305	-
HAUT ZAIRE	BAS-UELE	BILI	1	ETAT	-	50465	-
HAUT ZAIRE	BAS-UELE	BONDO	1	ETAT	-	92000	-
HAUT ZAIRE	BAS-UELE	BUTA	1	ETAT	-	100486	-
HAUT ZAIRE	BAS-UELE	DINGILA	1	ETAT	-	115863	-
HAUT ZAIRE	BAS-UELE	POKO	1	ETAT	-	123290	-
HAUT ZAIRE	HAUT-UELE	ABA	1	ETAT	-	80000	-

File: ZS.306.MASTER TABLE 4.1 (continued)
Report: LIST OF 306 Z.S.

REGION	SOUS-REGION	ZONE DE SANTE	Nbr	HOP MGT	FUNC	POPULATION	SANRU
HAUT ZAIRE	HAUT-UELE	DORUMA	1	ET/CATH	HOK	65000	1986
HAUT ZAIRE	HAUT-UELE	DUNGU	1	ET/CATH	HOK	73500	1984
HAUT ZAIRE	HAUT-UELE	FARADJE	1	ETAT	-	95000	-
HAUT ZAIRE	HAUT-UELE	GOMBARI	1	ETAT	-	70000	-
HAUT ZAIRE	HAUT-UELE	ISIRO	1	ETAT	LOK	163327	1987
HAUT ZAIRE	HAUT-UELE	NIANGARA	1	ETAT	LOK	96000	1989
HAUT ZAIRE	HAUT-UELE	PAWA	1	ET/CATH	HOK	123000	1984
HAUT ZAIRE	HAUT-UELE	WAMBA	1	ETAT	-	122000	-
HAUT ZAIRE	HAUT-UELE	WATSHA	1	z.OKIMO	-	97000	-
HAUT ZAIRE	ITURI	ARU	1	ETAT	LOK	143000	-
HAUT ZAIRE	ITURI	BAMBUMINES	1	z.KILOMOTO	-	84000	-
HAUT ZAIRE	ITURI	BIRINGA	1	ETAT	-	58723	-
HAUT ZAIRE	ITURI	BOGA	1	PROT	MOK	82000	1989
HAUT ZAIRE	ITURI	BUNIA	1	ETAT	HOK	120000	1986
HAUT ZAIRE	ITURI	DRODRO	1	CATH	HOK	100000	1983
HAUT ZAIRE	ITURI	FATAKI	1	ET/CATH	-	100000	-
HAUT ZAIRE	ITURI	LAYBO	1	ETAT	-	112286	-
HAUT ZAIRE	ITURI	LOGO	1	CATH	-	100000	-
HAUT ZAIRE	ITURI	LOLWA	1	PROT	MOK	80000	1989
HAUT ZAIRE	ITURI	MAMBASA	1	ETAT	LOK	50000	-
HAUT ZAIRE	ITURI	MANDIMA	1	PROT	-	50000	-
HAUT ZAIRE	ITURI	MONGBWALU	1	z.KILOMOTO	-	76000	-
HAUT ZAIRE	ITURI	NYANKUNDE	1	PROT	HOK	150000	1982
HAUT ZAIRE	ITURI	NYARAMBE	1	ETAT	-	100000	-
HAUT ZAIRE	ITURI	RETHY	1	PROT	HOK	147000	1984
HAUT ZAIRE	ITURI	RIMBA	1	ETAT	-	94000	-
HAUT ZAIRE	ITURI	TCHOMIA	1	CATH	MOK	80000	1987
HAUT ZAIRE	KISANGANI	KABONDO	1	ETAT	MOK	128852	-
HAUT ZAIRE	KISANGANI	KISANGANI	1	ETAT	-	100000	-
HAUT ZAIRE	KISANGANI	LUBUNGA	1	ETAT	-	80000	-
HAUT ZAIRE	TSHOPO	BAFWASENDE	1	ET/PROT	LOK	60000	-
HAUT ZAIRE	TSHOPO	BANALIA	1	ETAT	-	93000	-
HAUT ZAIRE	TSHOPO	BASOKO	1	ETAT	-	110000	-
HAUT ZAIRE	TSHOPO	ISANGI-YANGAMB	1	z.INERA	-	58000	-
HAUT ZAIRE	TSHOPO	OPALA	1	ETAT	-	105000	-
HAUT ZAIRE	TSHOPO	UBUNDU	1	ETAT	-	113000	-
HAUT ZAIRE	TSHOPO	YABAONDO	1	ETAT	-	95000	-
HAUT ZAIRE	TSHOPO	YAHUMA	1	ETAT	-	56000	-
HAUT ZAIRE	TSHOPO	YAKUSU	1	PROT	MOK	80000	1983
			47			4422448	
KASAI OCC.	KANANGA	KANANGA	1	ETAT	-	200000	-
KASAI OCC.	KANANGA	KATOKA	1	ETAT	-	200000	-
KASAI OCC.	KANANGA	LUKONGA	1	ETAT	-	120000	-
KASAI OCC.	KANANGA	TSHIKAJI	1	PROT	HOK	175000	1982
KASAI OCC.	KASAI	BULAPE	1	PROT	HOK	110000	1983
KASAI OCC.	KASAI	DEKESE	1	ET/CATH	-	63000	199?
KASAI OCC.	KASAI	ILEBO	1	ETAT	MOK	101000	1987
KASAI OCC.	KASAI	KALONDA	1	PROT	MOK	135000	1982
KASAI OCC.	KASAI	KAMONIA	1	z.ET/NGO	LOK	120000	1989
KASAI OCC.	KASAI	KITANGWA	1	CATH	MOK	75000	1989
KASAI OCC.	KASAI	LUEBO	1	ETAT	LOK	154000	1986
KASAI OCC.	KASAI	MIKOPE	1	CATH	MOK	78000	1989
KASAI OCC.	KASAI	MUSHENGE	1	ETAT	MOK	110000	1983
KASAI OCC.	KASAI	NYANGA	1	PROT	HOK	78000	1988
KASAI OCC.	KASAI	TSHIKAPA	1	ET/PROT	MOK	80000	1986

File: ZS.306.MASTER TABLE 4.1 (continued)
Report: LIST OF 306 Z.S.

REGION	SOUS-REGION	ZONE DE SANTE	Nbr	HOP MGT	FUNC	POPULATION	SANRU
KASAI OCC.	LULUA	BENA-LEKA	1	CATH	-	108000	-
KASAI OCC.	LULUA	BILOMBA	1	CATH	-	85000	-
KASAI OCC.	LULUA	BUNKONDE	1	CATH	MOK	80000	-
KASAI OCC.	LULUA	DEMBA	1	ETAT	MOK	110000	-
KASAI OCC.	LULUA	DIBAYA	1	ETAT	-	100000	-
KASAI OCC.	LULUA	KATENDE	1	CATH	-	142209	-
KASAI OCC.	LULUA	LUAMBO	1	CATH	-	70000	-
KASAI OCC.	LULUA	LUBONDAIE	1	PROT	LOK	80000	-
KASAI OCC.	LULUA	LUIZA	1	ET/CATH	-	120000	-
KASAI OCC.	LULUA	MASUIKA	1	CATH	HOK	60000	-
KASAI OCC.	LULUA	MIKALAYI	1	CATH	HOK	100000	-
KASAI OCC.	LULUA	MUETSHI	1	CATH	-	104000	-
KASAI OCC.	LULUA	NDEKESHA	1	CATH	-	70000	-
KASAI OCC.	LULUA	TSHIBALA	1	ETAT	-	160000	-
KASAI OCC.	LULUA	TSHIKULA	1	CATH	-	88000	-
KASAI OCC.	LULUA	YANGALA	1	CATH	-	37000	-
			31			3313209	
KASAI OR.	KABINDA	GANDAJIKA	1	ETAT	MOK	130000	-
KASAI OR.	KABINDA	KABINDA	1	ET/CATH	HOK	120000	1984
KASAI OR.	KABINDA	KALONDA-EST	1	ETAT	-	70000	199?
KASAI OR.	KABINDA	LUBAO	1	ETAT	MOK	115000	1983
KASAI OR.	KABINDA	LUPUTA	1	ETAT	LOK	127000	1986
KASAI OR.	KABINDA	MWENE-DITU	1	CATH	-	124000	-
KASAI OR.	KABINDA	TSHOFA	1	ETAT	-	60000	199?
KASAI OR.	MBUJI-MAYI	BIPEMBE	1	z.ET/MIBA	-	95000	-
KASAI OR.	MBUJI-MAYI	BONZOLA	1	z.MIBA	-	160195	-
KASAI OR.	MBUJI-MAYI	DIBINDI	1	PROT	-	95000	-
KASAI OR.	MBUJI-MAYI	KANGELE	1	ETAT	LOK	197412	-
KASAI OR.	SANKURU	DIKUNGU-TSHUMB	1	ETAT	-	53000	-
KASAI OR.	SANKURU	KATAKO-KOMBE	1	ETAT	LOK	100000	-
KASAI OR.	SANKURU	KOLE	1	ET/CATH	HOK	67700	1983
KASAI OR.	SANKURU	LODJA NORD	1	ET/CATH	LOK	120000	1986
KASAI OR.	SANKURU	LODJA SUD	1	ET/CATH	LOK	110000	199?
KASAI OR.	SANKURU	LOMELA	1	ETAT	-	80000	-
KASAI OR.	SANKURU	LUSAMBO	1	ETAT	MOK	72408	1987
KASAI OR.	SANKURU	MINGA	1	PROT	MOK	40000	1989
KASAI OR.	SANKURU	TSHUDI-LOTO	1	PROT	LOK	40000	1987
KASAI OR.	SANKURU	WEMBO NYAMA	1	PROT	MOK	110000	1982
KASAI OR.	TSHILENGE	BIBANGA	1	PROT	HOK	156098	1982
KASAI OR.	TSHILENGE	KABEYA-KAMUANG	1	ETAT	LOK	151043	-
KASAI OR.	TSHILENGE	KASANSA	1	ETAT	-	90306	-
KASAI OR.	TSHILENGE	MIABI	1	ET/CATH	MOK	120000	-
KASAI OR.	TSHILENGE	TSHILENGE	1	ETAT	-	151040	-
KASAI OR.	TSHILENGE	TSHILUNDU	1	ETAT	HOK	106251	1986
			27			2861453	
KINSHASA	FUNA	FUNA	1	CATH	-	141000	-
KINSHASA	FUNA	MBOKA-SIKA	1	ETAT	-	145000	-
KINSHASA	LUKUNGA	BINZA-OZONE	1	ETAT	-	80000	-
KINSHASA	LUKUNGA	BIYELA	1	CATH	-	100000	-
KINSHASA	LUKUNGA	BUMBU	1	ETAT	-	130000	-
KINSHASA	LUKUNGA	MALEBO	1	ETAT	-	199000	-
KINSHASA	MONT AMBA	KITOKIMOSI	1	ETAT	-	80000	-
KINSHASA	MONT AMBA	LEMBA-MATETE	1	ETAT	-	217000	-
KINSHASA	MONT AMBA	MAKALA	1	ETAT	-	80000	-

File: ZS.306.MASTER TABLE 4.1 (continued)
Report: LIST OF 306 Z.S.

REGION	SOUS-REGION	ZONE DE SANTE	Nbr	HOP MGT	FUNC	POPULATION	SANRU
KINSHASA	SPT	BINZA-METEO	1	CATH	MOK	120000	-
KINSHASA	SPT	CAMP KOKOLO	1	ETAT	LOK	140000	-
KINSHASA	SPT	KIKIMI	1	CATH	HOK	90000	-
KINSHASA	SPT	KIMBANSEKE	1	z.KIMBANGU	HOK	120000	-
KINSHASA	SPT	KINGABWA	1	CATH	MOK	80000	-
KINSHASA	SPT	KINGASANI	1	CATH	MOK	120000	-
KINSHASA	SPT	KINKOLE	1	ETAT	MOK	80000	-
KINSHASA	SPT	KISENSO	1	ETAT	MOK	125000	-
KINSHASA	SPT	MAKELELE	1	ETAT	LOK	153000	-
KINSHASA	SPT	MASINA	1	ETAT	MOK	110000	-
KINSHASA	SPT	MT-AMBA	1	ETAT	MOK	100000	-
KINSHASA	SPT	NGABA	1	ETAT	MOK	130000	-
KINSHASA	TSHANGU	NDJILI	1	ETAT	-	145000	-
			22			2685000	
MANIEMA	MANIEMA	KALIMA	1	z.SOMINKI	MOK	97224	-
MANIEMA	MANIEMA	KAMPENE	1	CATH	-	90493	-
MANIEMA	MANIEMA	KASONGO	1	z.ET/IMT/A	HOK	190000	-
MANIEMA	MANIEMA	KIBOMBO	1	ETAT	-	46648	199?
MANIEMA	MANIEMA	KINDU	1	ETAT	MOK	135000	-
MANIEMA	MANIEMA	LUBUTU	1	ETAT	LOK	53300	-
MANIEMA	MANIEMA	LUSANGI	1	ETAT	-	110860	199?
MANIEMA	MANIEMA	PUNIA	1	z.SOMINKI	-	77830	-
			8			801355	
NORD KIVU	NORD KIVU	BENI	1	ETAT	LOK	158262	-
NORD KIVU	NORD KIVU	BIRAMBIZO	1	ETAT	-	120000	-
NORD KIVU	NORD KIVU	BUTEMBO	1	ETAT	-	136717	-
NORD KIVU	NORD KIVU	GOMA	1	ETAT	MOK	130000	-
NORD KIVU	NORD KIVU	KATWA	1	PROT	MOK	100000	1983
NORD KIVU	NORD KIVU	KAYNA	1	ETAT	MOK	130000	-
NORD KIVU	NORD KIVU	KIROTSHE	1	z.ET/CEMUB	HOK	120000	1983
NORD KIVU	NORD KIVU	KYONDO	1	CATH	MOK	120000	-
NORD KIVU	NORD KIVU	LUBERO	1	ETAT	-	195784	-
NORD KIVU	NORD KIVU	MANGUREDJIPA	1	ETAT	-	57000	-
NORD KIVU	NORD KIVU	MASISI	1	z.ET/CEMUB	HOK	150000	1988
NORD KIVU	NORD KIVU	MUSIENENE	1	CATH	HOK	120000	1983
NORD KIVU	NORD KIVU	MUTWANGA	1	ETAT	-	96661	-
NORD KIVU	NORD KIVU	MWESO	1	CATH	-	130000	-
NORD KIVU	NORD KIVU	OICHA	1	PROT	HOK	130000	1982
NORD KIVU	NORD KIVU	PINGA	1	PROT	-	80000	-
NORD KIVU	NORD KIVU	RUTSHURU	1	z.ET/CEMUB	HOK	120000	1983
NORD KIVU	NORD KIVU	RWANGUBA	1	PROT	MOK	120000	1983
NORD KIVU	NORD KIVU	WALIKALE	1	ETAT	-	75000	-
			19			2289424	
SHABA	HAUT-LOMAMI	BUKAMA	1	ETAT	-	86000	-
SHABA	HAUT-LOMAMI	KABONDO	1	ET/CATH	MOK	115000	199?
SHABA	HAUT-LOMAMI	KABONGO	1	ET/PROT	HOK	80000	1988
SHABA	HAUT-LOMAMI	KAMINA	1	ETAT	HOK	145000	1984
SHABA	HAUT-LOMAMI	KANIAMA	1	ETAT	HOK	74000	1983
SHABA	HAUT-LOMAMI	KINKONDJA	1	CATH	MOK	85716	-
SHABA	HAUT-LOMAMI	KITENGE	1	ETAT	-	86000	199?
SHABA	HAUT-LOMAMI	MALEMBA-NKULU	1	ETAT	LOK	236500	-
SHABA	HAUT-LOMAMI	MULONGO	1	PROT	-	130000	-
SHABA	HAUT-LOMAMI	SONGA-MWILAMBW	1	PROT	HOK	83000	1987

File: ZS.306.MASTER TABLE 4.1 (continued)
Report: LIST OF 306 Z.S.

REGION	SOUS-REGION	ZONE DE SANTE	Nbr	HOP MGT	FUNC	POPULATION	SANRU
SHABA	HAUT-SHABA	KAMBOVE	1	z.GCM	MOK	100000	-
SHABA	HAUT-SHABA	KASENGA	1	ETAT	LOK	100000	1990
SHABA	HAUT-SHABA	KILWA	1	ET/CATH	MOK	100300	1986
SHABA	HAUT-SHABA	MUFUNGA-SAMPWE	1	ETAT	-	100000	-
SHABA	HAUT-SHABA	PWETO	1	PROT	-	100000	199?
SHABA	HAUT-SHABA	SAKANIA	1	z.ET/SNCZ	-	90000	-
SHABA	KOLWEZI	DILALA	1	z.GCM	-	105755	-
SHABA	KOLWEZI	KANSENYA	1	CATH	-	72250	-
SHABA	KOLWEZI	MANIKA	1	ET/PROT	MOK	128739	-
SHABA	KOLWEZI	MUTSHASHA	1	z.SNCZ	-	68267	199?
SHABA	LIKASI	KIKULA	1	ETAT	LOK	169285	-
SHABA	LIKASI	PANDA	1	z.GCM	-	150000	-
SHABA	LUALABA	DILOLO	1	ETAT	LOK	100487	1989
SHABA	LUALABA	KAPANGA	1	PROT	MOK	75000	1983
SHABA	LUALABA	KASAJI/KISENGE	1	PROT	HOK	97036	1989
SHABA	LUALABA	SANDOA	1	ETAT	LOK	107598	1987
SHABA	LUBUMBASHI	KAMALONDO-KENI	1	z.ET/GCM	-	137244	-
SHABA	LUBUMBASHI	KAMPEMBA	1	z.SNCZ	-	142729	-
SHABA	LUBUMBASHI	KATUBA	1	ETAT	LOK	151580	-
SHABA	LUBUMBASHI	LUBUMBASHI	1	ETAT	-	146337	-
SHABA	LUBUMBASHI	RUASHI	1	ETAT	HOK	147320	-
SHABA	TANGANIKA	ANKORO	1	ET/PROT	-	79711	-
SHABA	TANGANIKA	KABALO	1	ETAT	-	82669	-
SHABA	TANGANIKA	KALEMIE	1	ETAT	LOK	157858	-
SHABA	TANGANIKA	KANSIMBA	1	ETAT	-	97000	-
SHABA	TANGANIKA	KIAMBI	1	ETAT	-	61778	-
SHABA	TANGANIKA	KONGOLO	1	ETAT	LOK	173000	1983
SHABA	TANGANIKA	MANONO	1	z.ETAIN	LOK	92252	-
SHABA	TANGANIKA	MOBA	1	ETAT	-	110000	-
SHABA	TANGANIKA	NYUNZU	1	ETAT	-	96535	-
			40			4461946	
SUD KIVU	SUD KIVU	BUKAVU	1	ETAT	LOK	171491	-
SUD KIVU	SUD KIVU	BUNYAKIRI	1	z.ET/FOMUL	MOK	80000	-
SUD KIVU	SUD KIVU	FIZI	1	ETAT	-	81000	-
SUD KIVU	SUD KIVU	IDJWI	1	ET/CATH	HOK	87000	-
SUD KIVU	SUD KIVU	KABARE	1	ET/CATH	MOK	100000	-
SUD KIVU	SUD KIVU	KATANA	1	z.ET/FOMUL	HOK	270000	-
SUD KIVU	SUD KIVU	KAZIBA	1	PROT	HOK	80000	1983
SUD KIVU	SUD KIVU	LEMERA	1	PROT	MOK	85000	1984
SUD KIVU	SUD KIVU	MWENGA	1	ET/PROT	LOK	136823	1987
SUD KIVU	SUD KIVU	NUNDU	1	PROT	HOK	95000	1983
SUD KIVU	SUD KIVU	NYANGEZI	1	ET/CATH	MOK	90000	-
SUD KIVU	SUD KIVU	SHABUNDA	1	ETAT	-	180000	-
SUD KIVU	SUD KIVU	UVIRA	1	ETAT	MOK	155000	1983
SUD KIVU	SUD KIVU	WALUNGU	1	z.FSK	HOK	300000	-
			14			1911314	
			306*			32712655*	