regional Smallpox eradication and Measles control...

in AFRICA

(FY 1967 – 1971)

COMMUNICABLE DISEASE CENTER / AGENCY FOR INTERNATIONAL DEVELOPMENT

Operation and Technical Direction by
U. S. Department of
Health, Education, and Welfare
Public Health Service
Communicable Disease Center

Financed through
U.S. Department of State
Agency for International Development
(Bureau for Africa)

In Cooperation with
The World Health Organization,
The O.C.C.G.E., and
The O.C.E.A.C

OFFICE OF WHITE HOUSE PRESS SECRETARY

Austin, Texas
Tuesday,
November 23, 1965

Plans for campaigns to protect 105 million people from smallpox and measles in 18 African countries were announced today by the White House.

The plans result from President Johnson's pledge of May 18, 1965; "This Government is ready to work with other interested countries to see to it that smallpox is a thing of the past by 1975."

AID and the PHS staff are beginning consultations with African and WHO officials on plans for the campaign, its acceptability to African countries and their willingness to contribute to the program.

The smallpox eradication program is being designed to fit within plans of the World Health Organization (WHO) to eradicate smallpox throughout Africa and the rest of the world within 10 years.

The eradication program would help prevent the possible reintroduction of smallpox into the United States and other smallpox-free countries. The smallpox activity would run concurrently with a measles control program in the same area.

The AID contributions would consist of technical assistance, vaccines, and jet injectors, which can inoculate 1,000 persons an hour. Vehicles, field supplies, freezers, and refrigerating equipment would also be provided under the AID plan.

Local costs and operational personnel would be supplied by the individual countries cooperating in the program.

Operational responsibility for the project would be assumed by the U. S. Public Health Service in cooperation with AID.

A measles control program has already been implemented by AID in 11 African countries, all of which are included in the 18 to be covered in the smallpox project. The 18 countries* are Cameroon, Central African Republic, Chad, Dahomey, Gabon, Gambia, Ghana, Guinea, Ivory Coast, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo and Upper Volta.

Africa is one of the world's major areas of smallpox incidence. Approximately 25 percent of those stricken by the disease there become fatalities. According to WHO, the 18 African countries are among the 45 countries that are the principal sources from which smallpox infections are spread to other parts of the world.

Measles is also one of the principal causes of death and disability in African children. A death rate of 20 percent is not unusual and rates have run as high as 50 percent. In the area concerned, around 21 million children under the age of 6 are susceptible to measles.

*This offer of assistance has been extended to Congo (Brazzaville) since this press release.

REGIONAL SPE/MC PROGRAM

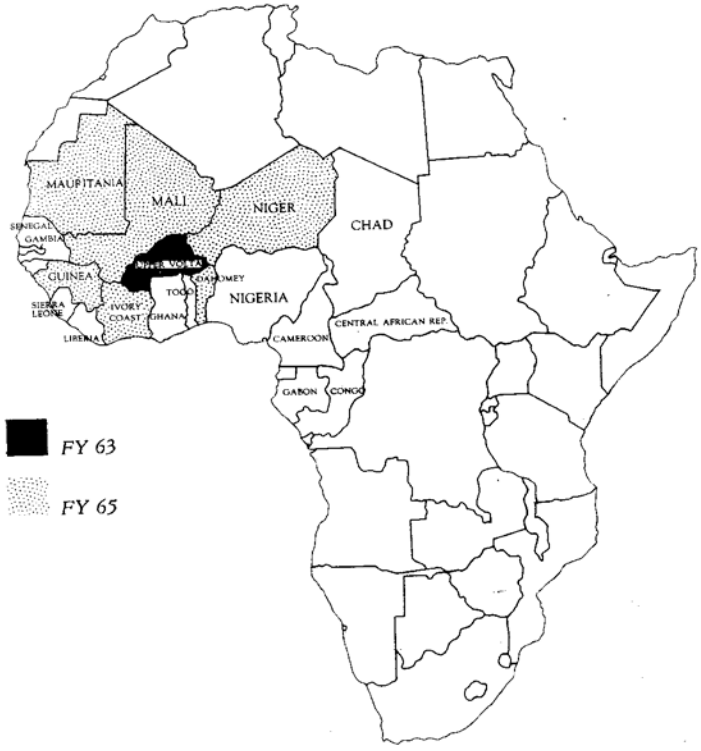
19 AFRICAN COUNTRIES

EVOLUTION OF PROJECT

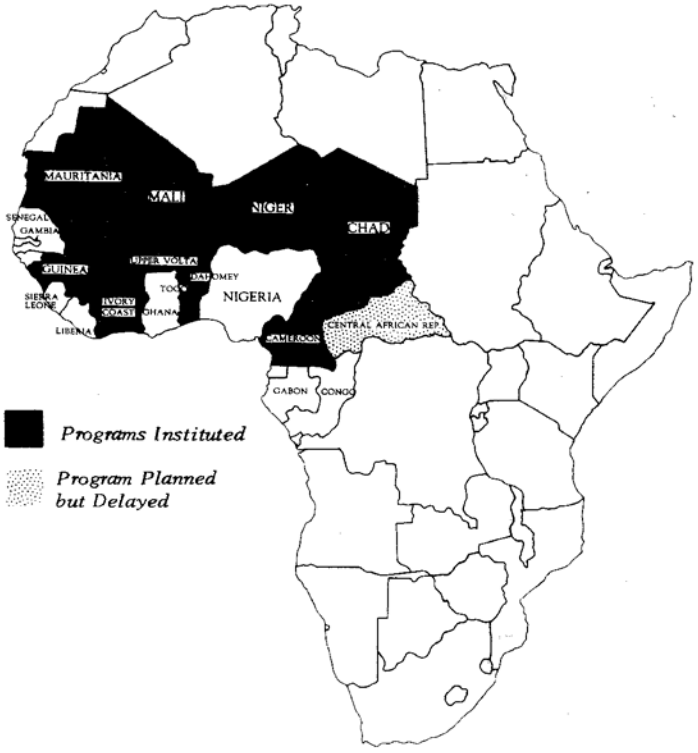
Following the development of a measles vaccine by Dr. John Enders of Harvard University and its experimental testing in American children, small-scale trials in Upper Volta in 1961 demonstrated its efficacy and safety in African children. In FY 63, a nation-wide measles vaccination program supported by AID was carried out in Upper Volta. Other countries requested help, and programs were initiated in Fy 65 which were designed to vaccinate 25 percent of susceptible children in Dahomey, Guinea, Ivory Coast, Mali, Mauritania and Niger. Programs were continued by AID in these countries during the following year and extended to include Cameroon, Chad and Togo. Requests for measles vaccination programs soon were received from each of the other countries in this area. During the past two years, Communicable Disease Center medical staff have provided part-time technical assistance to these AID-supported programs.

AID MEASLES CONTROL PROJECTS
FY 1963 – FY 1966

PROJECTS IN FY 63 AND FY 65

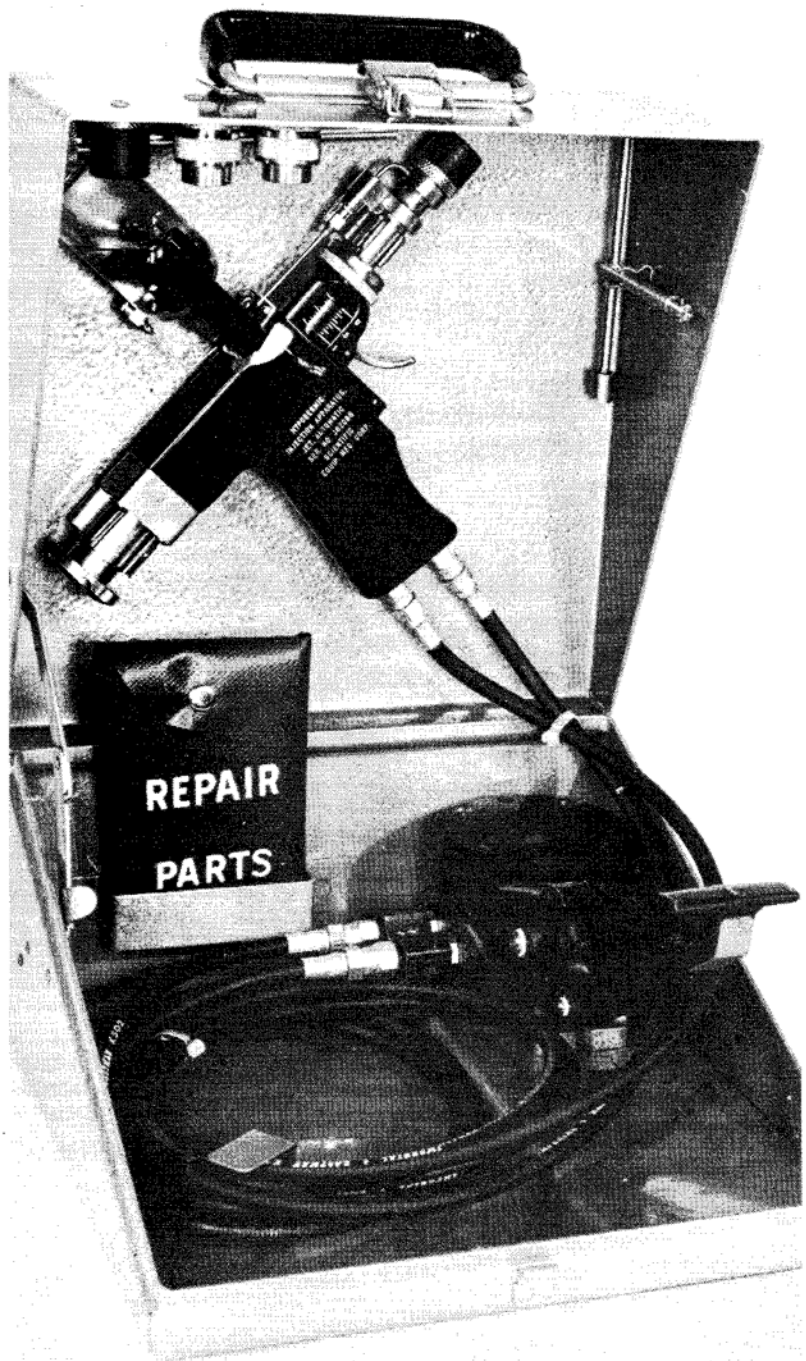


PROJECTS IN FY 66



During the past 3 years, the Communicable Disease Center, working with the Army Research and Development Command, has carried out extensive field tests of a hydraulic-powered, foot-actuated, portable jet injector capable of administering up to 1,000 injections per hour. With a special nozzle for the intradermal administration of smallpox vaccine, the jet injector has exceeded all expectations with respect to speed and facility of operation and effectiveness of vaccination. Over 100,000 persons have been inoculated and studied in the United States, Jamaica, Brazil, Tonga, Panama and Togo.

The development of the injector gave strong impetus to the World Health Organization global smallpox eradication program.


REPAIR
PARTS

SMALLPOX A GLOBAL PROBLEM

Smallpox is one of the most deadly, readily communicable diseases known to man. Fear of the disease is responsible for the most stringent quarantine measures in international travel.

In 1959, a global eradication program was initiated by the World Health Organization. Although progress was made, the effort was hampered by a lack of funds. In 1966, the World Health Assembly voted $2.4 million for an intensified 10-year program. At the same time its member States were requested to provide bilateral assistance to the various countries of the world in which smallpox is endemic, to support the objective.

世界衛生大會 決議

RESOLUTION OF THE WORLD HEALTH ASSEMBLY

RÉSOLUTION DE L'ASSEMBLÉE MONDIALE DE LA SANTÉ

РЕЗОЛЮЦИЯ ВСЕМИРНОЙ АССАМБЛЕИ ЗДРАВООХРАНЕНИЯ

RESOLUCION DE LA ASAMBLEA MUNDIAL DE LA SALUD

NINETEENTH WORLD HEALTH ASSEMBLY

WHA19.16
13 May 1966

ORIGINAL: ENGLISH AND FRENCH

SMALLPOX ERADICATION PROGRAMME

The Nineteenth World Health Assembly,

Having considered the report of the Director-General on smallpox eradication[1] and the recommendation of the Executive Board thereon; and

Noting that particular emphasis has been placed on the need for co-ordination of individual countries' smallpox eradication programmes,

1. DECIDES that the participation of the Organization in the smallpox eradication programme should be financed from the regular budget of the Organization;

2. URGES countries which plan to strengthen or initiate smallpox eradication programmes to take the necessary steps to begin the work as soon as possible;

3. REQUESTS Member States and multilateral and bilateral agencies to provide adequate material support for the realization of the programme;

4. DECIDES that, in the part of the programme financed by the Organization either from the regular budget or from the Special Account for Smallpox Eradication, the following costs may be met:

(a) such supplies and equipment as are necessary for the effective implementation of the programme in individual countries;

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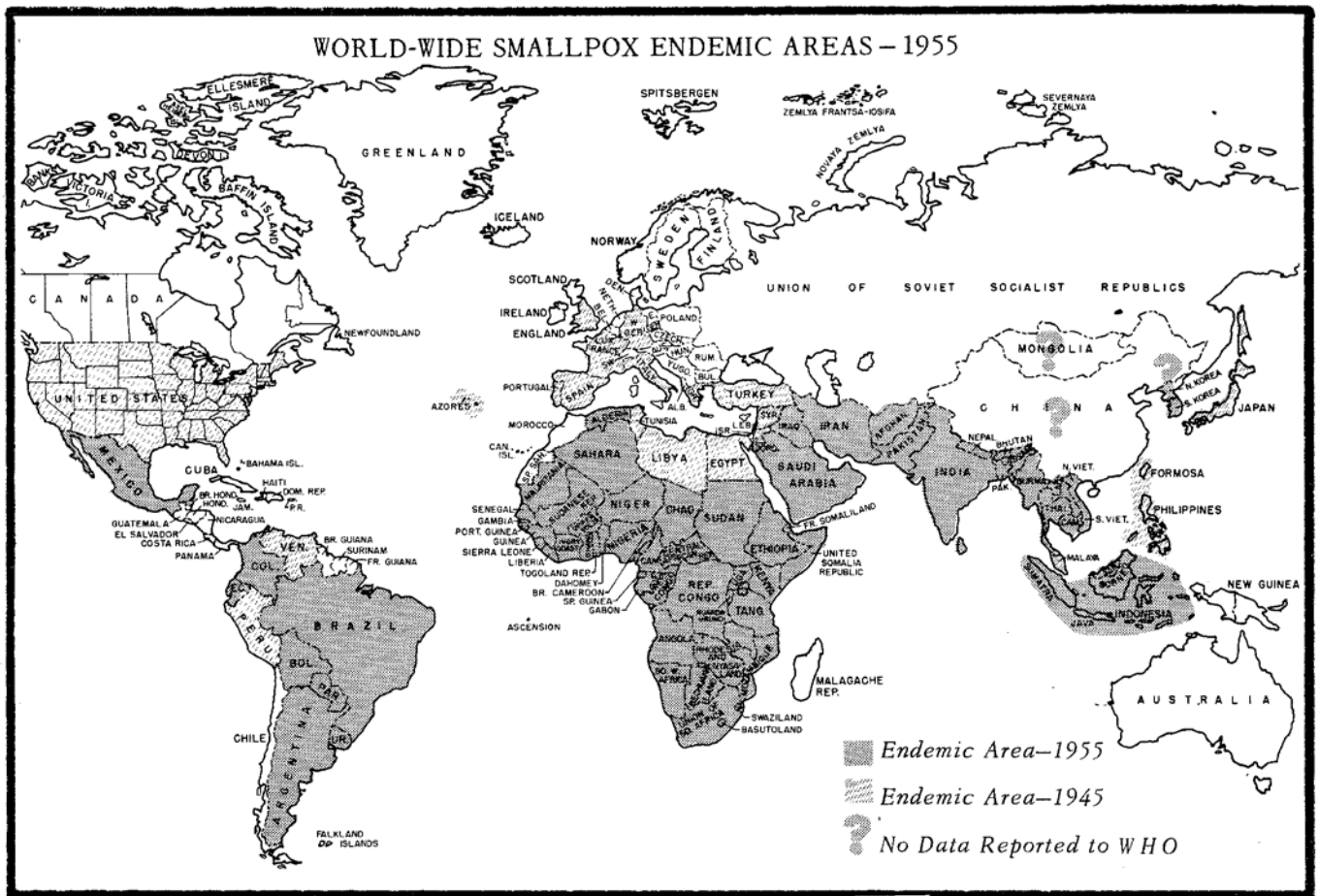
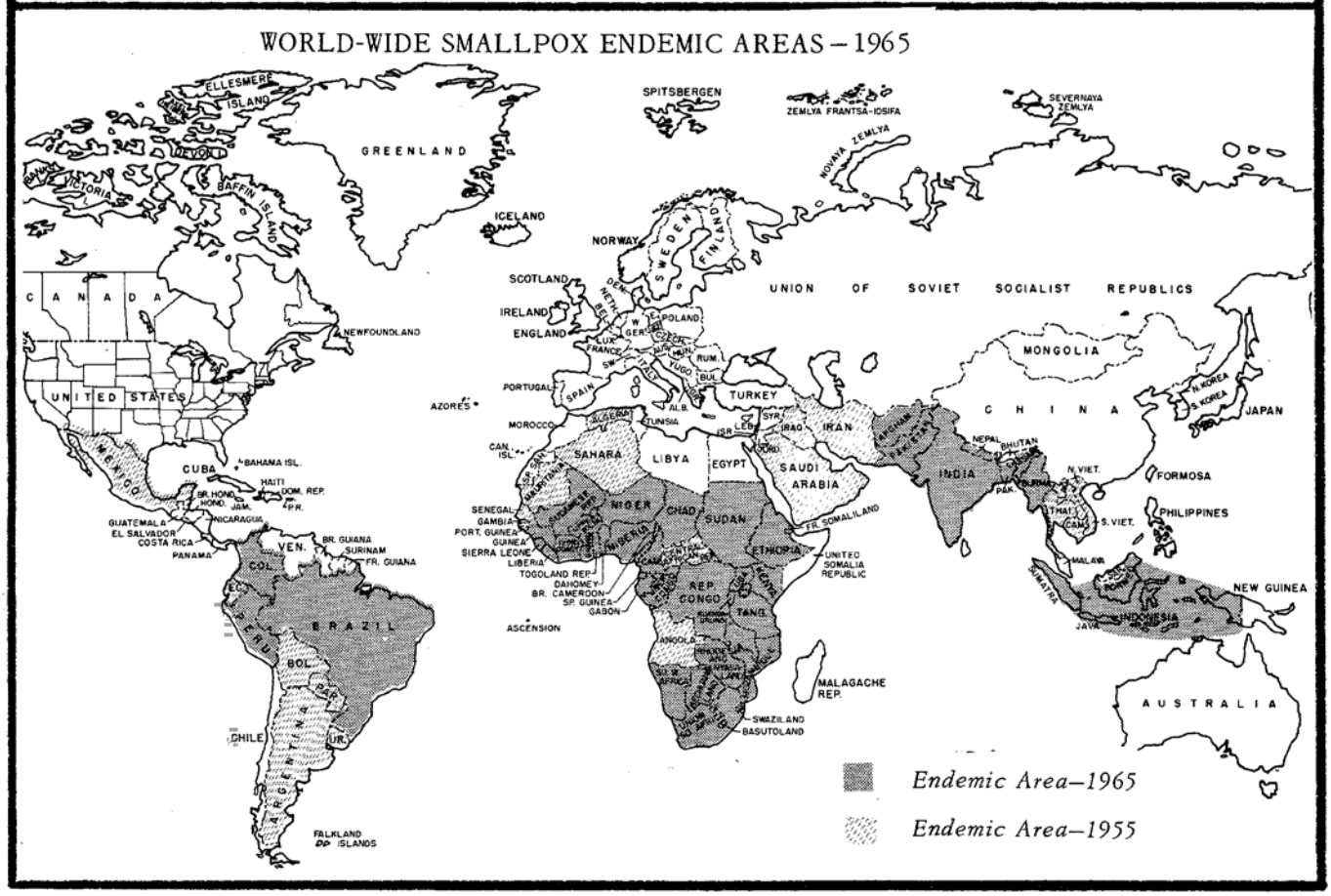
[1] Document A19/P&B/2.

Once a world-wide problem, intensive vaccinations efforts have progressively reduced the scope of smallpox until it is now confined to parts of South-East Asia, South America and sub-Saharan Africa.


WORLD-WIDE SMALLPOX ENDEMIC AREAS – 1955
ELLESMERE ISLAND
GREENLAND
SPITSBERGEN
ZEMLYA FRANTSA-IOSIFA
SEVERNAYA ZEMLYA
NOVAYA ZEMLYA
ICELAND
NORWAY
SWEDEN
FINLAND
SCOTLAND
IRELAND
ENGLAND
UNION OF SOVIET SOCIALIST REPUBLICS
MONGOLIA
CANADA
UNITED STATES
NEWFOUNDLAND
AZORES
MOROCCO
ALGERIA
TUNISIA
LIBYA
EGYPT
SAHARA
SAUDI ARABIA
IRAN
IRAQ
TURKEY
INDIA
NEPAL
BHUTAN
CHINA
N. KOREA
S. KOREA
JAPAN
FORMOSA
PHILIPPINES
N. VIET.
S. VIET.
MEXICO
CUBA
BAHAMA ISL.
HAITI
DOM. REP.
P.R.
GUATEMALA
EL SALVADOR
COSTA RICA
PANAMA
NICARAGUA
BR. HOND.
HOND.
JAM.
VEN.
COL.
BR. GUIANA
SURINAM
FR. GUIANA
BRAZIL
PERU
BOL.
CHILE
ARGENTINA
PAR.
URU.
FALKLAND ISLANDS
SENEGAL
GAMBIA
PORT. GUINEA
GUINEA
SIERRA LEONE
LIBERIA
TOGOLAND REP.
DAHOMEY
BR. CAMEROON
SP. GUINEA
GABON
NIGER
CHAD
SUDAN
ETHIOPIA
FR. SOMALILAND
UNITED SOMALIA REPUBLIC
ASCENSION
REP. CONGO
TANG.
ANGOLA
MALAGACHE REP.
SWAZILAND
BASUTOLAND
MALAYA
SUMATRA
JAVA
INDONESIA
NEW GUINEA
AUSTRALIA
Endemic Area–1955
Endemic Area–1945
No Data Reported to WHO


WORLD-WIDE SMALLPOX ENDEMIC AREAS – 1965
ELLESMERE ISLAND
GREENLAND
SPITSBERGEN
ZEMLYA FRANTSA-IOSIFA
SEVERNAYA ZEMLYA
NOVAYA ZEMLYA
ICELAND
NORWAY
SWEDEN
FINLAND
SCOTLAND
IRELAND
ENGLAND
UNION OF SOVIET SOCIALIST REPUBLICS
MONGOLIA
CANADA
UNITED STATES
NEWFOUNDLAND
AZORES
MOROCCO
ALGERIA
TUNISIA
LIBYA
EGYPT
SAHARA
SAUDI ARABIA
IRAN
IRAQ
TURKEY
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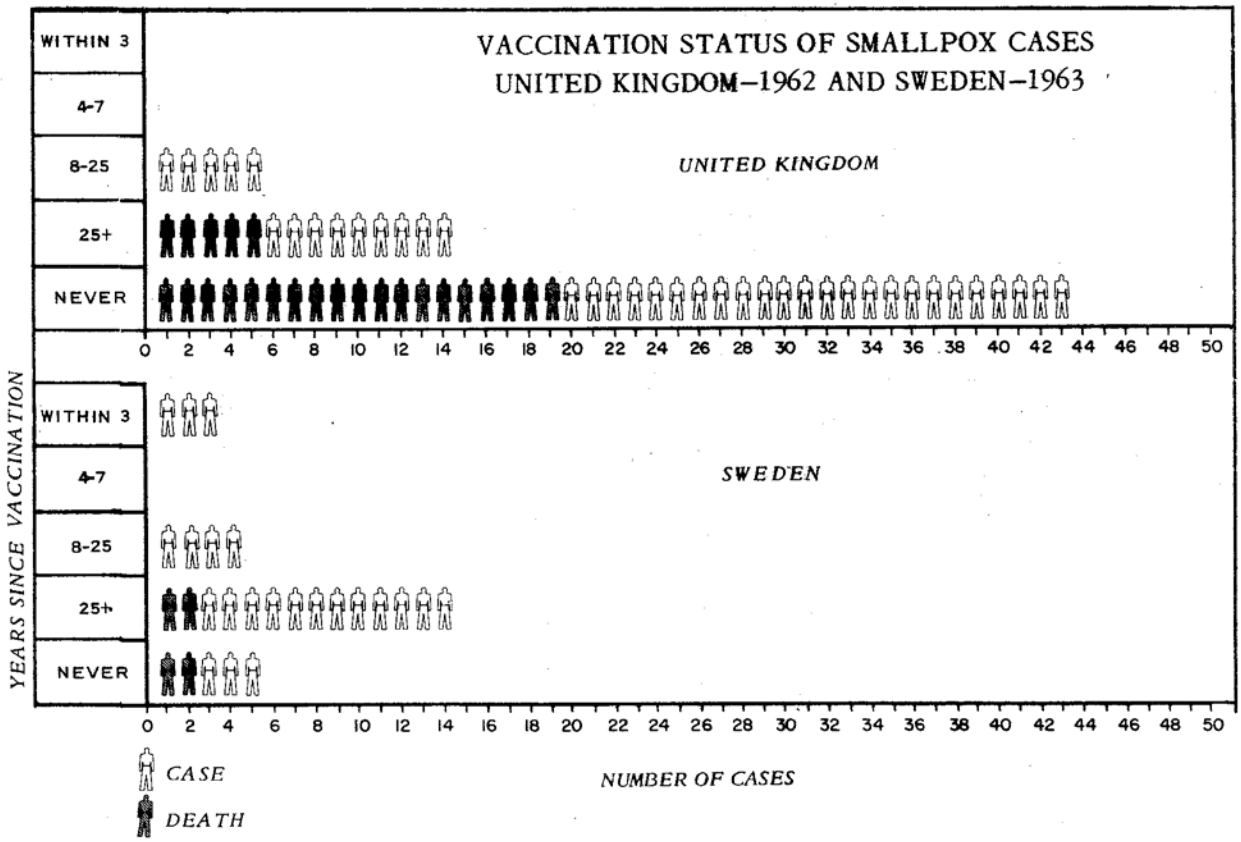
MALAGACHE REP.
SWAZILAND
BASUTOLAND
MALAYA
SUMATRA
JAVA
INDONESIA
NEW GUINEA
AUSTRALIA
Endemic Area–1965
Endemic Area–1955

SMALLPOX A PROBLEM TO THE U. S.

Although smallpox has not been present in the United States since 1949, about 14 million persons continue to be vaccinated annually to prevent its reintroduction. Fear of smallpox is not without cause. During localized European outbreaks in 1962 and 1963, 40 percent of unvaccinated persons who contracted the disease died despite the availability of excellent medical care.

The United States now spends over $20 million annually for vaccination, in support of quarantine facilities and for treatment of those experiencing complications following vaccination. Only through total eradication of smallpox can this needless expenditure be terminated.

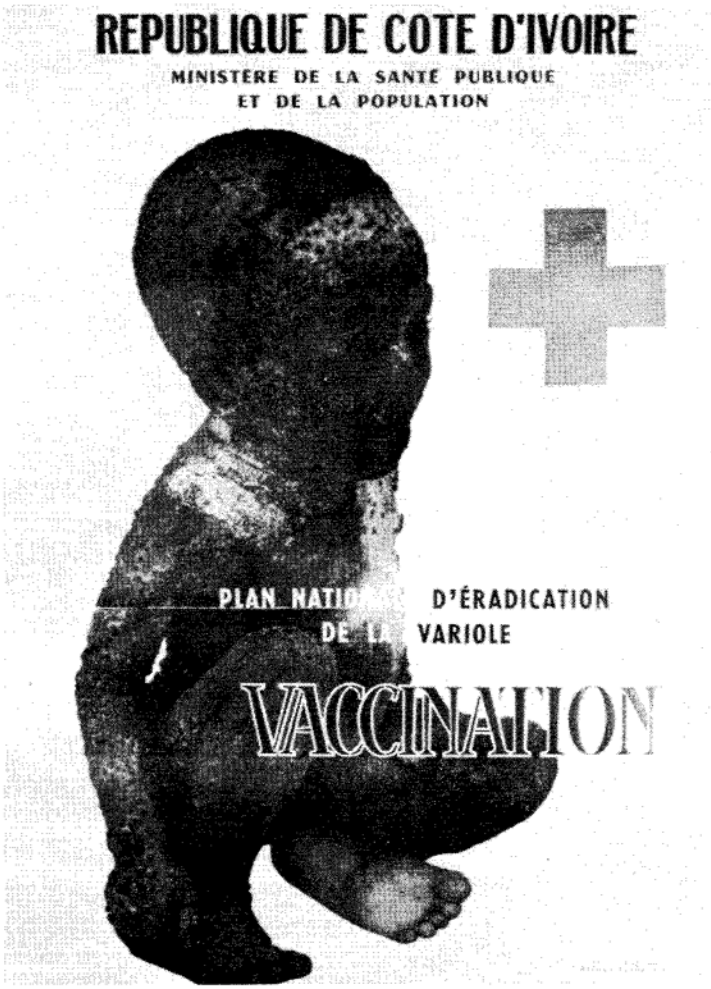

VACCINATION STATUS OF SMALLPOX CASES
UNITED KINGDOM–1962 AND SWEDEN–1963
UNITED KINGDOM
SWEDEN
WITHIN 3
4-7
8-25
25+
NEVER
YEARS SINCE VACCINATION
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50
CASE
DEATH
NUMBER OF CASES

SMALLPOX A CONTINUING PROBLEM IN AFRICA

Smallpox occurs in endemic fashion year after year in most countries of sub-Saharan Africa; epidemics periodically dislocate the entire economic life of communities, leaving behind a heavy toll of death, disfigurement, crippling arthritis and blindness. In Nigeria 15 percent of all cases of blindness have been ascribed to smallpox.

An anthropologist resident in a northern Nigerian village writes*; "At the first advance of smallpox, the countryside seethed and boiled with the movement of people fleeing before it." A native commented to her; "Who does not know the terror and the death and the hate it brings. I fear nothing else but I fear the smallpox."

*Bowen, E.S. "A Return to Laughter."



*"Smallpox was the illness about which the people of Ibadan were most knowledgeable and fearful. Numerous taboos are associated with this dreaded epidemic disease and sundry salves, soaps, and medicine were prescribed."**

*Health opinion survey in Ibadan, Nigeria – February 1963.

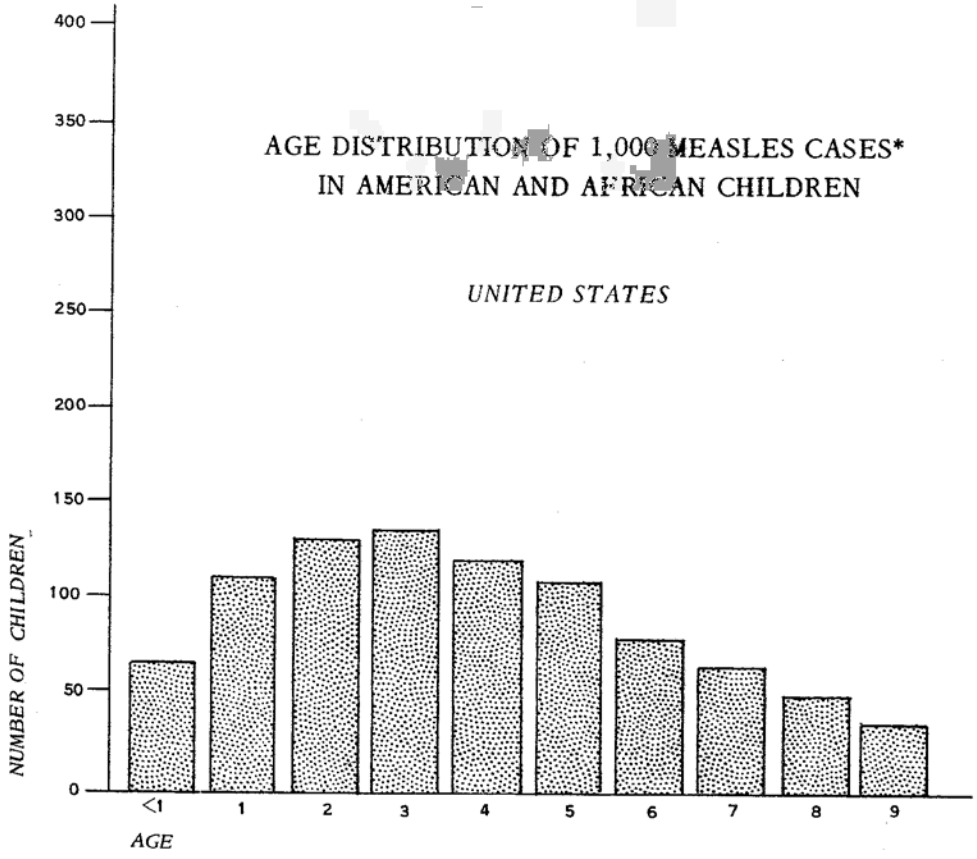
Photos courtesy of Le Medecin-Colonel des T.D.M., BINSON, Medecin-Chef de l'Institut d'Hygiene, Ivory Coast.

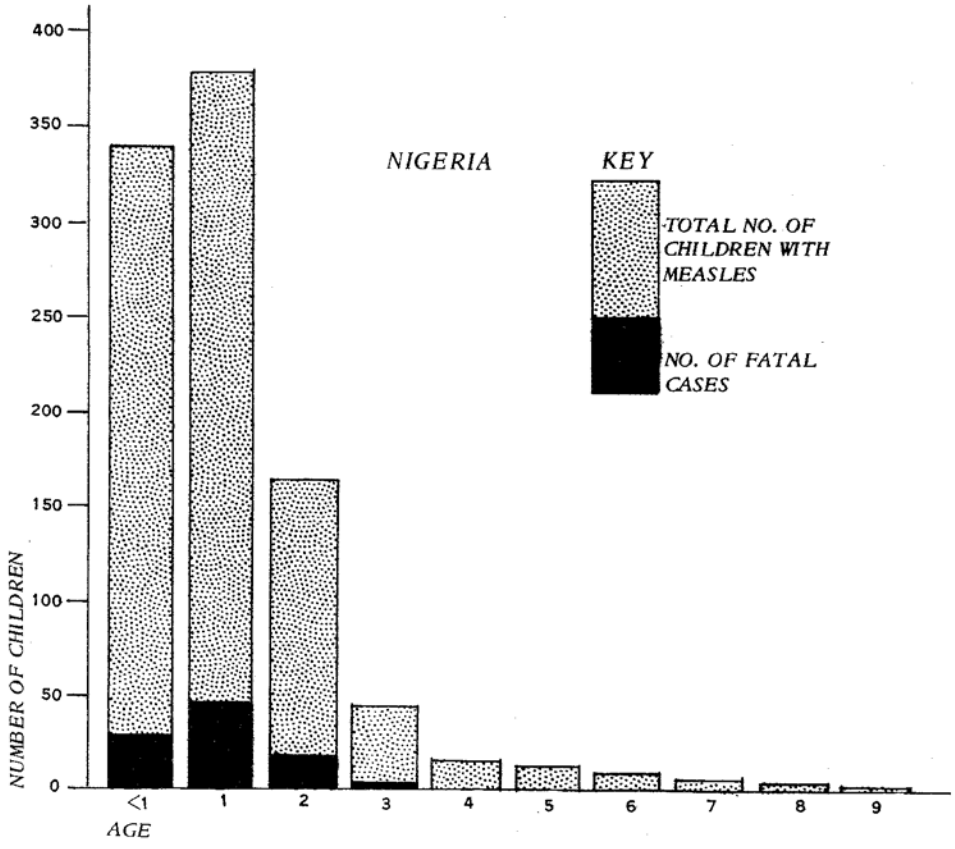
MEASLES A DEVASTATING DISEASE IN AFRICA

While measles in America is regarded as one of the "common childhood diseases" rarely resulting in death or disability, measles in Africa is a catastrophic event. Striking at a younger age, measles kills approximately 1 in 10 children and leaves uncounted numbers mentally retarded, deaf, blind and with chronic lung disease. Medical facilities devote up to 20 percent of their resources caring for measles cases and complications; in Northern Nigeria, 38 percent of cases of blindness have been ascribed to measles.

Although smallpox eradication has been successfully carried out in many developing countries, the more contagious disease, measles poses a much more difficult problem. Control of this disease appears now to be the only reasonable target.

AGE DISTRIBUTION OF 1,000 MEASLES CASES* IN AMERICAN AND AFRICAN CHILDREN





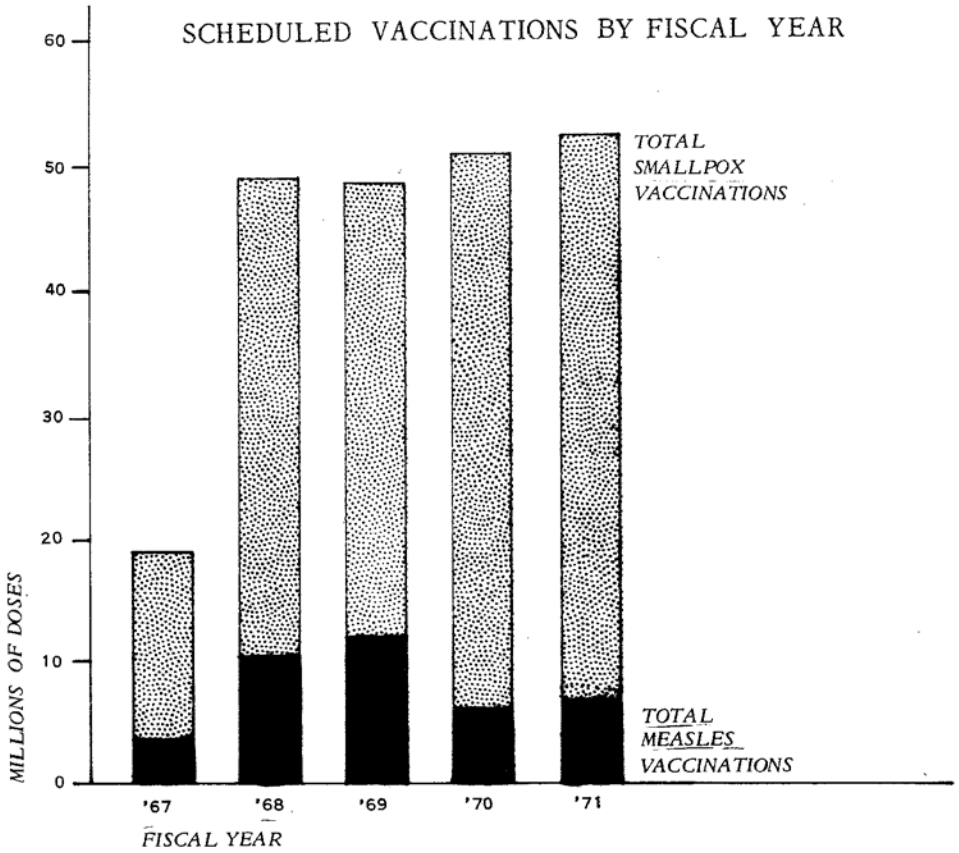
*Through 9 years of age.

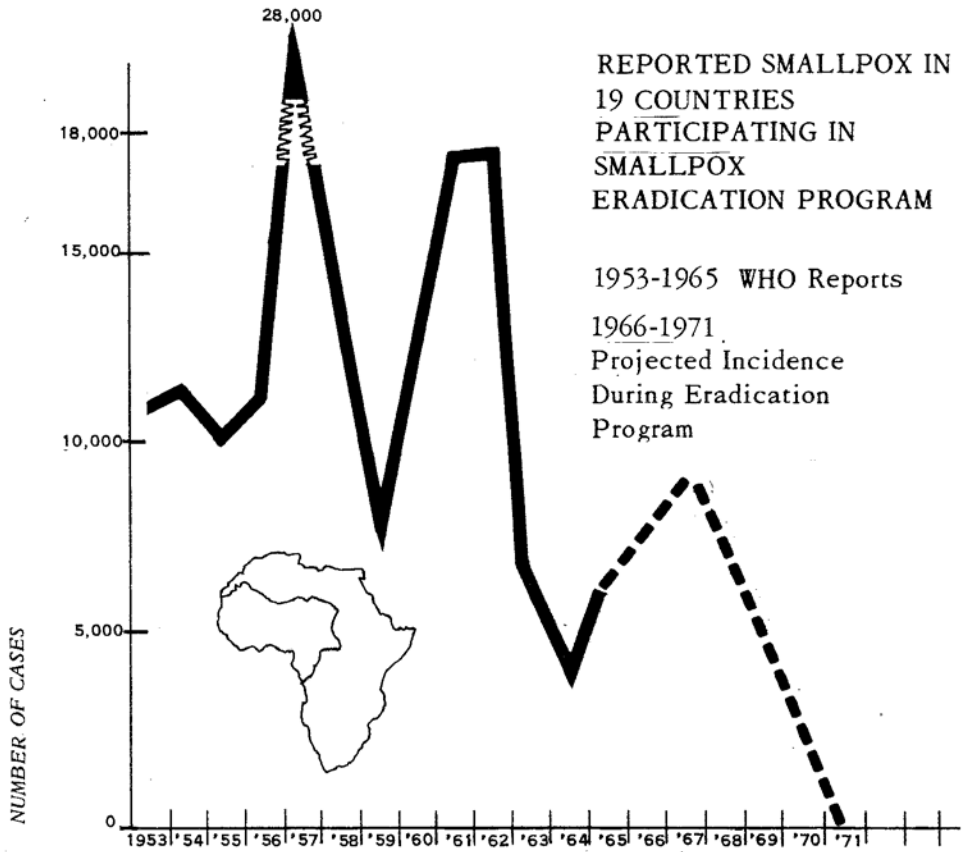
THE PROJECT

The Project will be carried out as a closely coordinated regional effort in concert with the World Health Organization, Regional African Health Organizations (O.C.C.G.E. and O.C.E.A.C.) and the individual countries. Project objectives call for the eradication of smallpox and the control of measles during a five-year period.

Systematic mass vaccination programs will be initiated in 16 of the 19 countries in the autumn of 1966. In Guinea, Sierra Leone, and Liberia, planning will be required during 1966 with initiation of vaccination anticipated a year later. All persons will be vaccinated against smallpox; measles vaccine will be given only to young children, the susceptible group. It is expected that during the 5 years of the program over 200 million will receive smallpox vaccine and over 30 million, the measles vaccine. In most areas, the vaccines will be administered simultaneously by mobile teams using jet injectors.

Improved reporting, surveillance, and assessment mechanisms should result in an apparent increase in cases during the first year or two of the program. By 1971, it is anticipated that '0' cases of smallpox should be reported.


SCHEDULED VACCINATIONS BY FISCAL YEAR
60
50
40
30
20
10
0
MILLIONS OF DOSES
TOTAL SMALLPOX VACCINATIONS
TOTAL MEASLES VACCINATIONS
'67
'68
'69
'70
'71
FISCAL YEAR


28,000
18,000
15,000
10,000
5,000
0
NUMBER OF CASES
1953 '54 '55 '56 '57 '58 '59 '60 '61 '62 '63 '64 '65 '66 '67 '68 '69 '70 '71
REPORTED SMALLPOX IN 19 COUNTRIES PARTICIPATING IN SMALLPOX ERADICATION PROGRAM
1953-1965 WHO Reports
1966-1971 Projected Incidence During Eradication Program

The United States Government will provide technical assistance, vaccine, jet injectors, refrigeration equipment, vehicles and supplies. Personnel and local costs for the program will be borne by the individual governments.

The U.S. committment to this project is funded by the Agency for International Development. Through a Participating Agency Service Agreement, administrative and operational responsibility for the program has been assumed by the Communicable Disease Center, U. S. Public Health Service.

FISCAL YEAR

COMMODITIES	*1967*	*1968*	*1969*	*1970*	*1971*	*TOTAL*
MEASLES VACCINE (doses) 	3,600,000	10,400,000	10,700,000	5,300,000	5,500,000	35,500,000
SMALLPOX VACCINE (doses) 	20,100,000	48,900,000	47,900,000	52,600,000	53,000,000	222,500,000
VACCINATION CERTIFICATES 	16,200,000	18,700,000	17,400,000	13,800,000	14,000,000	80,100,000
JET INJECTORS 	546	450	508	236	270	2010
TRUCKS 	177	10	161	7	57	412
MOTOR BIKES 	112	0	93	0	27	232
FREEZERS 	268	16	249	8	27	568
FIELD EQUIPMENT (UNITS) 	155	14	140	11	66	386

LOCAL COSTS *BORNE BY HOST COUNTRIES*

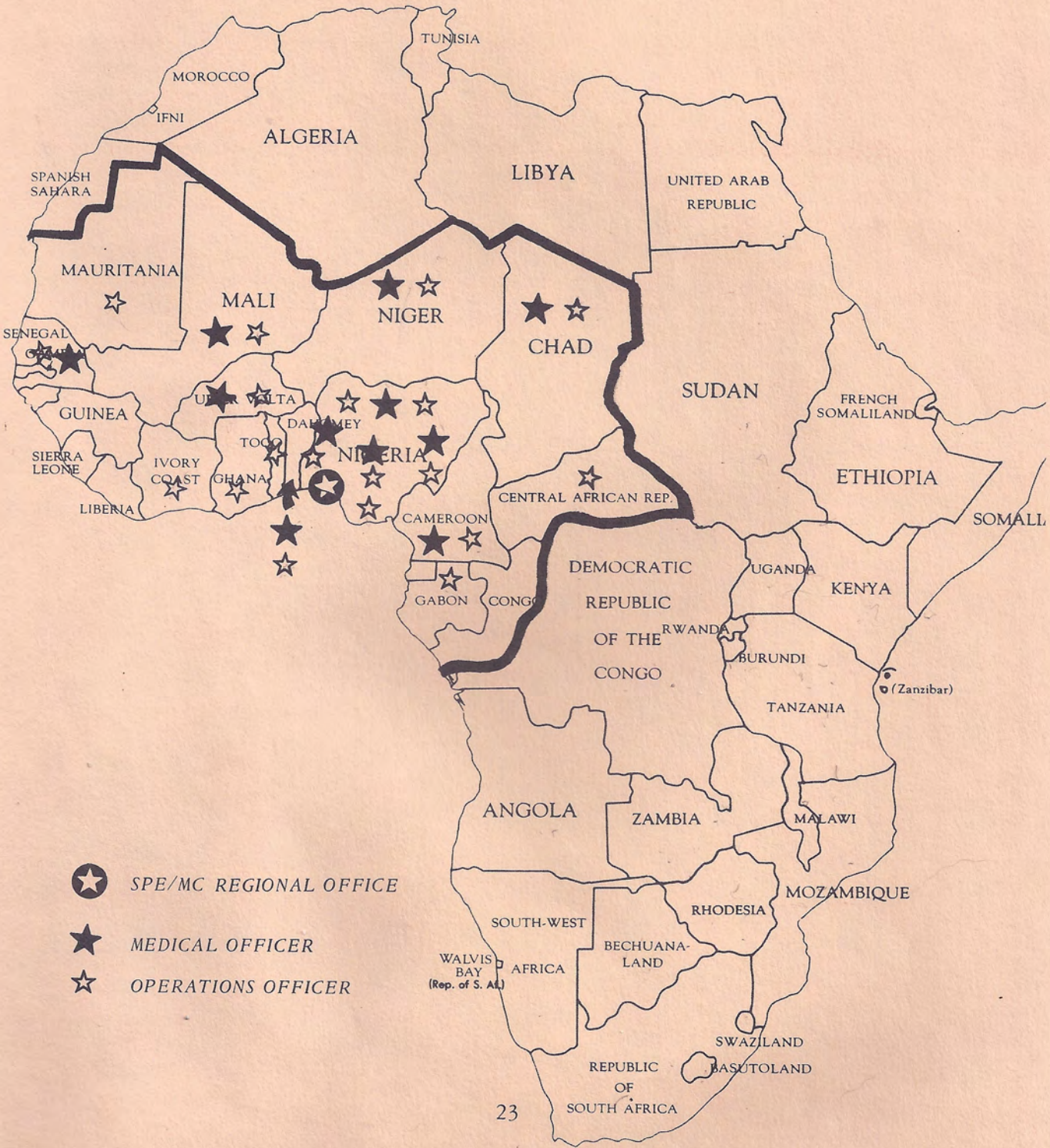
A Headquarters Staff based at the Communicable Disease Center, Atlanta, in addition to providing overall direction, guidance and assistance to the African program, will be carrying out multifaceted investigative and training activities pertaining to the epidemiology of smallpox, the application of vaccines, the conduct of vaccination programs in addition to a range of studies related to the diagnosis, character and behavior of smallpox and related viruses.

The Regional Project Office Staff, based at Lagos, Nigeria, is responsible for continuing consultation, coordination and direction of the Project.

The 30 Medical Officers and Operations Officers working with the individual country programs will provide the requisite continuity of assistance in the development and execution of individual country programs.

Headquarters Staff	Regional Project Staff
Medical Officers (4)	Medical Officers (2)
Statistician	Statistician
Virologists (2)	Health Educator
Program Management Officer	Equipment Specialist
	Virologist
	Administrative Officers (2)

REGIONAL SPE/MC PROGRAM
TECHNICAL STAFF BY COUNTRY



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Information Office, Publications Graphics