



INTER-REGIONAL SEMINAR ON SMALLPOX ERADICATION

Lagos, Nigeria, 13-20 May 1969

COUNTRY REPORT



INDEXED

1.0 DEMOGRAPHIC DATA

1.1 Estimated population (July 1969)

Age	
0-4	5 604 000
5-14	7 482 000
15-44	12 519 000
45+	4 173 000
TOTAL	29 778 000

1.2 Population by geographic subdivision (Table 1)

1.3 Population density by geographic subdivision (Table 1)

1.4 Population density by geographic subdivision (Figure 1)

2.0 SMALLPOX INCIDENCE AND VACCINATION DATA

2.1 Smallpox cases by month and geographic subdivision - Jan. 1968 - Feb. 1969 (Table 1)

2.2 Location of smallpox outbreaks.

Oct. 68 - Dec. 68 (Figure 2)

Jan. 69 - Feb. 69 (Figure 3)

2.3 Incidence rates per 100 000 population by geographic subdivision and by quarter.

Jan. 68 - Mar. 68 (Figure 4)

Apr. 68 - Jun. 68 (Figure 5)

Jul. 68 - Sep. 68 (Figure 6)

Oct. 68 - Dec. 68 (Figure 7)

Jan. 69 - Feb. 69 (Figure 8)

2.4 Monthly distribution of smallpox cases by age and sex - Jan. 1969 - Feb. 1969  
(Table 3)

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- 2.5 Smallpox vaccinations performed by quarter and geographic subdivision - January 1968 through February 1969 (Table 4)
- 2.6 Areas vaccinated since inception of the programme (Figure 9)
- 2.7 Smallpox vaccination targets by geographic subdivision - July 1969 through June 1970 (Table 5)
- 2.8 Method for recording of vaccinations:

Tally sheet: Yes  No

Other registry system (specify) \_\_\_\_\_

- 2.9 Youngest age for beginning smallpox vaccination:  
Birth  6 months  Other \_\_\_\_\_

3.0 MEASLES INCIDENCE AND VACCINATION DATA (for countries engaged in measles vaccination programmes)

- 3.1 Reported measles cases by month and geographic subdivision (Table 6)
- 3.2 Measles immunizations by quarter and geographic subdivision (Table 7)
- 3.3 Areas vaccinated against measles since inception of the programme and areas where maintenance vaccination programmes have been initiated (Figure 10)

4.0 NUMBER OF PERSONNEL ENGAGED IN VACCINATION PROGRAMME

4.1 Vaccinators: Regular teams	<u>160</u>
Maintenance teams	<u>10</u>
Other (Specify)	<u>-</u>
TOTAL	<u>170</u>

Other field staff, including recorders, drivers, etc. 52

Supervisory personnel (paramedical) 47

4.2 Number of vaccinators directly supervised by one supervisor 5

4.3 Average number of vaccinations performed daily by each team:

Regular teams 2 869

Maintenance teams 1 440

Other (specify) \_\_\_\_\_

5.0 PROGRAMME EXECUTION

5.1 Supervision

5.1.1 Proportion of time spent in field by supervisory staff and technical advisory staff checking directly on the work of vaccinators and assessors and lower level supervisors:

By country staff reviewing work of - Vaccination team: 21 days per mo.

Other levels: 7 days per mo.

By advisory staff reviewing work of -

Vaccination team: 14 days per mo.

Other levels: 10 days per mo.

5.1.2 Measures taken when vaccinator or assessor performance is unsatisfactory  
Measures taken vary, depending on the reasons for unsatisfactory performance, from reprimand to dismissal

5.2 Assessment

5.2.1 Vaccine "take rates"

Proportion of primary vaccinations in 0-4 year old children which are checked after seven days to determine takes Spot checks, less than 0.1%

Steps taken when the proportion of successful primary vaccination falls below 95% None found

5.2.2 Vaccination coverage:

Number of vaccinations performed in each area are compared with the population estimate for the area (e.g. village register, census, etc.)

Yes  No

5.2.3 Assessment of coverage:

An assessment of coverage is regularly performed in a sample of the population

Yes  No

Level of coverage in the 0-4 and 5-14 year age group which is considered acceptable

85%  80%  Other \_\_\_\_\_

Proportion of assessment surveys which fall below the level noted above.

16.3 %

Steps taken if the coverage is not acceptable (i.e. revaccinate the area etc.)  
1) Identification and revaccination of inadequately covered areas;  
2) Special effort to revaccinate such areas during the maintenance programme.

Changes which have been made in the programme as a direct result of assessment Greater emphasis on reaching younger age groups



6.0 COMMODITIES

	Col. 1	Col. 2	Col. 3	Col. 4	
6.1 Vaccine use:	Number of Doses Recd.	Number of Doses in Inventory	Number of Doses Used (Col.1-Col.2)	Number of Vacc. performed	Reasons for Difference between Col.3 and Col.4
Year					
				4 152 150	
<u>Smallpox vaccine</u>		1 750 000		12 290 340	
1969*	1 250 000	1 922 700	2 077 300	1 833 163	1)
				686 746	
<u>Measles vaccine</u>		120 800		1 576 173	
1969*	300 000	133 900	286 900	256 554	Normal loss

\* January and February only

6.2 Equipment:

<u>Item</u>	<u>Number Supplied</u> *	<u>Number in Operation</u>	<u>Comment</u>
Trucks	53	43	Spare parts supply system ineffective
Ped-o-Jets	171	162	
Refrigerators	54	21	Apparatus too fragile for field use
Motorbikes	22	10	Honda vehicle too complicated

\* Since inception of the programme.

Has a warehouse with rotating inventory system for spare parts been established? Yes  No

Injector often will not function at .1 cc. Improved maintenance is correcting this.



PAYS NORTHERN STATES OF NIGERIA  
COUNTRY

TABLEAU 2. CAS DE VARIOLE PAR MOIS ET PAR DIVISION GEOGRAPHIQUE (JUSQU'A FEVRIER 1969)  
TABLE 2. SMALLPOX CASES BY MONTH AND GEOGRAPHIC SUBDIVISION (TO FEBRUARY 1969)

Division géographique	Nombre de cas pas mois/Number of cases by month														
	1968													1969	
Geographic Subdivisions	J	F	M	A	M	J	J	A	S	O	N	D	Total	J	F
Semaines/Weeks	1-5	6-9	10-13	14-17	18-22	23-26	27-31	32-35	36-39	40-44	45-48	49-52		1-5	6-9
Adamawa Province	0	0	0	0	0	3	0	0	0	0	0	0	3	0	0
Bauchi "	0	18	30	0	1	33	2	27	11	0	1	0	123	0	7
Benue "	0	0	0	0	1	0	0	0	0	0	0	0	1	14	2
Bornu "	35	148	117	0	108	43	2	30	45	5	13	3	549	4	0
Ilorin "	0	0	5	0	0	0	0	0	0	0	4	0	9	1	6
Kabba "	3	0	1	1	0	1	0	12	6	0	1	0	25	22	71
Kano State	49	358	46	461	114	26	7	1	0	0	0	2	1 064	17	5
Katsina Province	9	30	7	2	3	1	1	1	0	0	0	0	54	0	1
Niger "	0	0	1	0	0	0	0	0	2	0	0	0	3	1	0
Plateau "	51	11	2	8	8	6	2	4	0	1	0	0	93	0	0
Sardauna "	10	0	2	1	0	0	0	0	0	0	0	0	13	0	0
Sokoto "	10	12	4	3	0	1	0	0	0	0	0	0	30	0	0
Zaria "	2	12	10	16	3	0	0	0	2	35	3	2	85	1	3
Total	169	589	225	492	238	114	14	75	66	41	22	7	2 052	60	95

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TABLEAU 3. CAS DE VARIOLE PAR AGE ET PAR SEXE  
TABLE 3. SMALLPOX CASES BY AGE AND SEX

Mois	Age								Age/Sexe inconnu	Total	
	0-4		5-14		15-44		45+		Unknown Age/Sex		
Month	M	F	M	F	M	F	M	F			
J 1968	0	0	0	0	0	0	0	0	0	169	169
F	0	0	0	0	0	0	0	0	0	589	589
M	0	1	0	0	1	1	0	0		222	225
A	0	0	0	0	1	0	0	0		491	492
M	0	0	0	0	2	0	0	0		236	238
J	0	0	0	0	0	0	0	0		114	114
J	0	1	2	0	2	2	0	0		7	14
A	0	1	0	0	1	0	0	0		73	75
S	1	0	0	0	2	1	0	0		62	66
O	0	2	2	1	3	0	0	0		33	41
N	3	1	2	2	1	3	0	0		10	22
D	0	0	1	1	2	1	0	0		2	7
J 1969	0	2	5	0	3	2	1	0		47	60
F	4	1	1	3	4	4	0	0		78	95



TABLEAU 4. VACCINATIONS ANTIVARIOLIQUES EFFECTUEES, PAR DIVISION GEOGRAPHIQUE  
(Divisions indiquées par les cartes)

TABLE 4. SMALLPOX VACCINATIONS PERFORMED BY GEOGRAPHIC SUBDIVISIONS  
(those shown on country maps)

Division géographique Geographic Subdivisions	1967	1er trim. 1968 First Quarter	2ème trim. 1968 Second Quarter	3ème trim. 1968 Third Quarter	4ème trim. 1968 Fourth Quarter	J-F 1969	Total général * Grand total *
Adamawa Prov.						71 425	71 425
Bauchi "					1 530 773	675 247	2 206 020
Benue "							
Bornu "				2 058 903	95 488	422 184	2 576 575
Ilorin "							
Kabba "						349 309	349 309
Kano State	57 838	316 093	3 615 293	1 561 347	19 924	300 749	5 871 244
Katsina Prov.		2 749 824					2 749 824
Niger "					103 880		103 880
Plateau "					17 529		17 529
Sardauna "							
Sokoto "	4 003 345	148 050		32 069			4 183 464
Zaria "	90 967			5 000	36 167	14 249	146 383
Total	4 152 150	3 213 967	3 615 293	3 657 319	1 803 761	1 833 163	18 275 653

\* Englobant le total depuis la mise en oeuvre du programme.

\* Includes the total since the inception of the programme.

TABLEAU 5. OBJECTIFS DE LA VACCINATION PAR DIVISION GEOGRAPHIQUE,  
DE JUILLET 1969 A JUIN 1970

TABLE 5. VACCINATION TARGETS BY GEOGRAPHIC SUBDIVISIONS  
JULY 1969-JUNE 1970

Division géographique Geographic Subdivisions	Nombre de vaccinations prévues/Number of vaccinations planned			
	1969		1970	
	Juillet-septembre July-September	Octobre-décembre October-December	Janvier-mars January-March	Avril-juin April-June
Adamawa Province			40 000	40 000
Bauchi "		62 000	62 000	62 000
Benue "		2 700 000		
Bornu "		72 000	72 000	72 000
Ilorin "			30 000	30 000
Kabba "			32 000	32 000
Kano State	150 000	150 000	150 000	150 000
Katsina Province		64 000	64 000	64 000
Niger "	1 400 000			35 000
Plateau "	700 000	700 000		
Sardauna "			22 000	22 000
Sokoto "		110 000	110 000	110 000
Zaria "	1 600 000			39 000
Total	3 850 000	3 858 000	582 000	656 000

TABLEAU 6. CAS DE ROUGEOLE DECLARES DE JANVIER 1968 JUSQU'A FEVRIER 1969 COMPRIS  
TABLE 6. REPORTED MEASLES CASES JANUARY 1968 (THROUGH FEBRUARY 1969)

Division géographique Geographic Subdivisions	Nombre de cas par mois/Number of cases by month														
	1968													1969	
	J	F	M	A	M	J	J	A	S	O	N	D	Total	J	F
Semaines/Weeks	1-5	6-9	10-13	14-17	18-22	23-26	27-31	32-35	36-39	40-44	45-48	49-52		1-5	6-9
Adamawa Province	31	177	69	113	44	49	34	35	52	6		73	683		106
Bauchi "	17	29	201		47	109	105	70	11	3	36	98	726	66	5
Benue "	27	50	103	205	274	283	572	1 293	203	79	119	98	3 306	59	131
Bornu "	312	555	330		258	282	41	130	1	4	2	2	1 917	1	0
Ilorin "	52	81	59	141	36	27		52	29	12	0	2	491	0	0
Kabba "	207	275	307	97	245	520	126	154	88	42	297	370	2 728	179	183
Kano State	500	1 569	523	3 682	479	388	184	133	52	103	103	53	7 769	120	207
Katsina Province	579	674	704	564	602	315	95	98	26	80	119	17	3 873	27	78
Niger "	30	55	50		25	17	30	53	33	45	88	77	503	77	199
Plateau "	365	741	330	233	181	401	290	335	286	340	291	393	4 186	228	386
Sardauna "	34	64	140	68	151	343	217			46	0	4	1 067	79	82
Sokoto "	531	302	332	772	103	396	244	419	82	35	129	466	3 811	247	355
Zaria "	280	268	256	321	178	147	615	530	144	149	206	259	3 353	533	735
Total	2 965	4 840	3 404	6 196	2 623	3 277	2 553	3 302	1 007	944	1 390	1 912	34 413	1 616	2 467

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TABLEAU 7. VACCINATIONS ANTIROUGEOLEUSES EFFECTUEES, PAR DIVISION GEOGRAPHIQUE  
(Divisions indiquées par les cartes)

TABLE 7. MEASLES VACCINATIONS PERFORMED BY GEOGRAPHIC SUBDIVISIONS  
(those shown on country maps)

Division géographique	1 <sup>er</sup> trim. 1968	2 <sup>ème</sup> trim. 1968	3 <sup>ème</sup> trim. 1968	4 <sup>ème</sup> trim. 1968	Janvier-février 1969	Total général*
Geographic Subdivisions	First Quarter	Second Quarter	Third Quarter	Fourth Quarter		Grand total*
Adamawa Province					12 575	12 575
Bauchi "				259 470	108 862	368 332
Benue "						
Bornu "			295 815	11 687	44 947	352 449
Ilorin "						
Kabba "					54 870	54 870
Kano State	49 291	520 474	232 173		35 300	837 238
Katsina Province	415 353					415 353
Niger "						
Plateau "						
Sardauna "						703 580
Sokoto "	23 175					23 175
Zaria "						6 341
Total	487 819	520 474	527 988	271 157	256 554	3 460 659**

\* Englobant le total depuis la mise en oeuvre du programme.

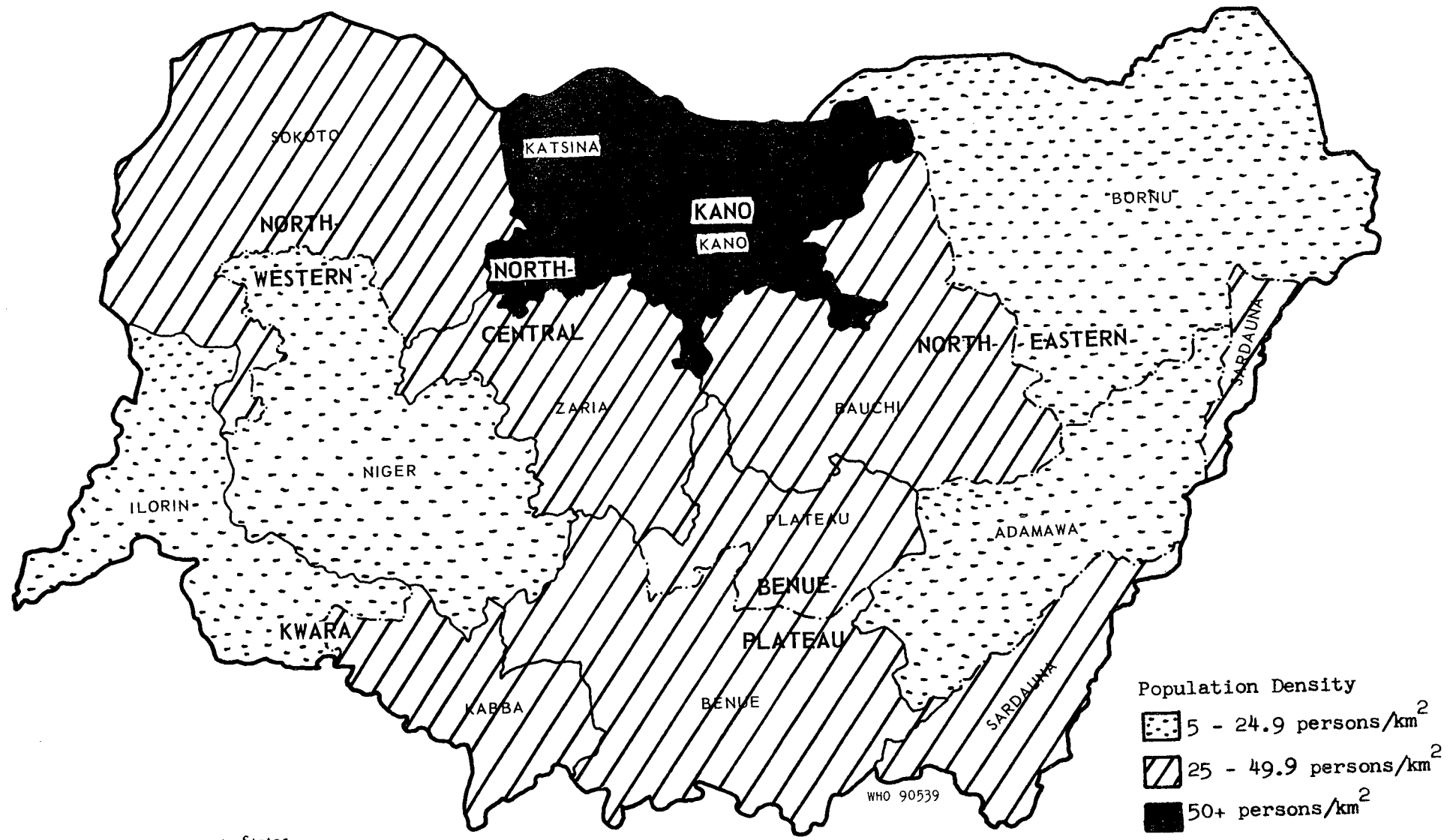
\* Includes the total since the inception of the programme.

\*\* Includes 680 405 from 1967

\*\* Y compris 680 405 de 1967

FIGURE 1  
(1.4)

**NIGERIA - NORTHERN STATES**  
(with Provincial Boundaries)



Large lettering represents States  
Small lettering represents Provinces

Population Density




-  5 - 24.9 persons/km<sup>2</sup>
-  25 - 49.9 persons/km<sup>2</sup>
-  50+ persons/km<sup>2</sup>

FIGURE 2  
(2.2)

**NIGERIA – NORTHERN STATES**  
(with Provincial Boundaries)



Large lettering represents States  
Small lettering represents Provinces

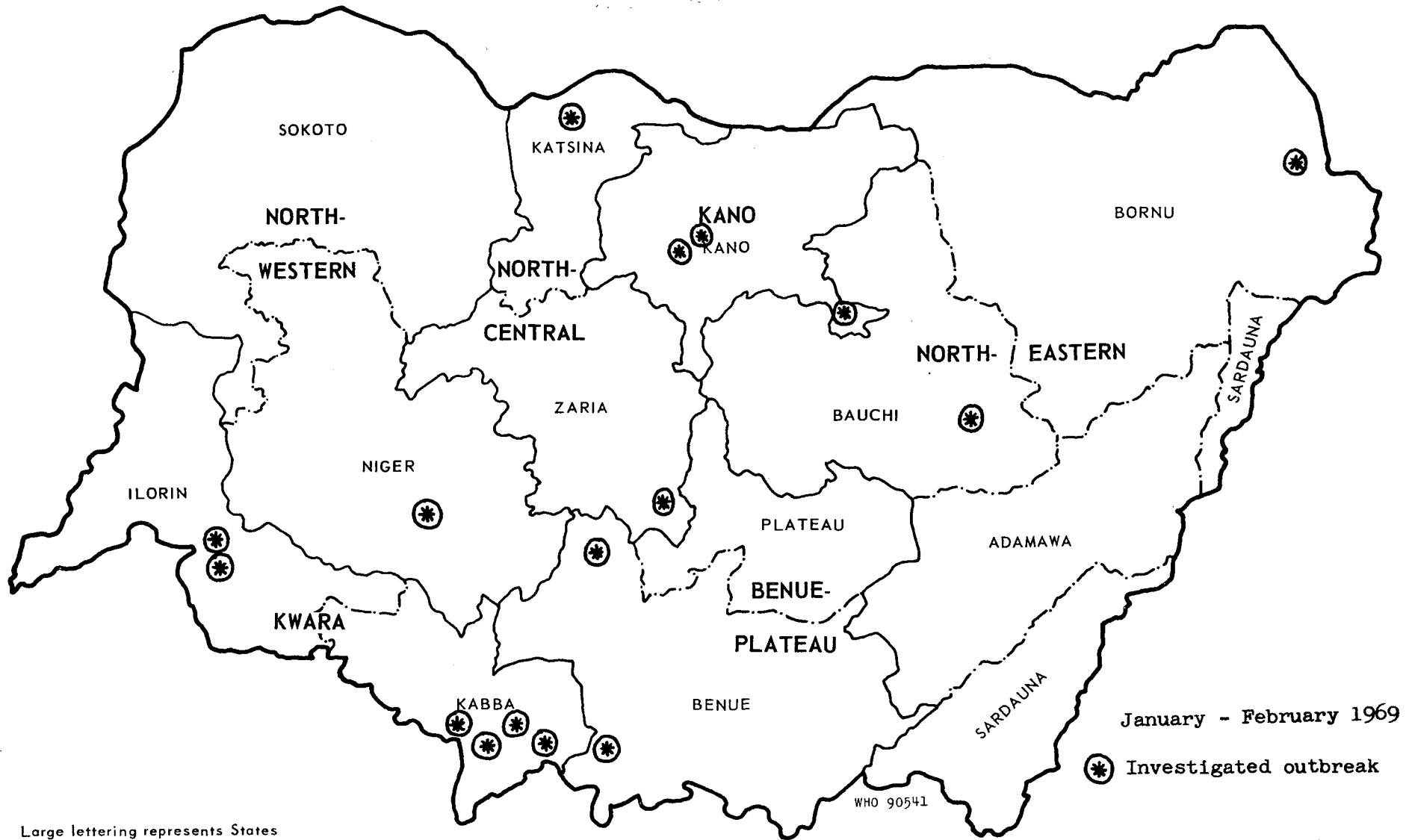
October - December 1968

- ⊛ Investigated outbreak
- \* Outbreak

WHO 90540

FIGURE 3  
(2.2)

**NIGERIA – NORTHERN STATES**  
(with Provincial Boundaries)



Large lettering represents States  
Small lettering represents Provinces

WHO 90541

FIGURE 4  
(2.3)

**NIGERIA – NORTHERN STATES**  
(with Provincial Boundaries)

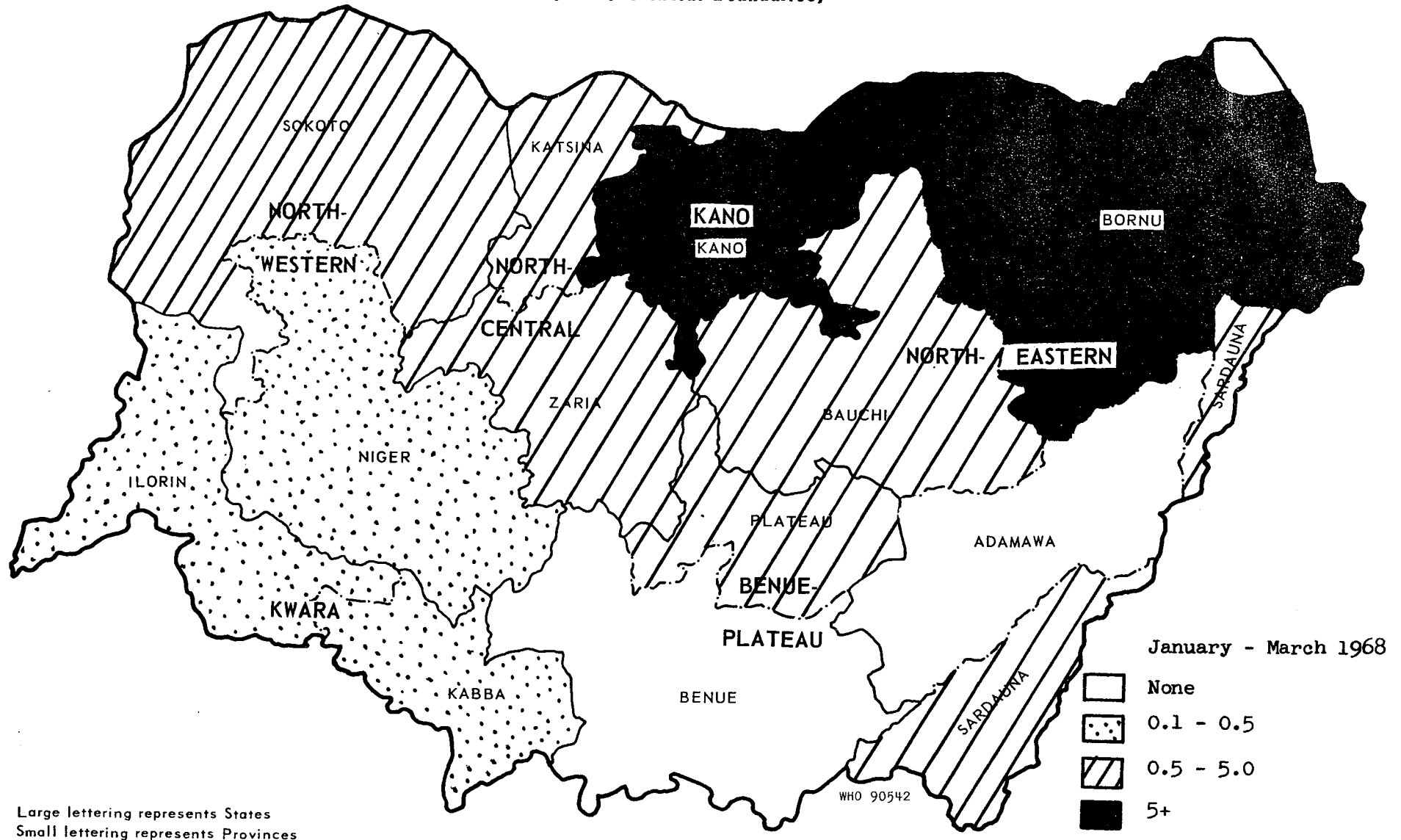
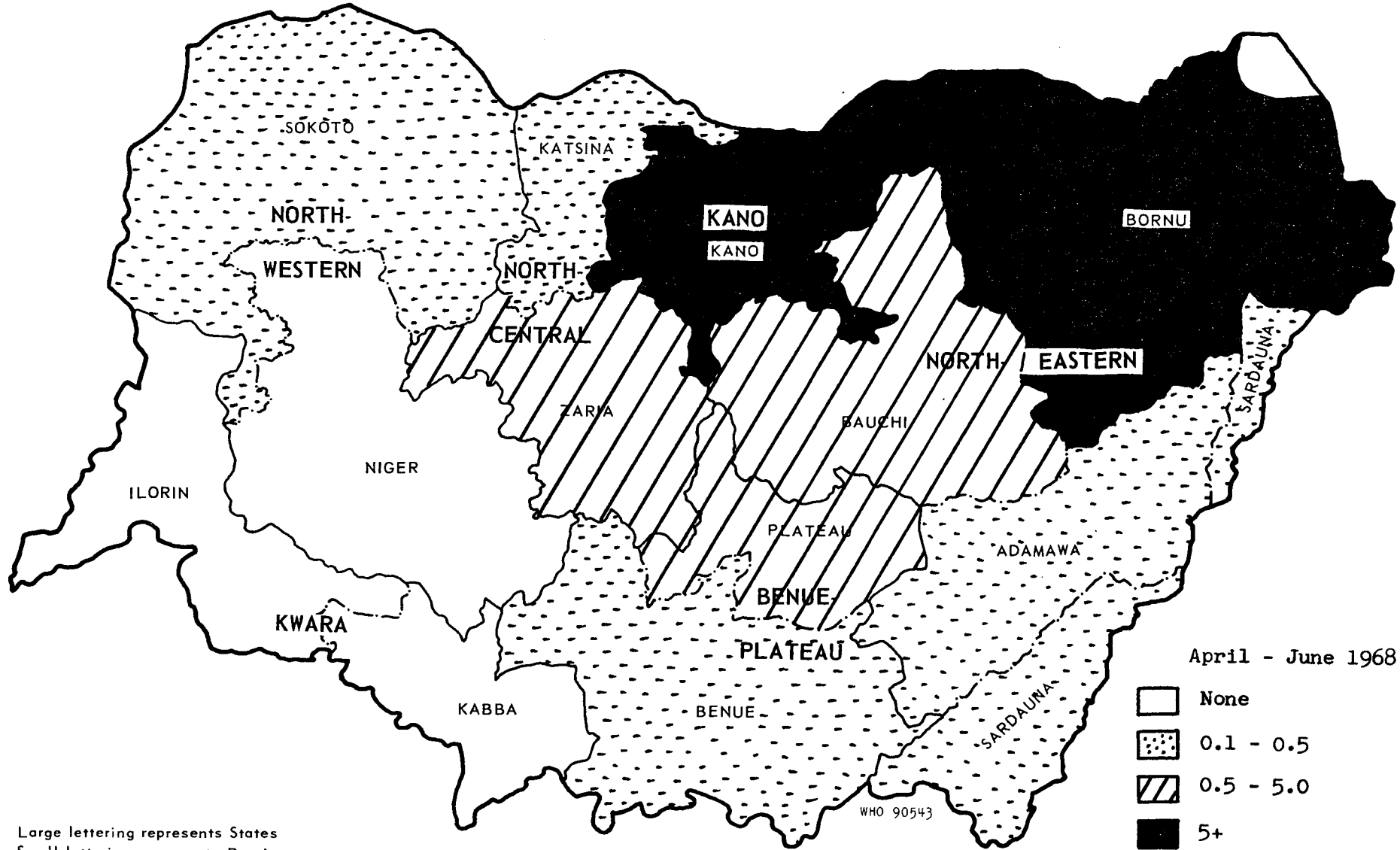




FIGURE 5  
(2.3)

**NIGERIA – NORTHERN STATES**  
(with Provincial Boundaries)



Large lettering represents States  
Small lettering represents Provinces

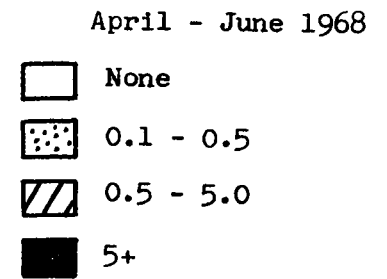
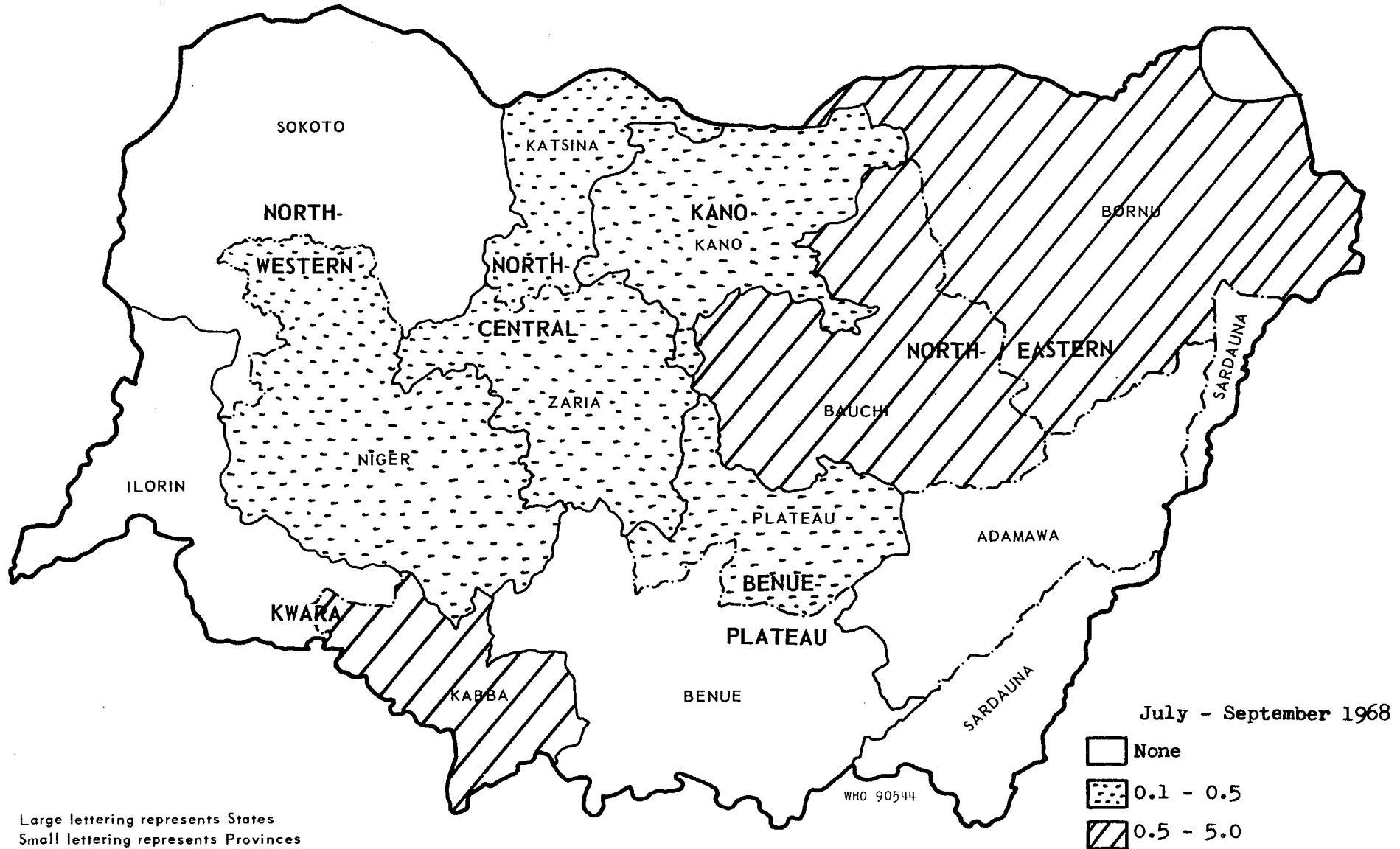


FIGURE 6  
(2.3)

**NIGERIA – NORTHERN STATES**  
(with Provincial Boundaries)



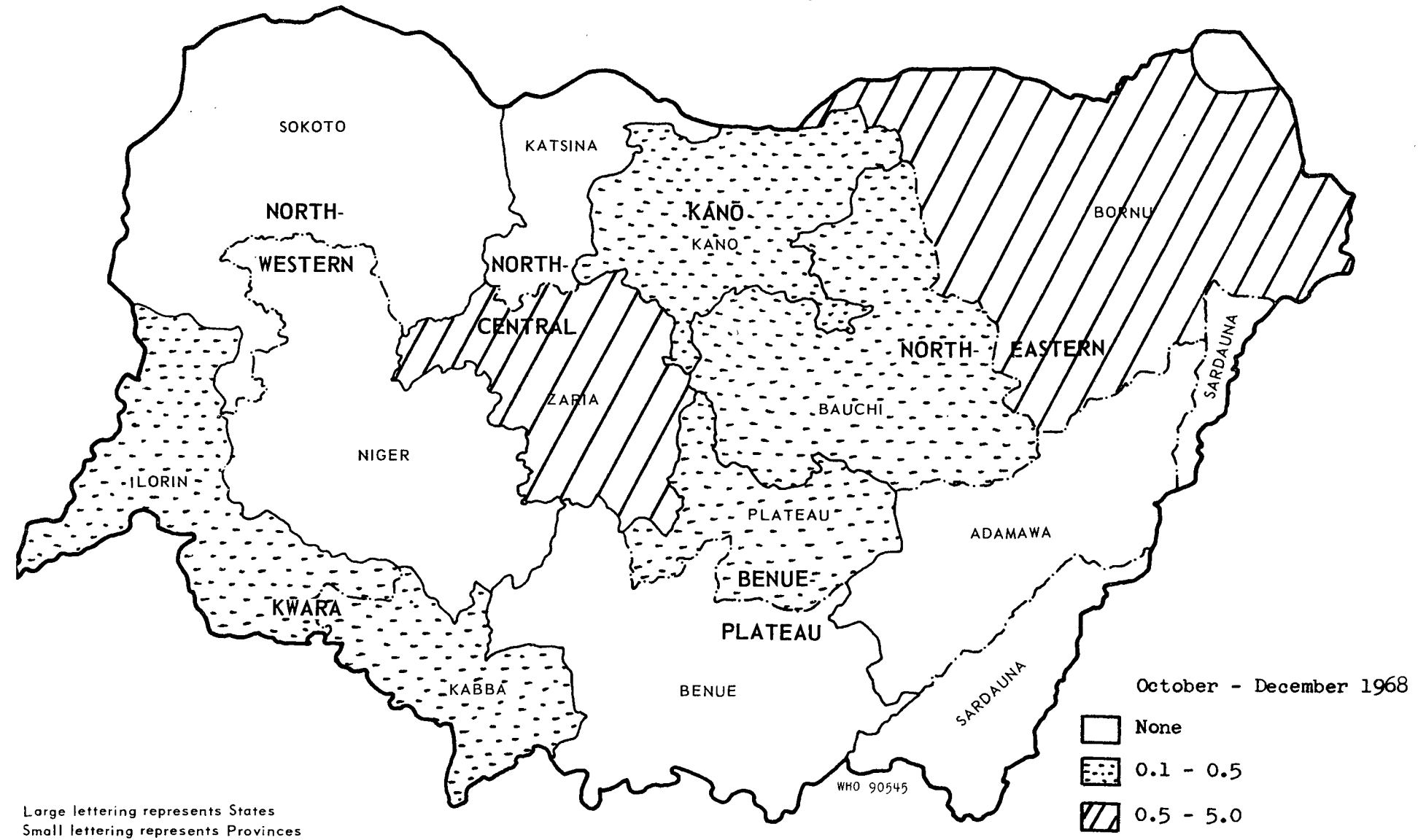
Large lettering represents States  
Small lettering represents Provinces

July - September 1968

- None
- 0.1 - 0.5
- 0.5 - 5.0

FIGURE 7  
(2.3)

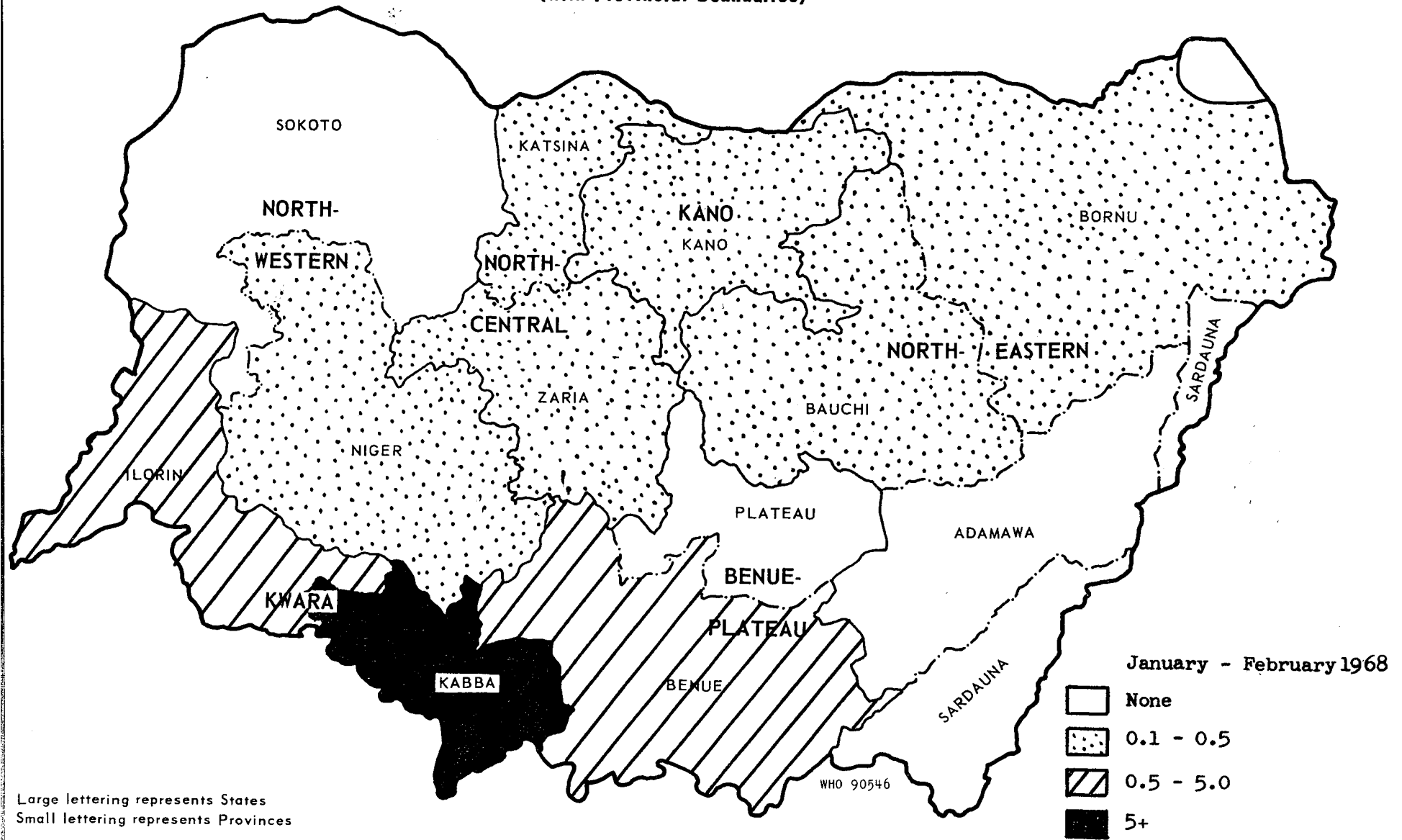
**NIGERIA – NORTHERN STATES**  
(with Provincial Boundaries)



Large lettering represents States  
Small lettering represents Provinces

FIGURE 8  
(2.3)

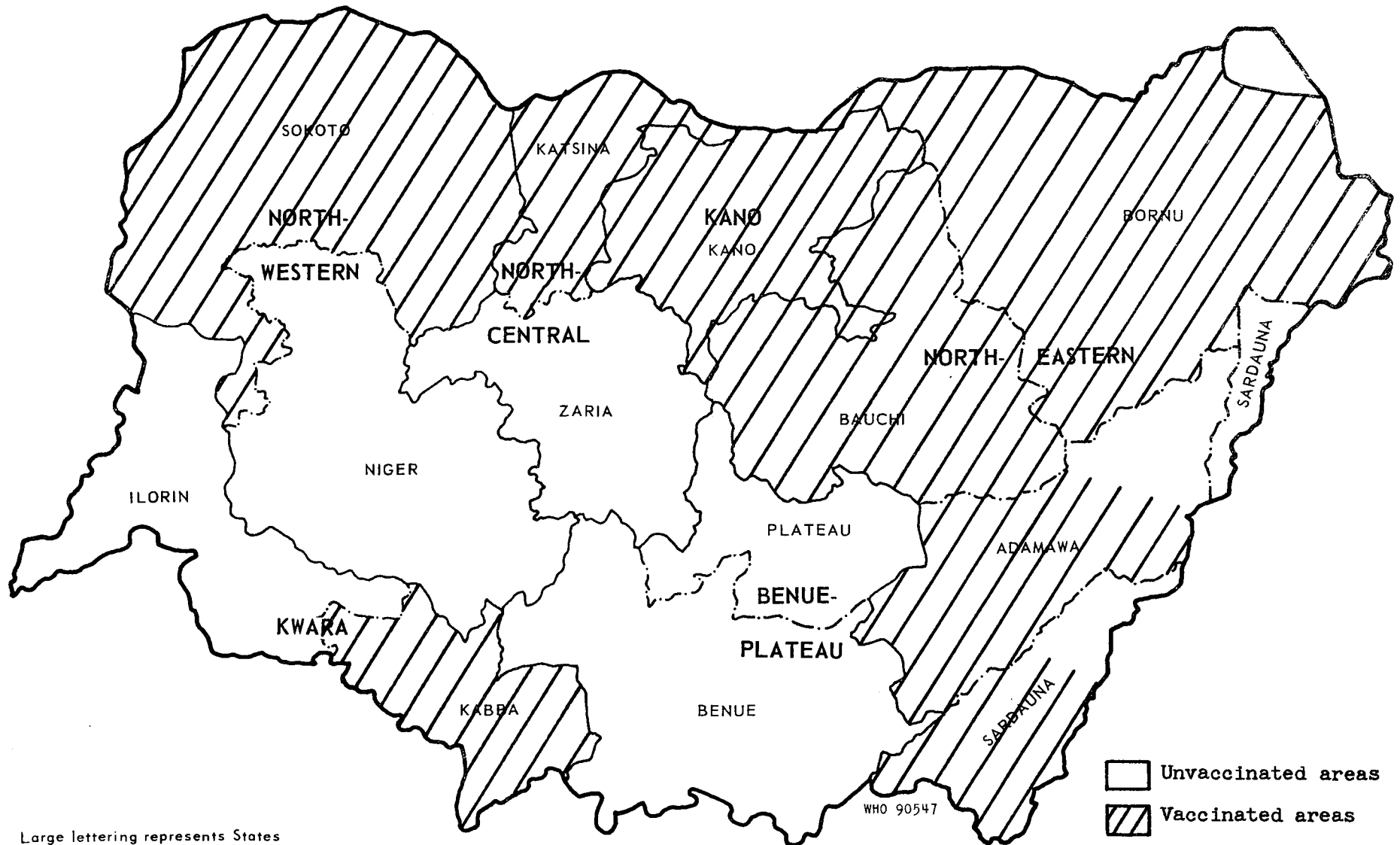
**NIGERIA – NORTHERN STATES**  
(with Provincial Boundaries)



Large lettering represents States  
Small lettering represents Provinces

FIGURE 9 and 10  
(2.6 and 3.3)

**NIGERIA – NORTHERN STATES**  
(with Provincial Boundaries)



Large lettering represents States  
Small lettering represents Provinces

□ Unvaccinated areas  
▨ Vaccinated areas

WHO 90547