



INTER-REGIONAL SEMINAR ON SMALLPOX ERADICATION

Lagos, Nigeria, 13-20 May 1969

INDEXED

COUNTRY REPORT



1.0 DEMOGRAPHIC DATA

1.1 Estimated population (July 1969)

Age	
0-4	415 069
5-14	465 376
15-44	1 117 864
45+	400 082
TOTAL	2 398 391

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 2)

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)

SE/69.8

The issue of this document does not constitute formal publication. It should not be reviewed, abstracted or quoted without the agreement of the World Health Organization. Authors alone are responsible for views expressed in signed articles.

Ce document ne constitue pas une publication. Il ne doit faire l'objet d'aucun compte rendu ou résumé ni d'aucune citation sans l'autorisation de l'Organisation Mondiale de la Santé. Les opinions exprimées dans les articles signés n'engagent que leurs auteurs.

- 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>12</u>
Maintenance teams	<u>0</u>
Other (Specify)	<u>13</u> Assessment, advance teams
TOTAL	<u>25</u>

Other field staff, including recorders, drivers, etc. 12

Supervisory personnel (paramedical) 9

4.2 Number of vaccinators directly supervised by one supervisor 2

4.3 Average number of vaccinations performed daily by each team:

Regular teams 1 000

Maintenance teams -

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: 23 days per mo.

Other levels: 23 days per mo.

By advisory staff reviewing work of -

Vaccination team: 4 days per mo.

Other levels: 6 days per mo.

5.1.2 Measures taken when vaccinator or assessor performance is unsatisfactory

Reprimand or pay deduction

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 7 - 10%

Steps taken when the proportion of successful primary vaccination falls below 95% Has not occurred

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.

15 %

Steps taken if the coverage is not acceptable (i.e. revaccinate the area etc.) Revaccinate sometimes

Changes which have been made in the programme as a direct result of assessment Mop up vaccinations have been done in some areas.

Advance team reshuffled.

5.3 Surveillance

5.3.1 Notification of smallpox cases:

Number of sites which could report smallpox cases (e.g. hospitals, health centres, health posts, dispensaries) 126

Frequency of reporting:

Immediate Weekly Other _____

Number of reports: Expected in 1968 In the absence of negative reporting, this computation is not meaningful.
Received in 1968 Estimated efficiency of reporting is given below.
% received _____

Negative reporting is generally practised: Yes No

Other specialized programmes which report cases
None

Other persons or groups who have been requested to notify cases
All paramount chiefs and chieftom health overseers

Proportion of cases for which age, sex, and vaccination status are recorded
60 %

Best estimate of the percentage of cases which are reported:

	January 1967	February 1969
More than 90%	_____	<u>X</u>
75-89%	<u>X</u>	_____
50-74%	_____	_____
Less than 50%	_____	_____

5.3.2 Case investigation and containment measures:

Number of case investigation/containment ('fire-fighting') teams which have been established One

These teams are: Centralized Decentralized

If decentralized, to what extent _____

Proportion of cases, since October 1968, in which containment action was taken within 48 hours after notification 60 %

Proportion of outbreaks, since October 1968, routinely investigated to determine the origin of infection 92 %

Of the investigations noted above, the percentage of outbreaks where the origin was not ascertained 25.6 %

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					
1967	600 000	600 000			
<u>Smallpox vaccine</u> 1968	600 000	170 000	1 030 000	965 572	1)
1969*	150 000	90 000	230 000	237 275	
1967	120 000	120 000			
<u>Measles vaccine</u> 1968	160 000	120 150	160 000	152 400	2)
1969*		72 000	48 150	48 290	

* January and February only

6.2 Equipment:

<u>Item</u>	<u>Number Supplied</u> *	<u>Number in Operation</u>	<u>Comment</u>
Trucks	9	9	
Ped-o-Jets	22	22	
Refrigerators	6	4	2 held in storage
Motorbikes	1	1	

* Since inception of the programme.

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

- 1) Most wastage occurred in sparsely populated Koinadugu District.
- 2) 7,450 doses expired because returns for Kambia and Port Loko District were not up to what was expected.

TABLEAU 1. DONNEES DEMOGRAPHIQUES PAR DIVISION GEOGRAPHIQUE
(Utiliser les divisions indiquées par les cartes)

TABLE 1. DEMOGRAPHIC DATA BY GEOGRAPHIC SUBDIVISION
(Use Subdivisions as shown on Country Maps)

Division géographique	Population approximative en 1969	Superficie (en km ²)	Densité de population au km ²
Geographic Subdivisions	Est. 1969 Population	Area (Square kms)	Population density per square km
Western Area	214 525	666	322.0
<u>Southern Province</u>			
Moyamba District	184 168	6 940	26.6
Bonthe District	88 152	3 630	24.3
Pujehun District	93 356	4 120	22.6
Bo District	230 729	5 240	44.1
<u>Eastern Province</u>			
Kono District	184 707	5 660	32.7
Kailahun District	165 260	4 020	41.0
Kenema District	250 171	6 070	41.3
<u>Northern Province</u>			
Koinadugu District	141 967	12 170	11.6
Bombali District	218 654	8 000	27.4
Tonkolili District	202 906	7 020	28.9
Kambia District	151 587	3 120	48.8
Port Loko District	272 209	5 760	47.3
Total	2 398 391	72 416	33.1

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
Western Area	1	1	6	0	5	4	6	0	1	2	0	0	26	0	3
Moyamba District	5	2	5	0	3	2	91	29	2	0	2	13	154	6	8
Bonthe District	9	18	3	0	1	0	9	7	13	21	2	12	95	1	0
Pujehun District	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Bo District	0	0	0	0	0	0	1	0	0	0	3	10	14	0	0
Kenema District	0	8	6	0	0	0	1	0	0	0	0	0	15	0	0
Kailahun District	8	0	0	0	0	11	1	0	0	1	0	0	21	0	0
Kono District	4	46	5	2	114	157	3	1	0	0	0	0	332	0	0
Koinadugu District	97	11	57	1	0	0	7	1	3	0	0	0	177	0	0
Tonkolili District	1	0	7	12	0	0	11	0	18	0	0	0	49	0	0
Bombali District	0	0	0	4	1	8	0	0	0	2	0	0	15	0	0
Kambia District	1	1	0	0	0	5	1	0	10	20	8	0	46	0	0
Port Loko District	10	0	8	4	0	4	20	74	28	58	0	6	212	0	19
Total	136	87	97	23	124	191	151	112	75	104	15	41	1 156	10	30

PAYS SIERRA LEONE
COUNTRY

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	6	4	13	18	3	8	1	2	81	136
F	-	-	-	-	-	-	-	-	87	87
M	-	-	-	-	-	-	-	-	97	97
A	-	-	-	-	-	-	-	-	23	23
M	6	19	14	14	20	13	3	5	30	124
J	14	13	20	5	22	44	9	10	54	191
J	2	6	9	4	28	21	10	8	63	151
A	4	6	10	8	15	15	7	8	39	112
S	3	2	4	3	15	16	3	2	27	75
O	2	6	12	9	13	20	6	1	35	104
N	1	3	0	3	0	6	2	0	0	15
D	-	-	-	-	-	-	-	-	41	41
J 1969	1	0	0	1	1	0	1	0	6	10
F	0	2	6	5	4	2	0	0	11	30

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*
Western Area		488			50		538
<u>Southern Prov.</u>							
Moyamba Dist.				14 916		582	15 498
Bonthe Dist.				4 000	7 106	1 967	13 073
Pujehun Dist.							
Bo Dist.		201 064			1 238		202 302
<u>Eastern Prov.</u>							
Kono District			170 730				170 730
Kailahun Dist.			3 421				3 421
Kenema District		94 141	148 147				242 288
<u>Northern Prov.</u>							
Koinadugu Dist.		6 000	21 942	48 826	36 728		113 496
Bombali Dist.					8 433	132 426	140 859
Tonkolili Dist.				5 765			5 765
Kambia District					144 264		144 264
Port Loko Dist.				23 748	24 565	102 300	150 613
Total		301 693	344 240	97 255	222 384	237 275	1 202 847

* 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	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
Western Area	-	40 000	-	40 000
<u>Southern Province</u>				
Moyamba District	50 000	135 000	-	-
Bonthe District	-	-	-	-
Pujehun District	-	90 000	-	-
Bo District	-	15 000	20 000	-
<u>Eastern Province</u>				
Kenema District	-	-	37 000	-
Kailahun District	170 000	-	-	-
Kono	-	-	30 000	-
<u>Northern Province</u>				
Koinadugu District	-	-	-	23 000
Tonkolili District	-	-	-	-
Bombali District	-	-	-	-
Kambia District	-	-	-	-
Port Loko District	-	-	-	54 000
Total	220 000	280 000	87 000	117 000

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	Nombre de cas par 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
Western Area	2	14	15	18	75	8	119	2	0	5	0	7	265	0	2
Moyamba District	2	11	34	109	28	8	25	24	20	52	38	12	363	30	40
Bonthe District	22	17	13	29	5	3	6	15	15	8	15	14	162	4	10
Pujehun District	0	0	19	0	4	40	13	37	0	26	0	47	186	0	3
Bo District	0	0	4	10	2	0	0	0	0	0	0	0	16	0	0
Kenema District	0	0	2	2	0	3	9	7	0	0	0	2	25	0	0
Kailahun District	1	2	4	55	51	83	20	25	25	24	7	9	306	0	0
Kono District	0	2	3	45	6	3	0	4	1	0	0	2	66	0	0
Koinadugu District	1	2	3	1	3	0	6	23	6	10	5	17	77	2	16
Tonkolili District	0	0	0	1	0	0	6	40	0	1	8	0	56	5	1
Bombali District	0	1	7	34	13	21	3	0	0	0	0	0	79	0	5
Kambia District	50	100	59	15	37	53	1	0	1	0	2	1	319	2	0
Port Loko District	15	66	76	13	24	16	13	11	11	3	0	0	248	0	3
Total	93	215	239	332	248	238	221	188	79	129	75	111	2 168	43	80

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

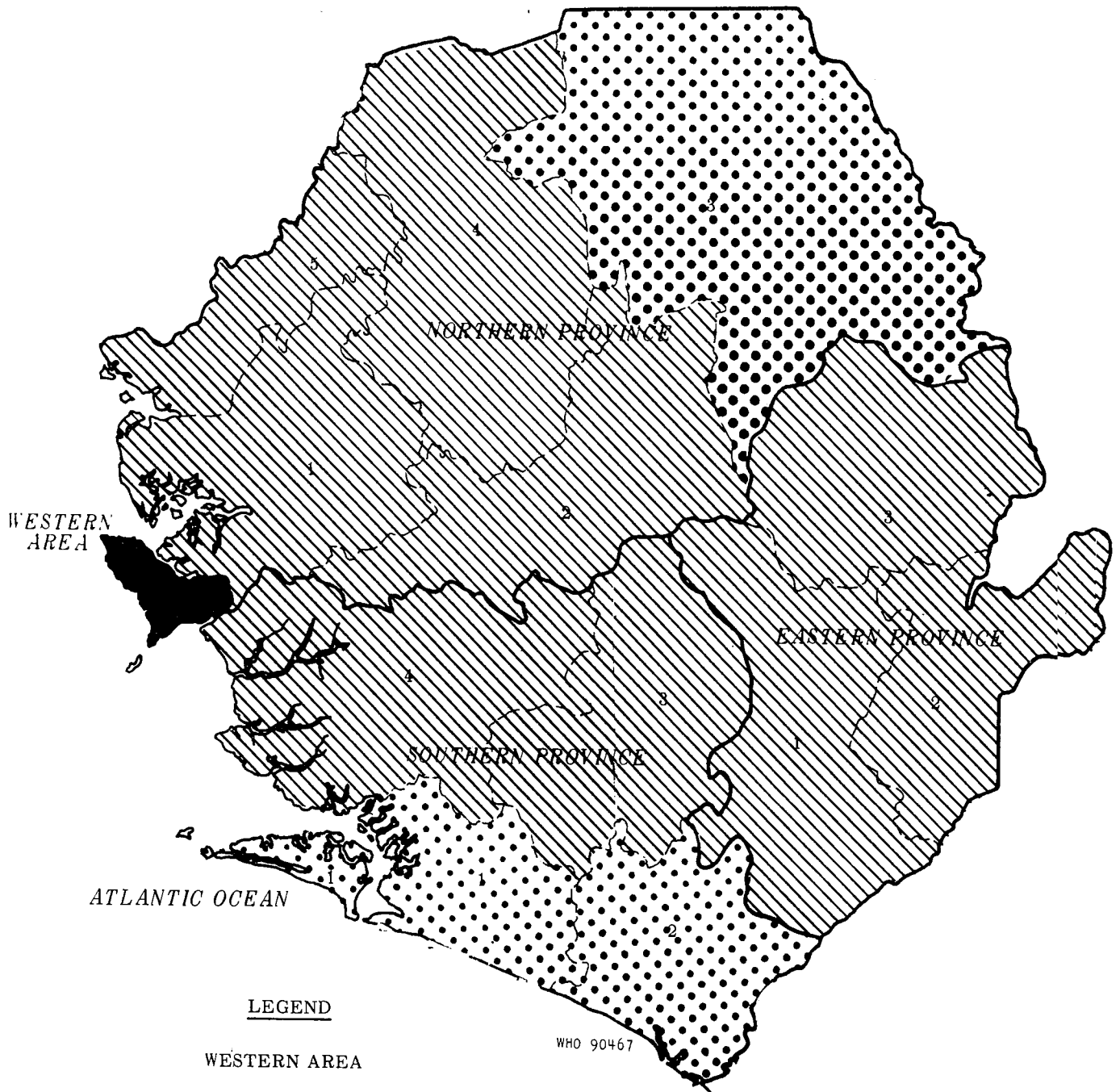
TABLE 7. MEASLES VACCINATIONS PERFORMED BY GEOGRAPHIC SUBDIVISIONS
(those shown on country maps)

Division géographique	1er trim. 1968	2ème trim. 1968	3ème trim. 1968	4ème trim. 1968	Janvier-février 1969	Total général*
Geographic Subdivisions	First Quarter	Second Quarter	Third Quarter	Fourth Quarter		Grand total*
Western Area	149					149
<u>Southern Province</u>						
Moyamba District				6 000		6 000
Bonthe District						-
Pujehun District						-
Bo District	35 273					35 273
<u>Eastern Province</u>						
Kono District		27 333				27 333
Kailahun District		387				387
Kenema District	15 423	22 412				37 835
<u>Northern Province</u>						
Koinadugu District		3 102	10 297			13 399
Bombali					26 876	26 876
Tonkolili District						-
Kambia District				17 918		17 918
Port Loko District				14 106	21 414	35 520
Total	50 845	53 234	10 297	38 024	48 290	200 690

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

* Includes the total since the inception of the programme.

FIGURE 1
SIERRA LEONE



LEGEND

WESTERN AREA

NORTHERN PROVINCE

1. Port Loko
2. Tonkolili
3. Koinadugu
4. Bombali
5. Kambia





EASTERN PROVINCE

1. Kenema
2. Kailahun
3. Kono

SOUTHERN PROVINCE

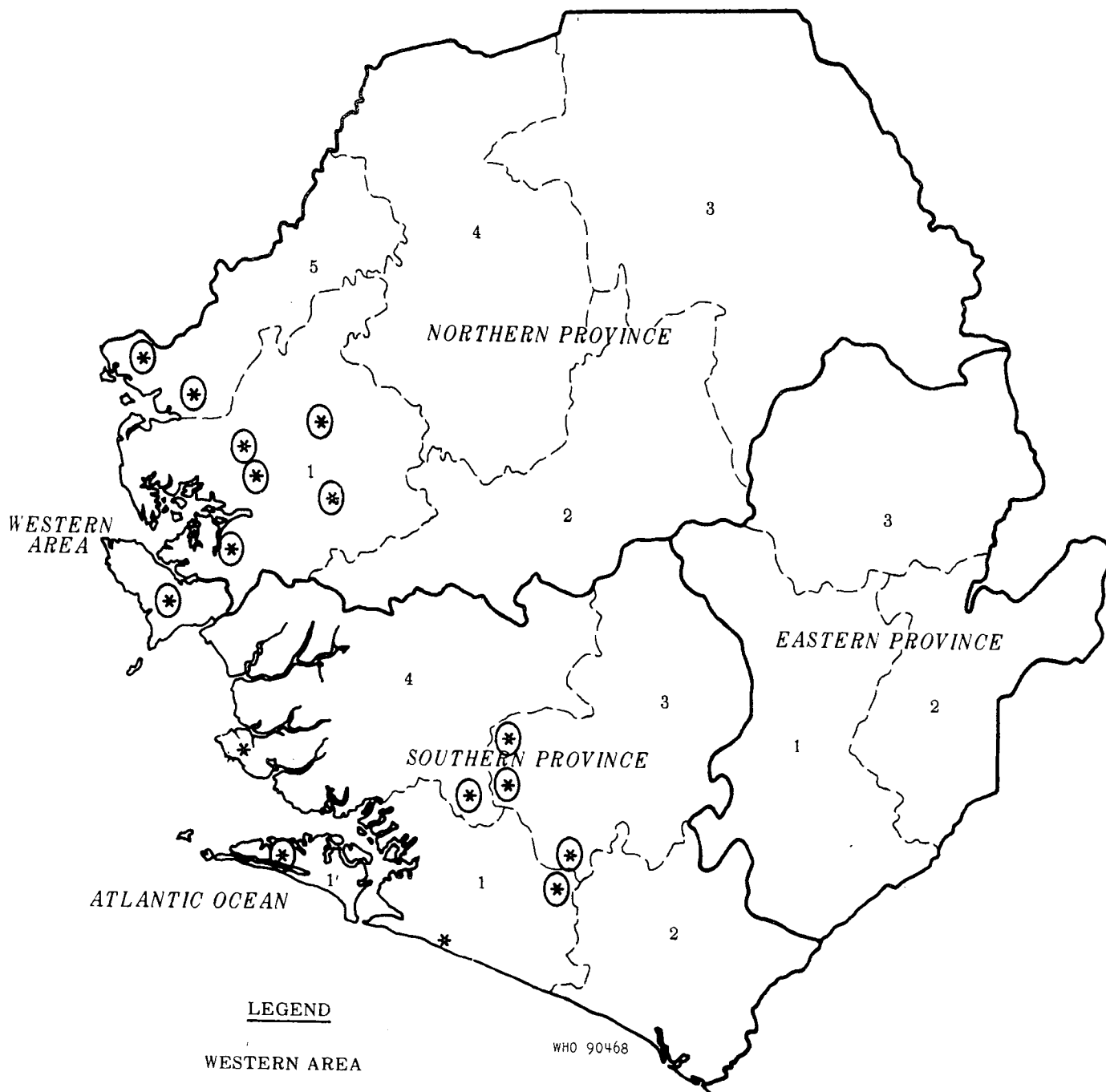
1. Bonthe
2. Pujehun
3. Bo
4. Moyamba

POPULATION DENSITY
By Geographic Subdivision

-  0-4.9 Persons/sq. km.
-  5-24.9 Persons/sq. km.
-  25-49.9 Persons/sq. km.
-  50+ Persons/sq. km.

WHO 90467

FIGURE 2
SIERRA LEONE



WESTERN AREA

NORTHERN PROVINCE

1. Port Loko
2. Tonkolili
3. Koinadugu
4. Bombali
5. Kambia

EASTERN PROVINCE

1. Kenema
2. Kailahun
3. Kono

SOUTHERN PROVINCE

1. Bonthe
2. Pujehun
3. Bo
4. Moyamba

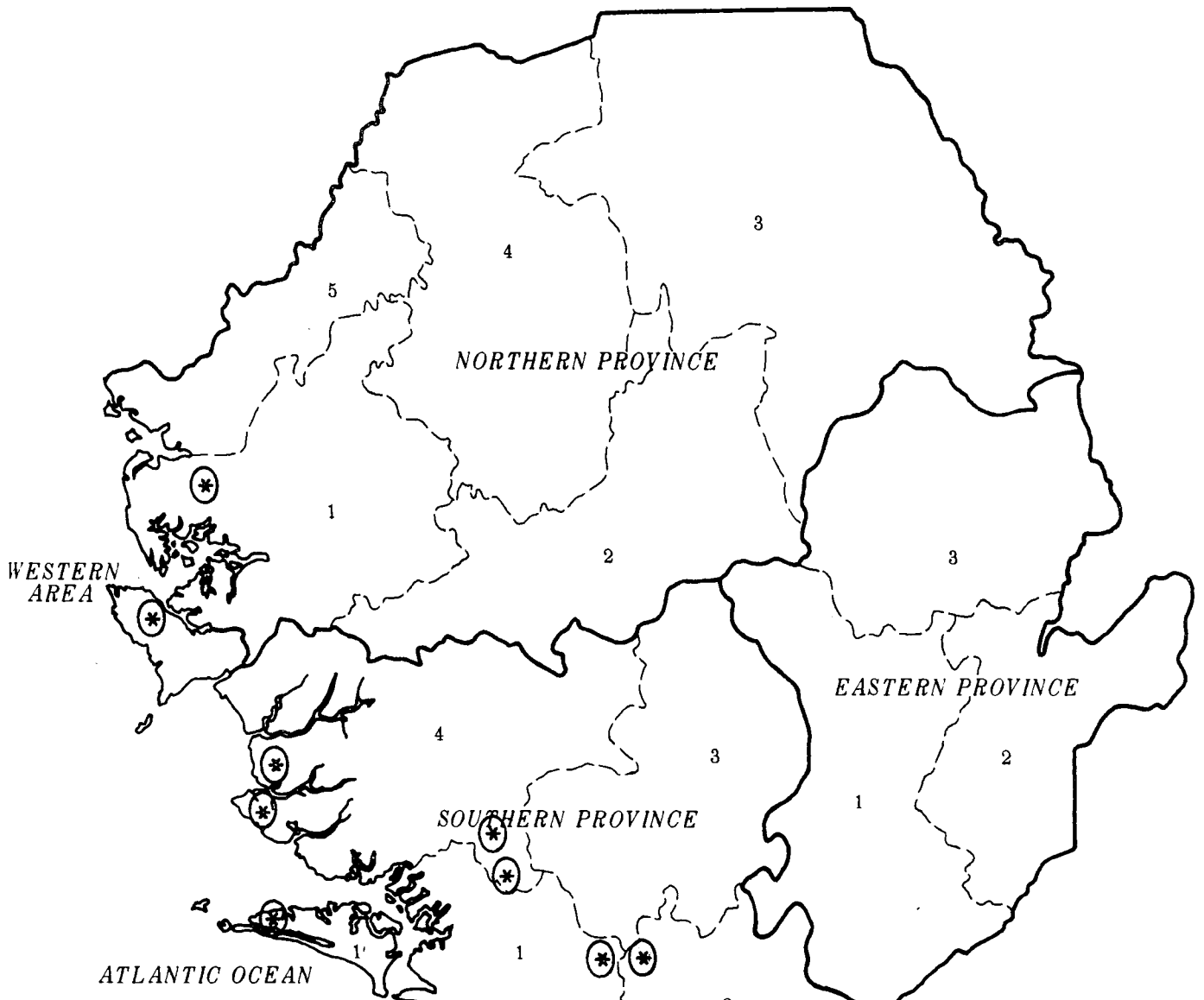
ACTUAL SMALLPOX OUTBREAKS
October, 1968-December, 1968

* Outbreak

(*) Investigated Outbreak

WHO 90468

FIGURE 3
SIERRA LEONE

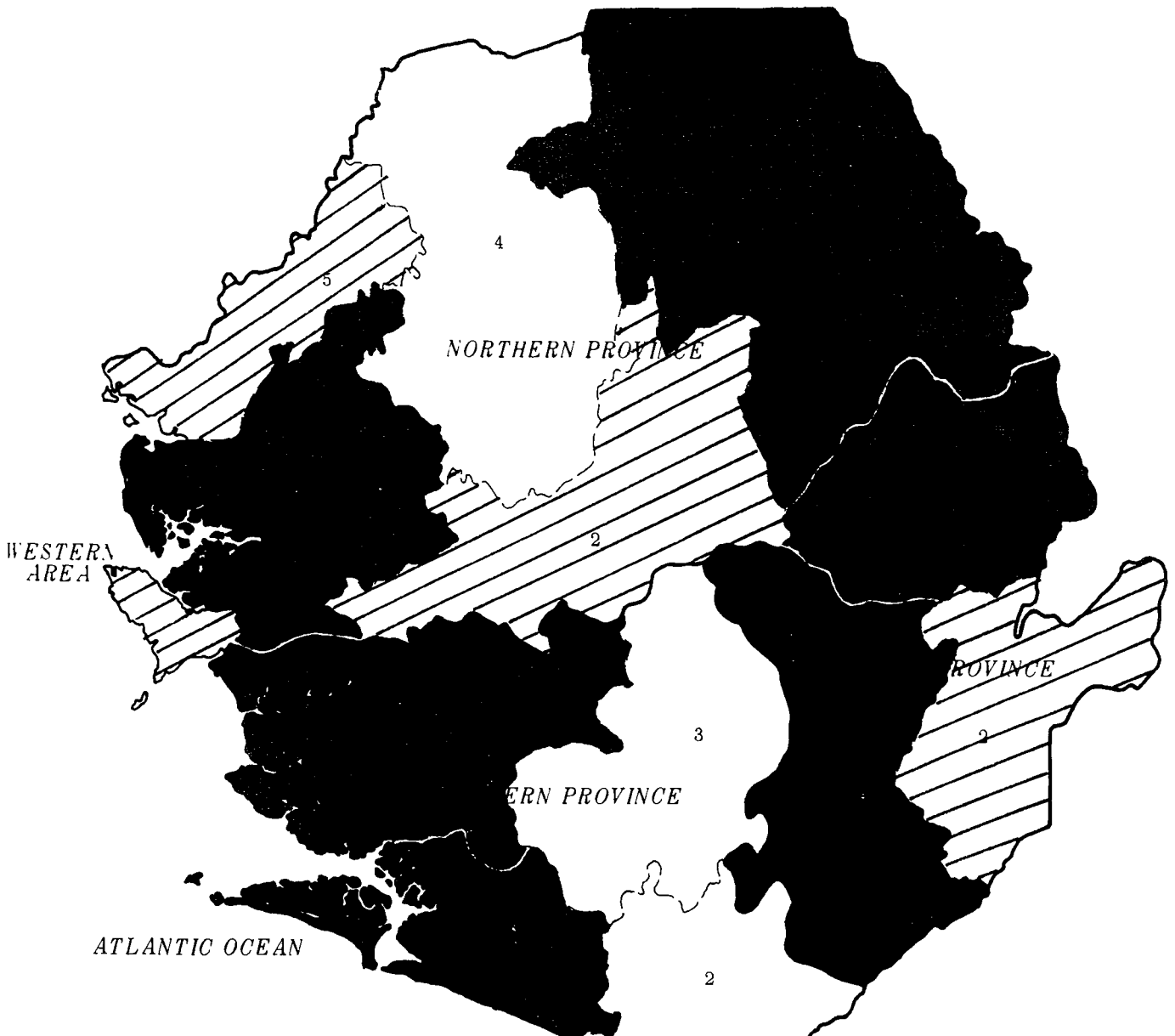


WHO 90469

- LEGEND**
- WESTERN AREA**
- NORTHERN PROVINCE**
1. Port Loko
 2. Tonkolili
 3. Koinadugu
 4. Bombali
 5. Kambia
- EASTERN PROVINCE**
1. Kenema
 2. Kailahun
 3. Kono
- SOUTHERN PROVINCE**
1. Bonthe
 2. Pujehun
 3. Bo
 4. Moyamba

- ACTUAL SMALLPOX OUTBREAKS**
January, 1969-March, 1969
- * Outbreak
- ⊛ Investigated Outbreak

FIGURE 4
SIERRA LEONE 320 Cases (13.3)

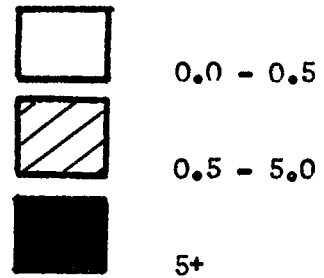


LEGEND

	Cases	Rate
WESTERN AREA	8	3.7
NORTHERN PROVINCE		
1. Port Loko	18	6.6
2. Tonkolili	8	3.9
3. Koinadugu	165	116.0
4. Bombali	0	0
5. Kambia	2	1.3
EASTERN PROVINCE		
1. Kenema	14	5.6
2. Kailahun	8	4.9
3. Kono	55	29.8
SOUTHERN PROVINCE		
1. Bonthe	30	34.0
2. Pujehun	0	0
3. Bo	0	0
4. Moyamba	12	6.5

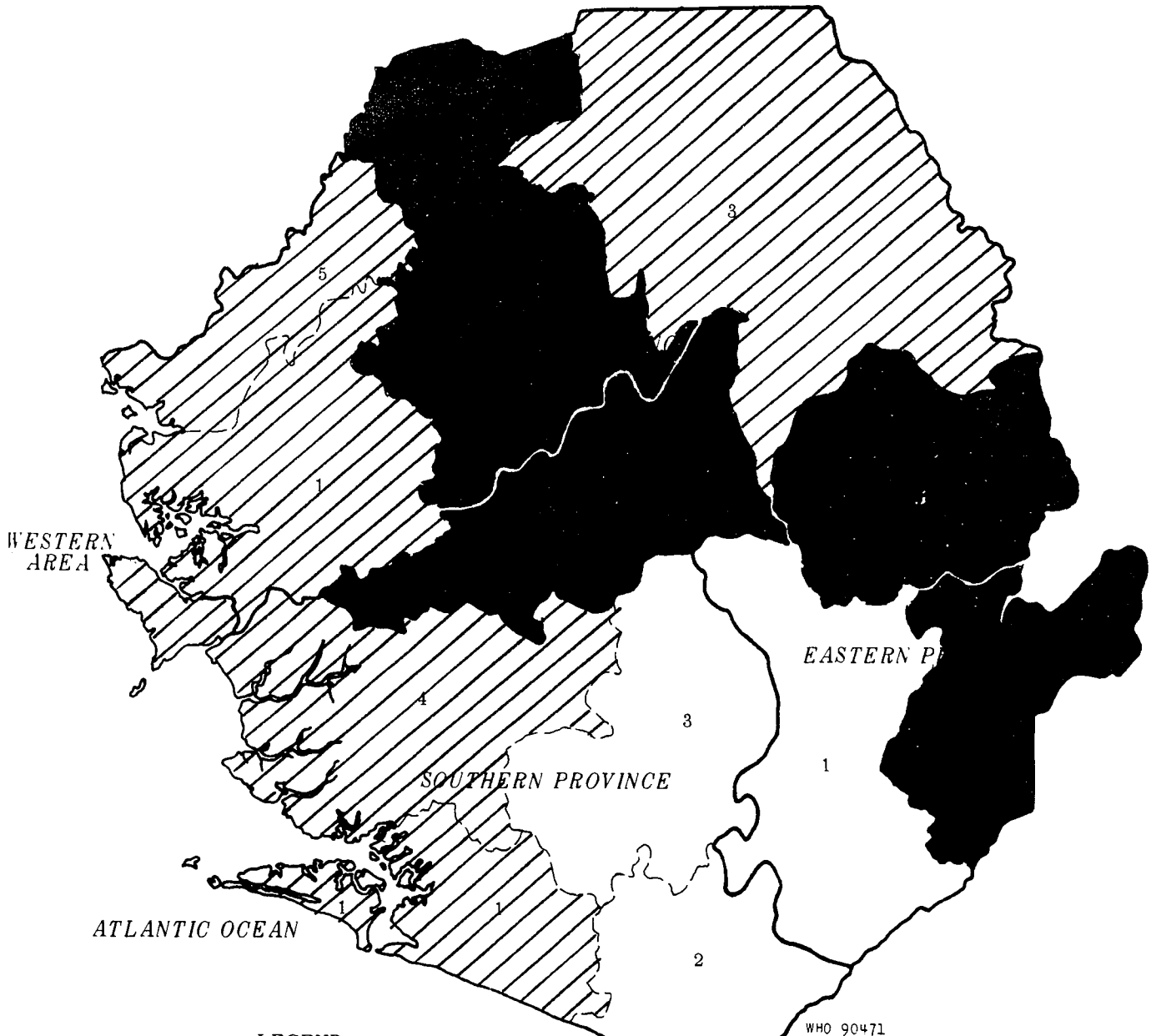
Incidence Rates per 100,000 Population¹

FIRST QUARTER 1968



WHO 90470

FIGURE 5
SIERRA LEONE 338 Cases (14.1)



LEGEND	Cases	Rate
WESTERN AREA	9	4.2
NORTHERN PROVINCE	8	2.9
1. Port Loko	12	5.9
2. Tonkolili	1	0.7
3. Koinadugu	13	5.9
4. Bombali	5	3.3
5. Kambia		
EASTERN PROVINCE		
1. Kenema	0	0
2. Kailahun	11	6.7
3. Kono	273	148.0
SOUTHERN PROVINCE		
1. Bonthe	1	1.1
2. Pujehun	0	0
3. Bo	0	0
4. Moyamba	5	2.7

Incidence Rates per 100,000 Population

SECOND QUARTER 1968

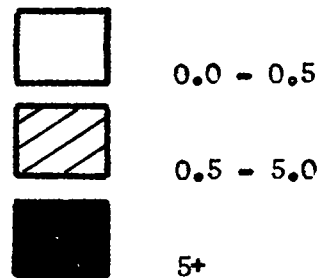
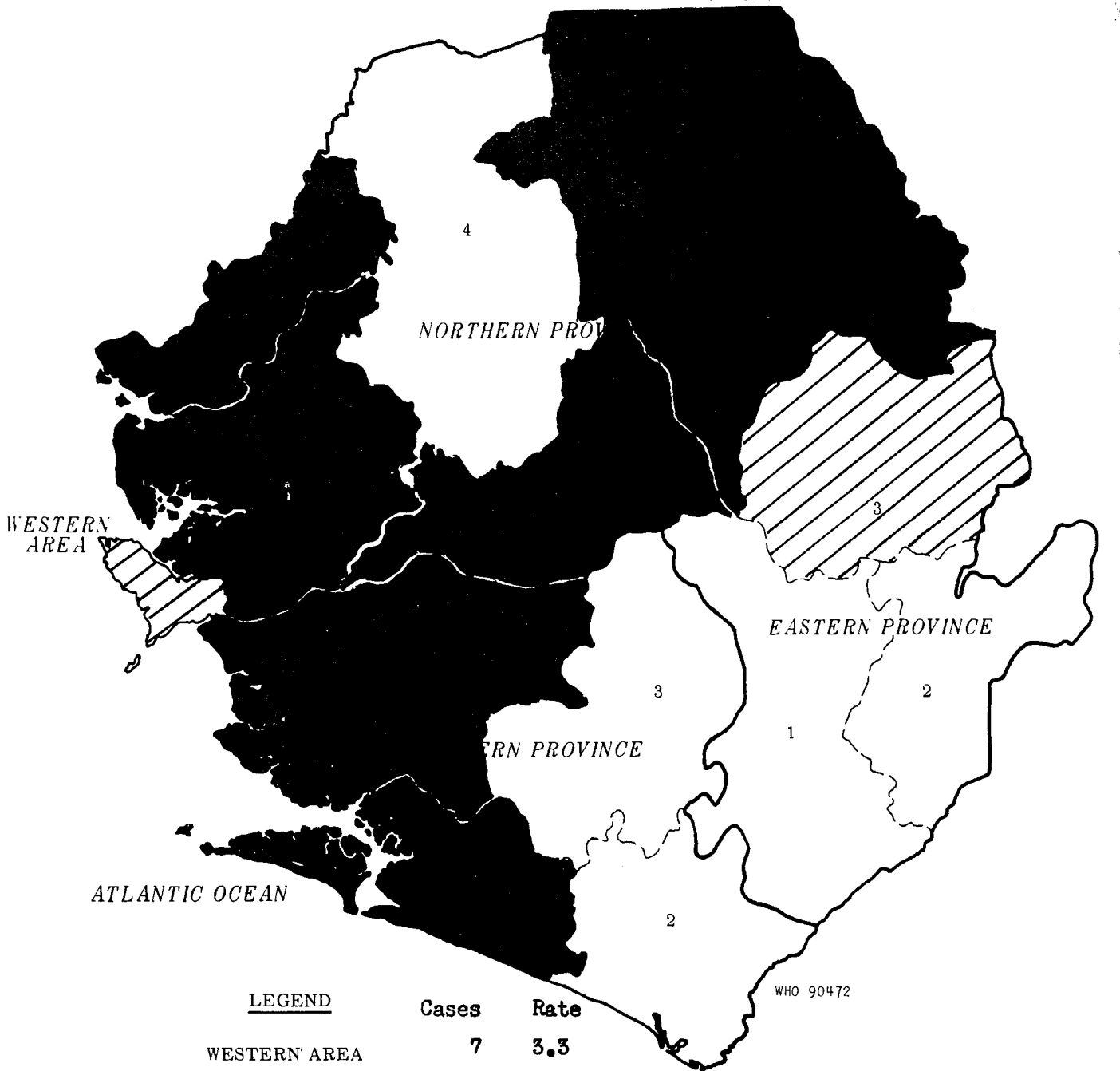


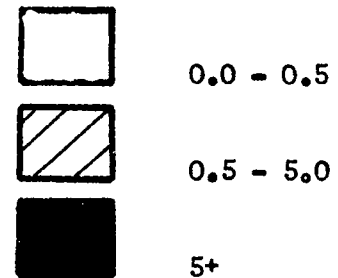
FIGURE 6
SIERRA LEONE 334 Cases (13.8)



LEGEND	Cases	Rate
WESTERN AREA	7	3.3
NORTHERN PROVINCE		
1. Port Loko	122	44.9
2. Tonkolili	29	14.3
3. Koinadugu	8*	5.6
4. Bombali	0	0
5. Kambia	11	7.3
EASTERN PROVINCE		
1. Kenema	1	0.4
2. Kailahun	0**	0
3. Kono	4	2.2
SOUTHERN PROVINCE		
1. Bonthe	29	32.9
2. Pujehun	0	0
3. Bo	1	0.4
4. Moyamba	122	66.3

Incidence Rates per 100,000 Population

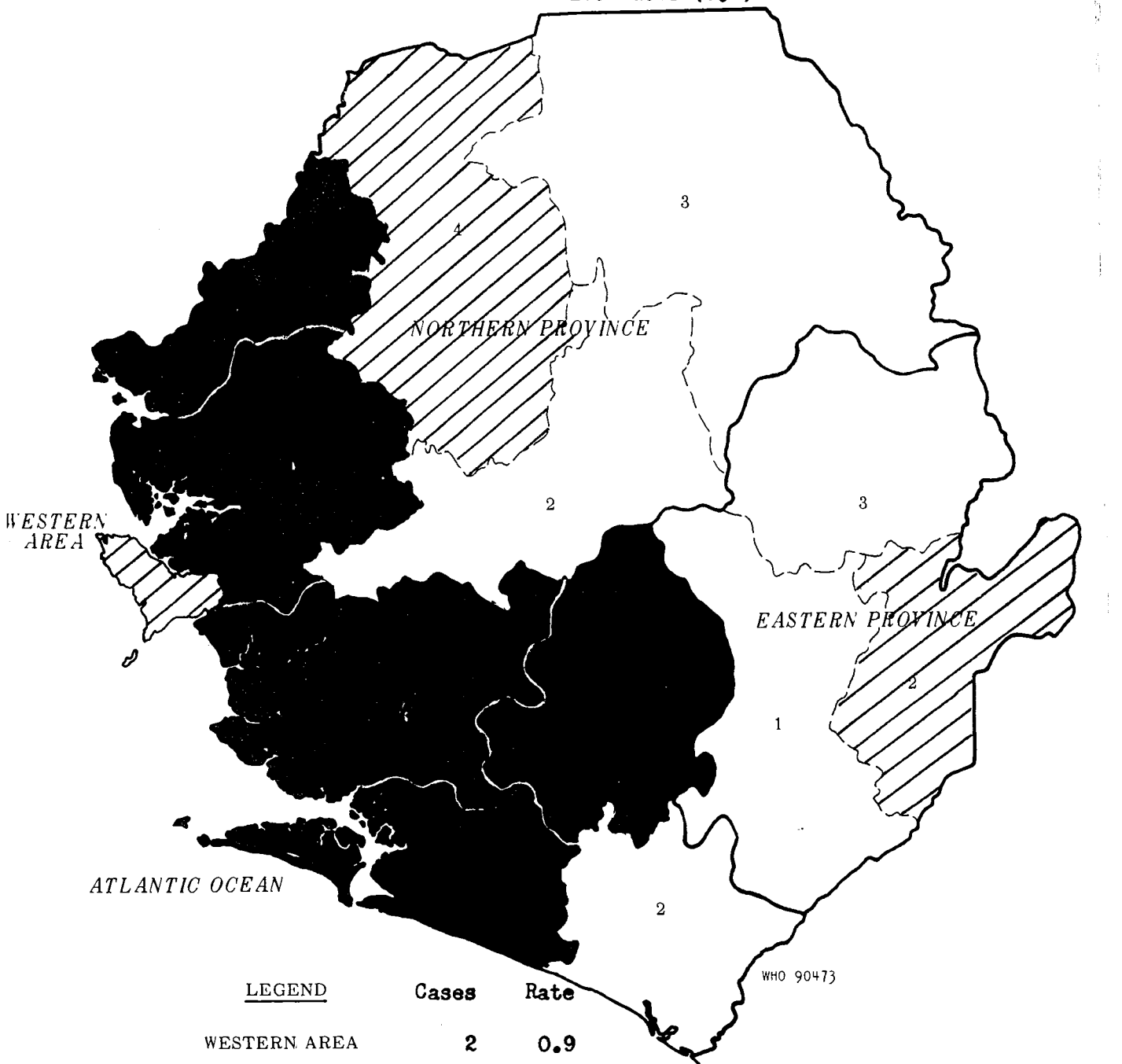
THIRD QUARTER 1968



*Subtracted 3 cases = Varicella
** " " 1 case = "

WHO 90472

FIGURE 7
SIERRA LEONE 160 Cases (6.7)



LEGEND	Cases	Rate
WESTERN AREA	2	0.9
NORTHERN PROVINCE		
1. Port Loko	64	23.6
2. Tonkolili	0	0
3. Koinadugu	0	0
4. Bombali	2	0.9
5. Kambia	28	18.5
EASTERN PROVINCE		
1. Kenema	0	0
2. Kailahun	1	0.6
3. Kono	0	0
SOUTHERN PROVINCE		
1. Bonthe	35	39.7
2. Pujehun	0	0
3. Bo	13	5.6
4. Moyamba	15	8.2

Incidence Rates per 100,000 Population

FOURTH QUARTER 1968



0.0 - 0.5



0.5 - 5.0



5+

FIGURE 8
SIERRA LEONE 110 Cases (4.6)

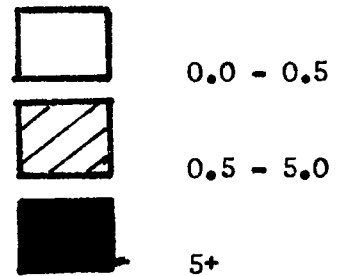


WHO 90474

LEGEND	Cases	Rate
WESTERN AREA	11	5.2
NORTHERN PROVINCE		
1. Port Loko	26	9.6
2. Tonkolili	0	0
3. Koinadugu	0	0
4. Bombali	0	0
5. Kambia	0	0
EASTERN PROVINCE		
1. Kenema	0	0
2. Kailahun	0	0
3. Kono	0	0
SOUTHERN PROVINCE		
1. Bonthe	30	34.0
2. Pujehun	21	22.6
3. Bo	0	0
4. Moyamba	22	11.9

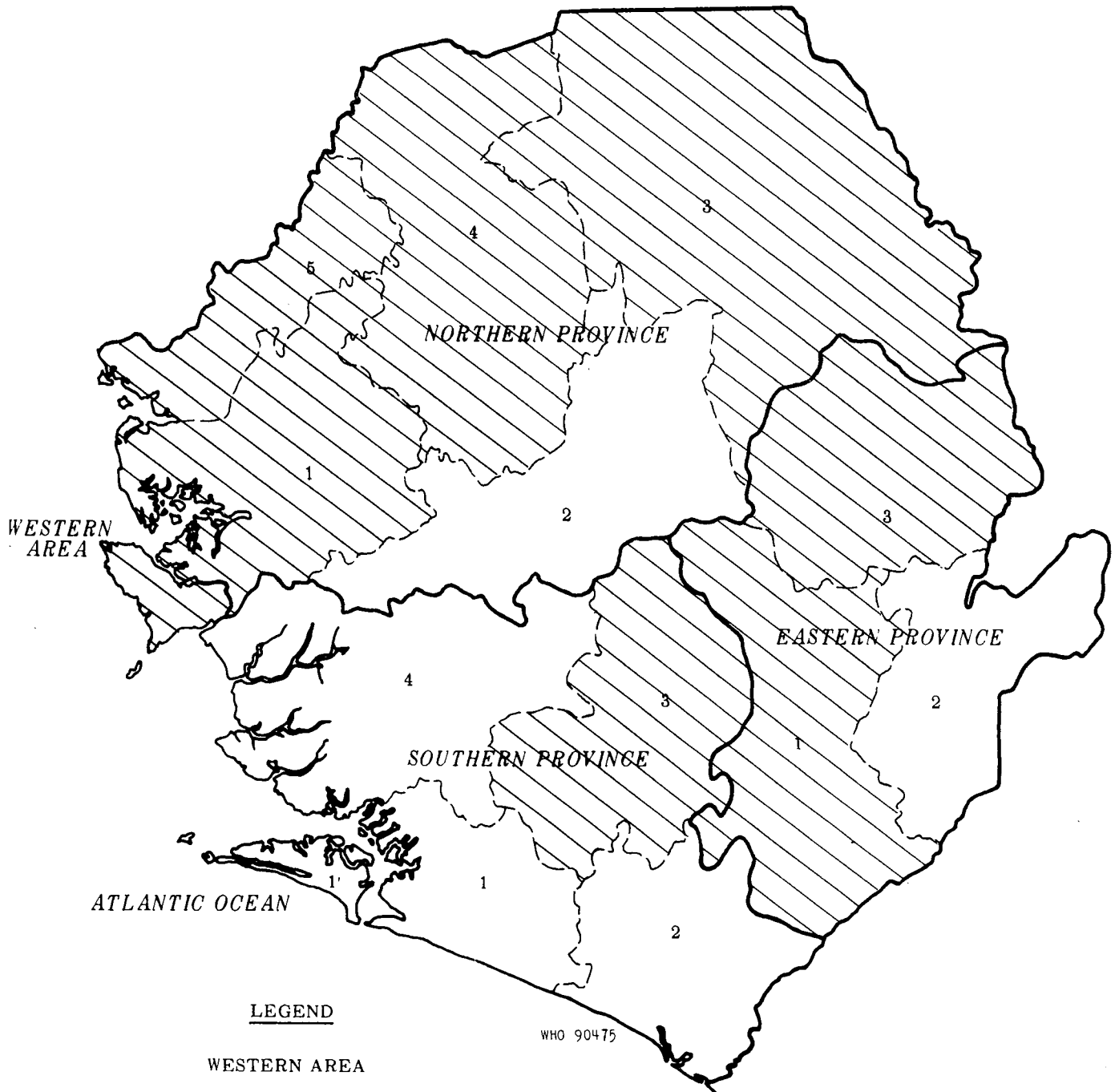
Incidence Rates per 100,000 Population

FIRST QUARTER 1969 *



* (Provisional data)

FIGURE 9-10
SIERRA LEONE



LEGEND

WESTERN AREA

NORTHERN PROVINCE

1. Port Loko
2. Tonkolili
3. Koinadugu
4. Bombali
5. Kambia

EASTERN PROVINCE

1. Kenema
2. Kailahun
3. Kono

SOUTHERN PROVINCE

1. Bonthe
2. Pujehun
3. Bo
4. Moyamba

WHO 90475

AREAS VACCINATED
Since Inception of the Programme
Smallpox and Measles

NOTE: No measles maintenance vaccination to date.