



INTER-REGIONAL SEMINAR ON SMALLPOX ERADICATION

Lagos, Nigeria, 13-20 May 1969

COUNTRY REPORT



1.0 DEMOGRAPHIC DATA

1.1 Estimated population (July 1969)

Age		%
0-4	710 000	18.6
5-14	1 110 000	29.2
15-44	1 510 000	39.7
45+	475 000	12.5
TOTAL	3 805 000	100.0

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)

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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>12</u>	(6 teams)
Maintenance teams	<u>0</u>	
Other (Specify)	<u>6</u>	(3 departmental teams)
TOTAL	<u>18</u>	

Other field staff, including recorders, drivers, etc. 20

Supervisory personnel (paramedical) 2

4.2 Number of vaccinators directly supervised by one supervisor 12

4.3 Average number of vaccinations performed daily by each team:

Regular teams 700 - 1 500

Maintenance teams \_\_\_\_\_

Other (specify) 700 - 1 500

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: 10 days per mo.

Other levels: 2 days per mo.

By advisory staff reviewing work of -

Vaccination team: 5 days per mo.

Other levels: 5 days per mo.

5.1.2 Measures taken when vaccinator or assessor performance is unsatisfactory

Reprimand, replacement

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 20%

Steps taken when the proportion of successful primary vaccination falls below 95% Always greater than 95%

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.

40 %

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

Changes which have been made in the programme as a direct result of assessment The teams spend longer periods in gathering crowds and a government official accompanies each team

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) 185

Frequency of reporting:

Immediate  Weekly  Other \_\_\_\_\_

Number of reports: Expected in 1968 1 546

Received in 1968 342

% received 45%

Negative reporting is generally practised: Yes  No

Other specialized programmes which report cases

Missionaries, Peace Corps

Other persons or groups who have been requested to notify cases

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

Best estimate of the percentage of cases which are reported:

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

5.3.2 Case investigation and containment measures:

Number of case investigation/containment ('fire-fighting') teams which have been established          0 \_\_\_\_\_

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          30 %

Proportion of outbreaks, since October 1968, routinely investigated to determine the origin of infection          100 %

Of the investigations noted above, the percentage of outbreaks where the origin was not ascertained          80 %

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					
<u>Smallpox vaccine</u> 1967	2 425 000	674 500	1 750 500	1 590 473	Use of 500 dose vials is wasteful in small villages
1968	800 000	0	1 474 500	1 166 292	
1969*	550 000	144 000	406 000	205 783	Field stations have modest vaccine stocks
<u>Measles vaccine</u> 1967	290 000	18 000	272 000	220 001	(1)
1968	200 000	200	217 800	195 157	
1969*	80 000	19 750	60 450	54 541	

\* January and February only

6.2 Equipment:

<u>Item</u>	<u>Number Supplied*</u>	<u>Number in Operation</u>	<u>Comment</u>
Trucks	8	7	One wrecked in road accident
Ped-o-Jets	38	29	4 being repaired 5 are spares in Niamey
Refrigerators	9 C-80's 8 Morphy Richards	4 8	(2)
Motorbikes	12	9	3 transferred to SEP, Upper Volta

\* Since inception of the programme.

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

- (1) Inadequate field refrigeration early in programme caused much vaccine wastage  
 (2) 4 in use as stationary units. C-80 is impractical as mobile unit. M.R are mobile units

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 <sup>2</sup> )	Densité de population au km <sup>2</sup>
Geographic Subdivisions	Est. 1969 Population	Area (Square kms)	Population density per square km
Niamey	846 522	88 214	9,6
Dosso	507 035	35 850	14,1
Tahoua	770.518	96 818	7,9
Maradi	646 092	42 760	15,1
Zinder	821 375	127 880	6,5
Diffa	141 613	173 500	0,8
Agadez	72 671	735 000	0,1
Total	3 805 826	1 300 000	2,9

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
Niamey	15	37	37	9	0	0	0	0	0	0	0	0	98	0	0
Dosso	3	1	0	0	0	0	0	0	0	0	0	0	4	0	0
Tahoua	0	11	2	28	20	3	1	0	0	1	0	9	75	0	0
Maradi	1	0	0	1	9	28	5	0	0	1	0	0	45	0	4
Zinder	149	15	19	20	36	46	4	0	0	0	0	0	289	2	1
Diffa	0	1	0	154	4	6	0	0	0	0	0	0	165	0	0
Agadez	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	168	65	58	212	69	83	10	0	0	2	0	9	676	2	5

PAYS LE NIGER  
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									168	168
F									65	65
M									58	58
A									212	212
M									69	69
J									83	83
J									10	10
A									0	0
S									0	0
O			1	1					0	2
N									0	0
D	4	5							0	9
J 1969			1	1					0	2
F			2	1	1	1			0	5



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	1967	1er trim. 1968	2ème trim. 1968	3ème trim. 1968	4ème trim. 1968	J-F 1969	Total général *
Geographic Subdivisions		First Quarter	Second Quarter	Third Quarter	Fourth Quarter		Grand total *
Niamey	618 539	106 137	81 925	37 122	16 935	5 287	865 945
Dosso	201 108	41 058	24 530	9 377	35 102	14 244	325 419
Tahoua	331 337	20 762	146 488	22 897	3 492	40 670	565 646
Maradi	274 145	83 100	3 415	68 445	49 363	23 113	501 581
Zinder	77 640	61 732	74 631	10 076	174 572	124 758	523 409
Diffa	29 318	49 828	26 565	3 321	7 714	1 444	118 190
Agadez	28 222	2 560	2 563	2 566	2 390	0	38 301
Total	1 560 309	365 177	360 177	153 804	289 568	209 516	2 938 491

\* 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	
Geographic Subdivisions	Juillet-septembre	Octobre-décembre	Janvier-mars	Avril-juin
	July-September	October-December	January-March	April-June
Niamey	60 000	110 000	140 000	140 000
Dosso	35 000	65 000	85 000	85 000
Tahoua	50 000	100 000	125 000	125 000
Maradi	45 000	85 000	100 000	100 000
Zinder	55 000	105 000	130 000	130 000
Diffa	5 000	10 000	12 500	12 500
Agadez	10 000	20 000	25 000	25 000
Total	260 000	495 000	617 500	617 500

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
Niamey	135	78	406	403	367	241	55	54	74	97	124	205	2 239	2 413	1 905
Dosso	2	22	43	38	118	49	92	16	10	22	49	140	601	679	1 131
Tahoua	5	103	292	229	318	404	213	457	47	48	345	750	3 211	611	487
Maradi	38	112	234	228	251	269	344	134	36	12	12	25	1 695	117	185
Zinder	76	158	801	717	735	263	42	3	0	0	0	0	2 795	15	28
Diffa	0	3	45	141	91	85	33	5	0	0	1	4	408	31	0
Agadez	257	48	21	12	4	19	3	0	0	1	0	0	365	1	0
Total													11 314	3 867	3 736

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

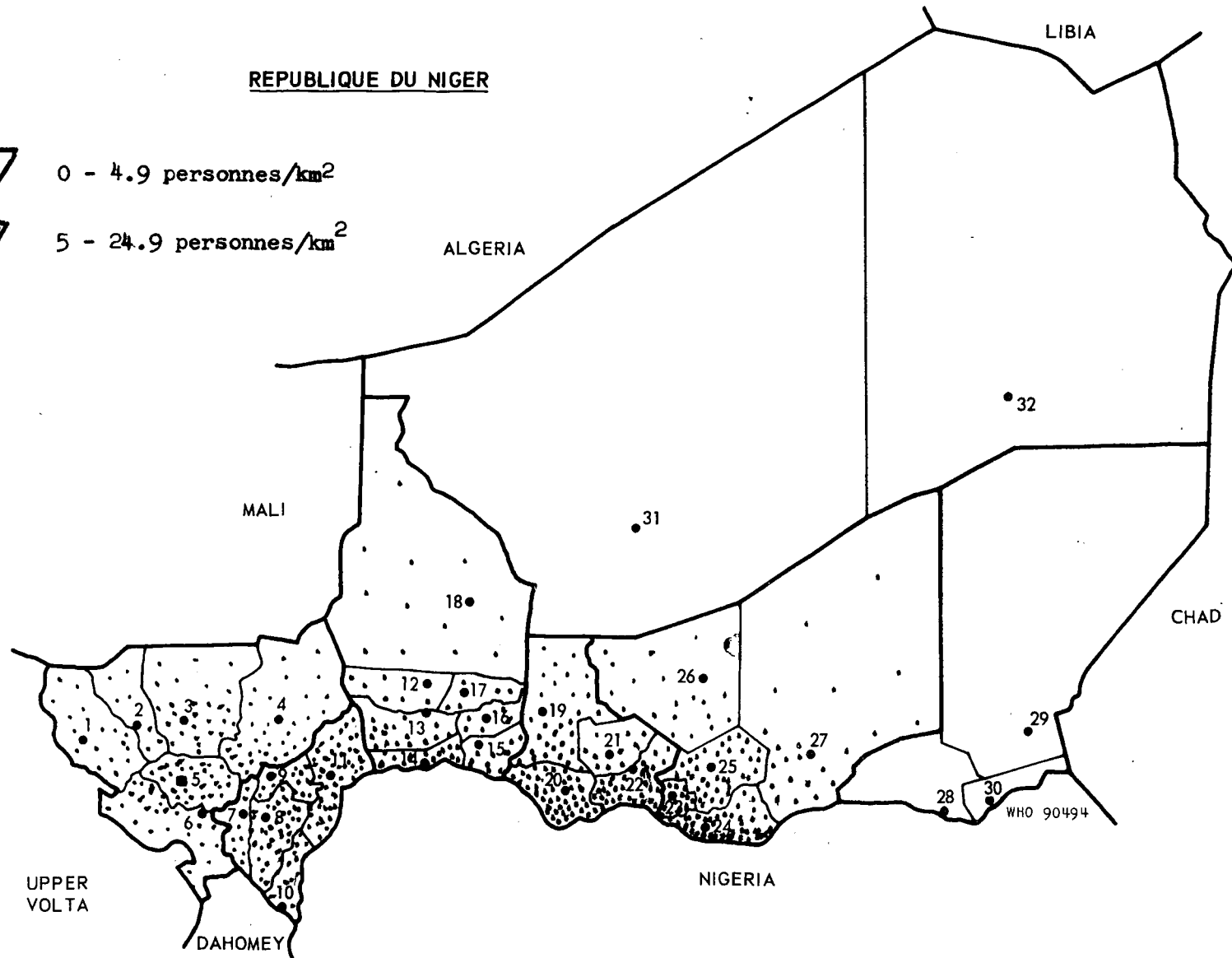
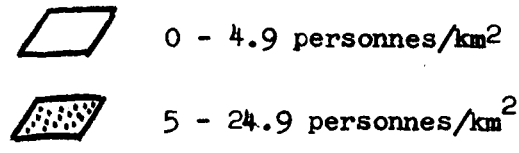
TABLE 7. MEASLES VACCINATIONS PERFORMED BY GEOGRAPHIC SUBDIVISIONS  
(those shown on country maps)

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*
Niamey	767	0	6 851	5 206	975	97 044
Dosso	10 831	4 699	2 870	6 128	3 445	63 163
Tahoua	5 333	4 195	25 072	1 273	18 910	86 504
Maradi	14 819	0	23 301	23 117	3 828	117 433
Zinder	0	0	0	10 412	27 212	42 233
Diffa	6 427	27 455	1 003	804	171	39 444
Agadez	2 166	0	731	0	0	2 897
						448 718

\* Englobant le total depuis la mise en oeuvre du programme.  
\* Includes the total since the inception of the programme.

Figure 1 (1.4)

DENSITÉ DE LA POPULATION



## LEGEND

### DEPARTEMENTS

NIAMEY

DOSSO

TAHOUA

MARADI

ZINDER

DIFFA

AGADEF

### ARRONDISSEMENTS

1. Tera
2. Tillaberi
3. Ouallam
4. Filingue
5. Niamey
6. Say

7. Birni N'Gaoure
8. Dosso
9. Loga
10. Gaya
11. Dogondoutchi

12. Tahoua
13. Illéla
14. Birni N'Konni
15. Madaoua
16. Bouza
17. Keita
18. Tchir Tabaraden

19. Dakoro
20. Maradi
21. Mayahi
22. Tessaoua

23. Matameye
24. Magaria
25. Myrria
26. Tanout
27. Goure

28. Maine-Soroa
29. N'Guigmi
30. Diffa

31. Agadez
32. Bilma

Figure 2 (2.2)

POUSSEES

Octobre 1968-décembre 1968

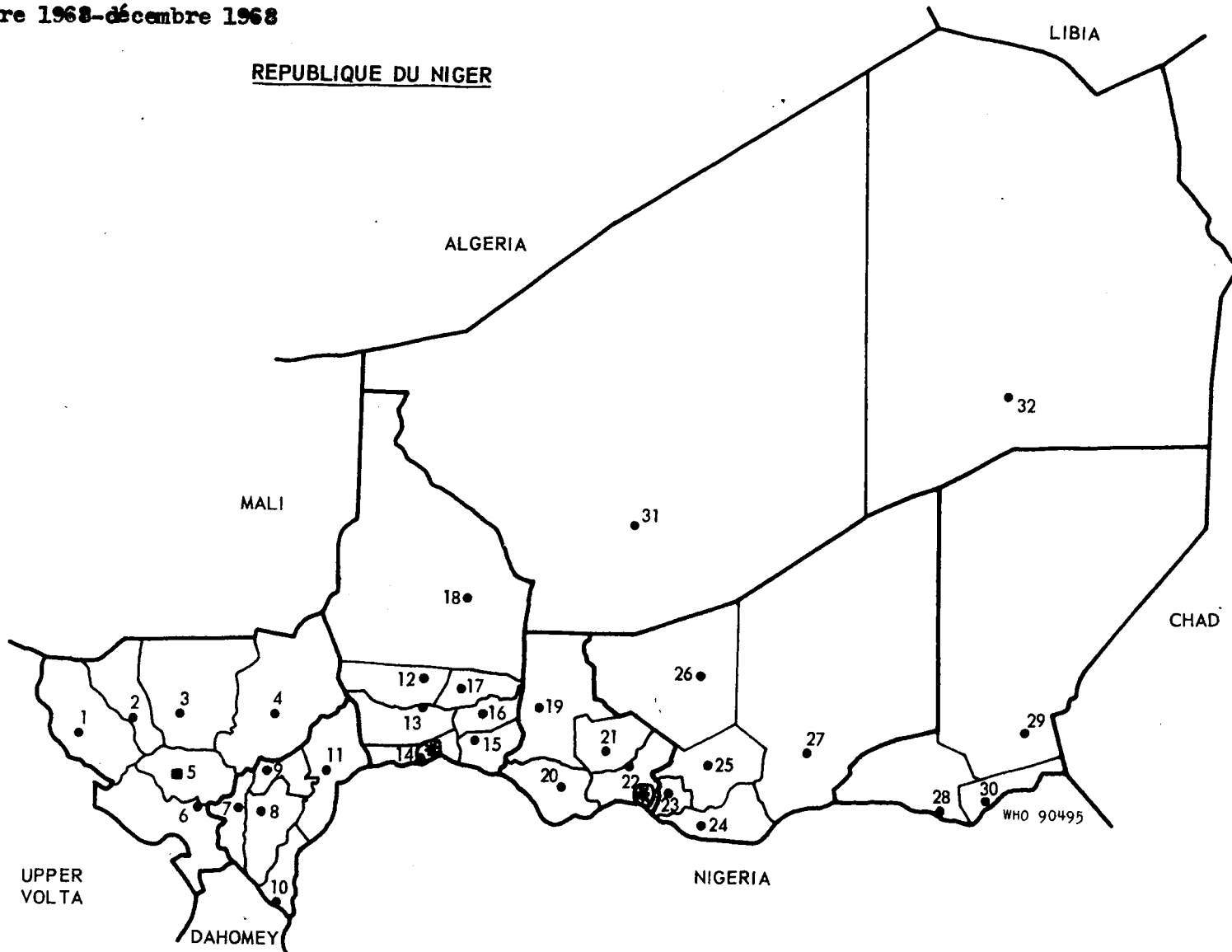


Figure 3 (2.2)

POUSSEES

Janvier 1969-février 1969

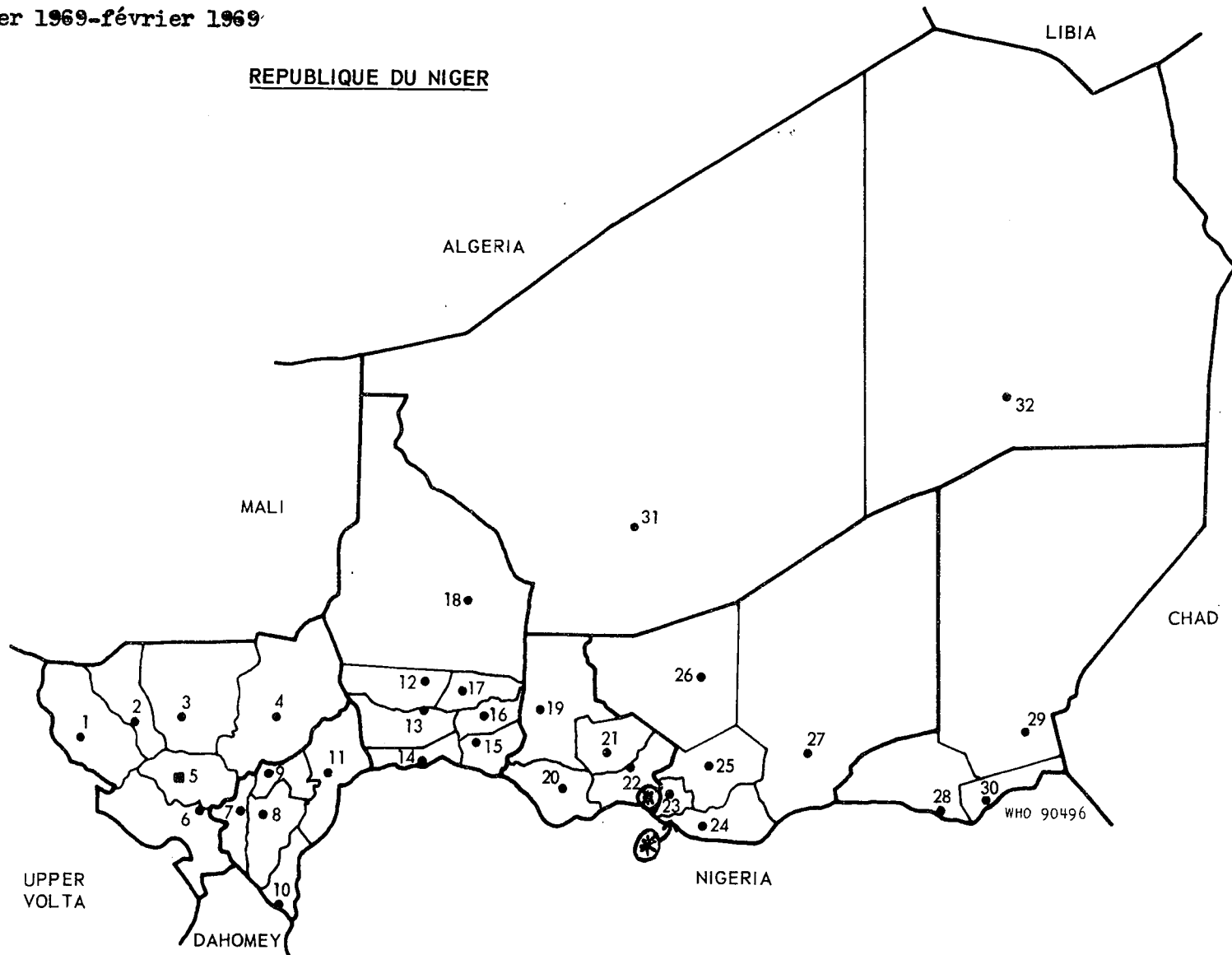
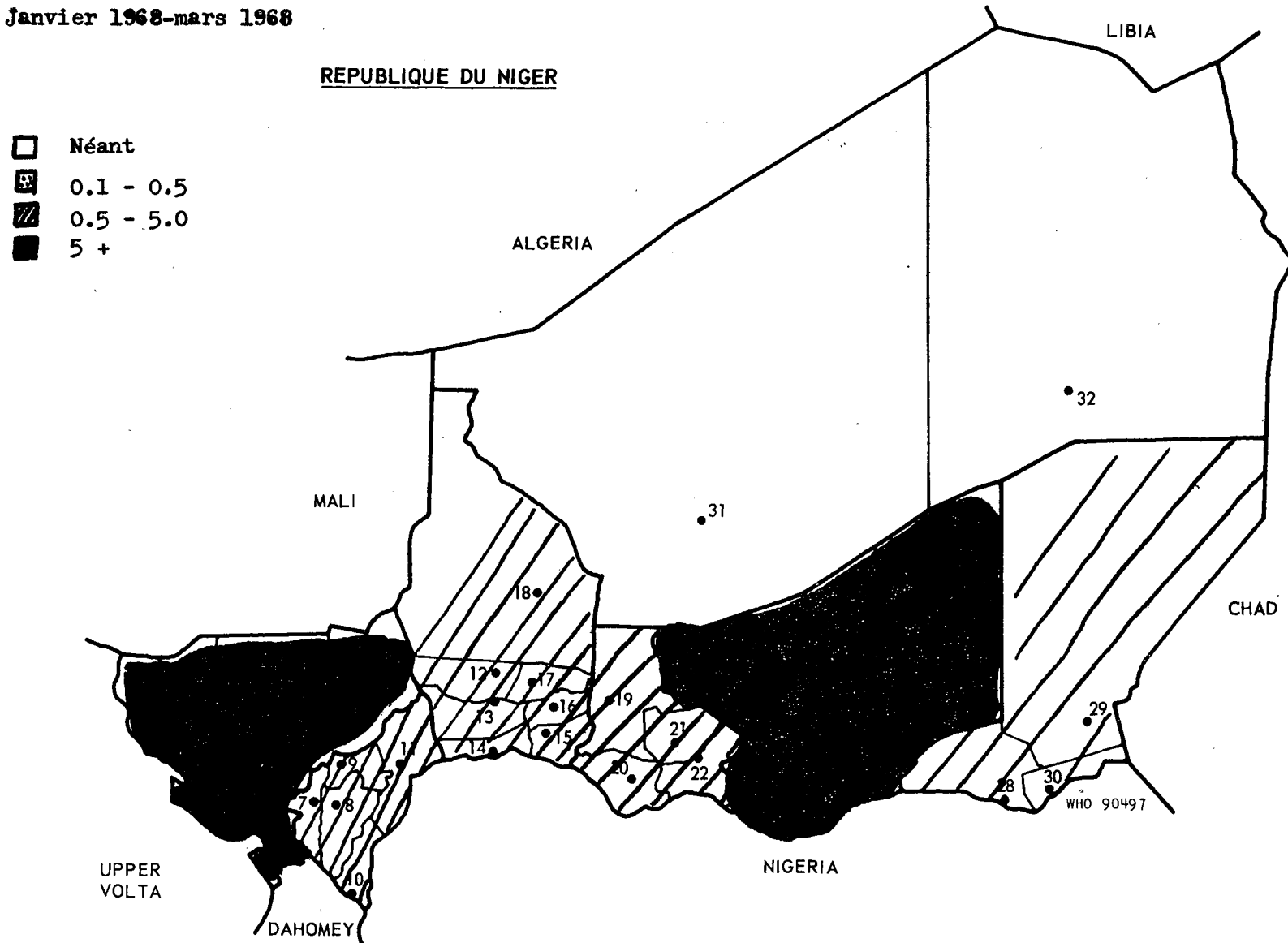




Figure 4 (2.3)

TAUX D'INCIDENCE POUR 100.000 HABITANTS

Janvier 1968-mars 1968



**Figure 5 (2.3)**

**TAUX D'INCIDENCE POUR 100.000 HABITANTS**

**Avril 1968-juin 1968**

- Néant
- ▨ 0.1 - 0.5
- ▩ 0.5 - 5.0
- 5 +

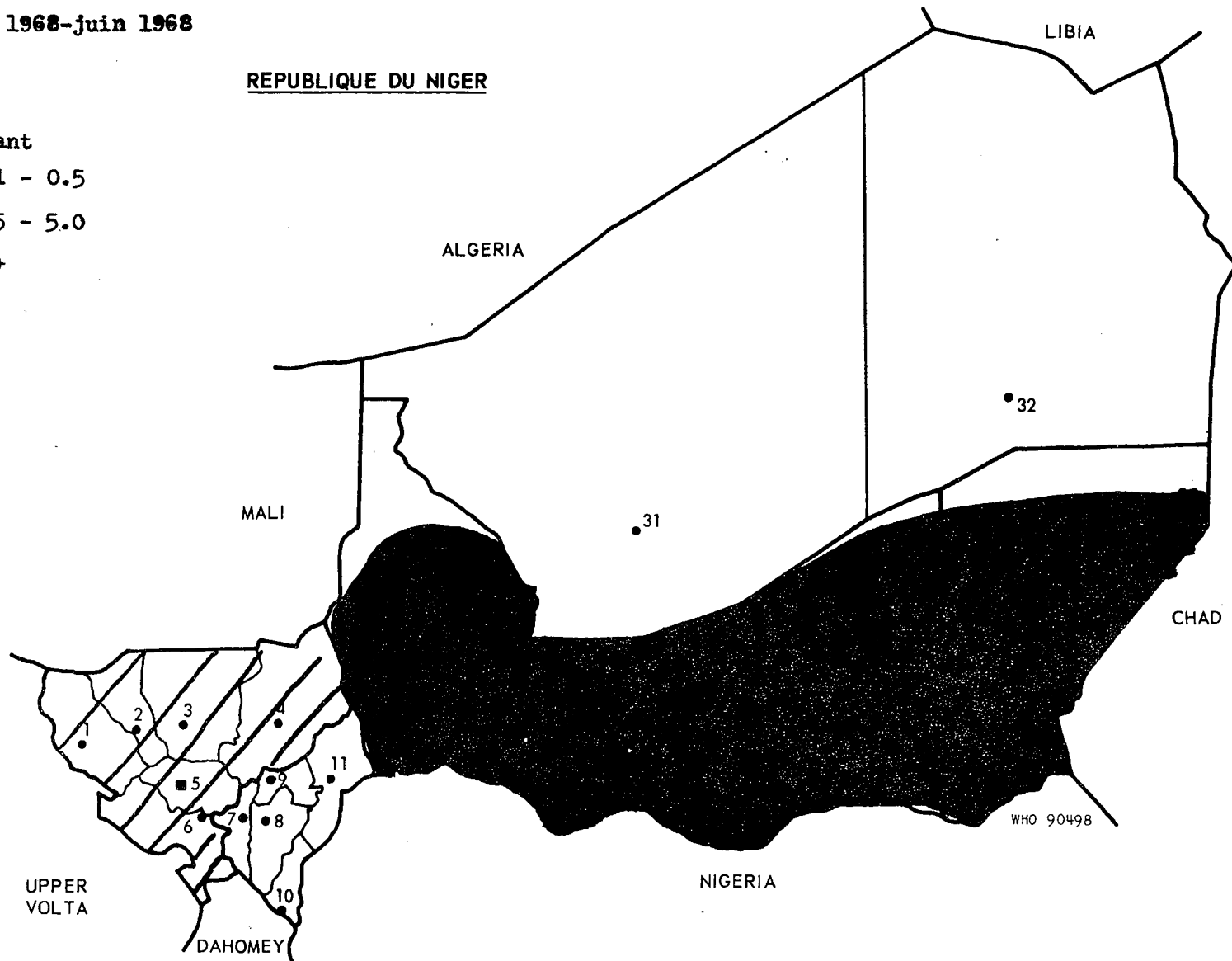
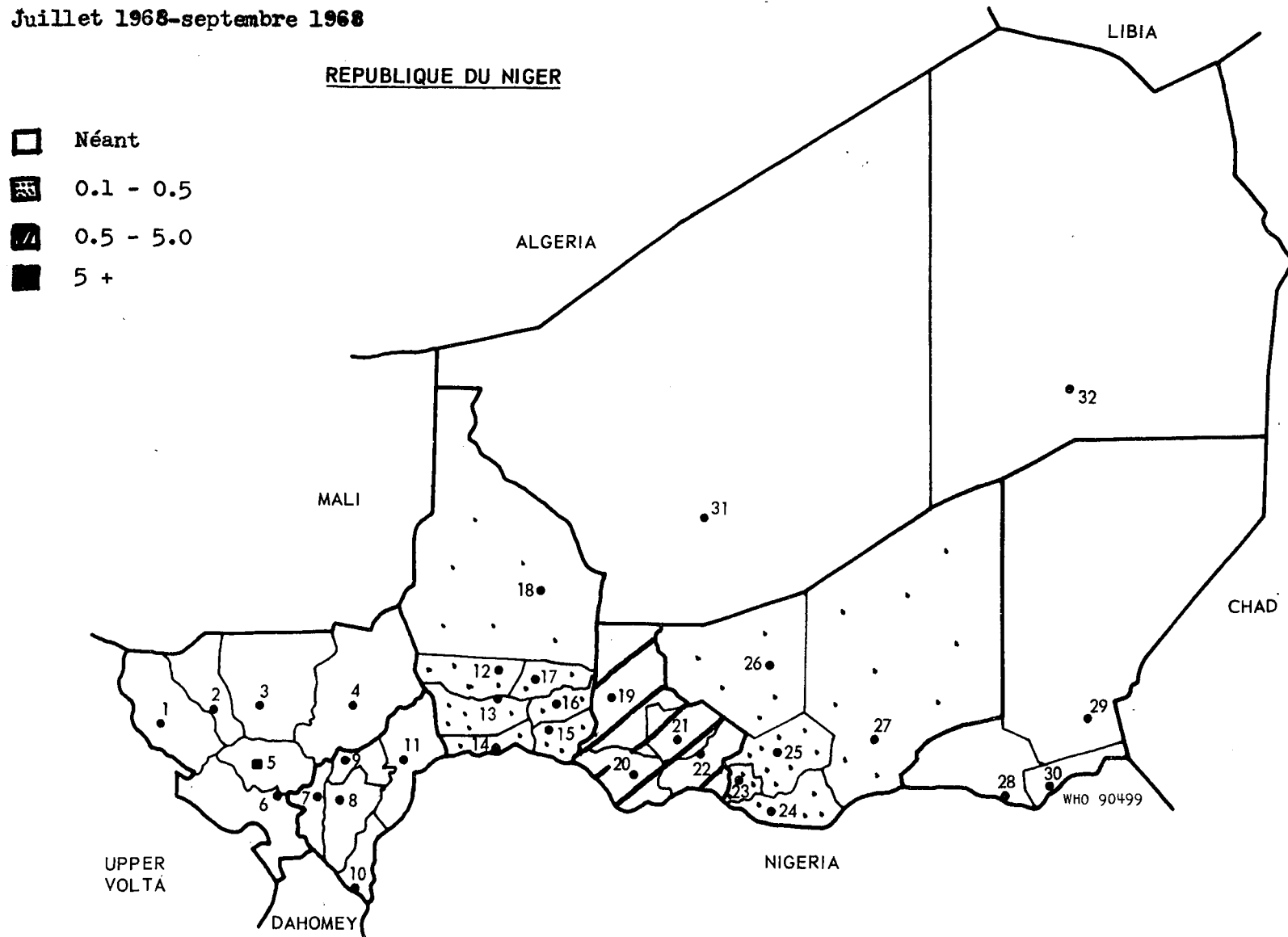


Figure 6 (2.3)

TAUX D'INCIDENCE POUR 100.000 HABITANTS

Juillet 1968-septembre 1968

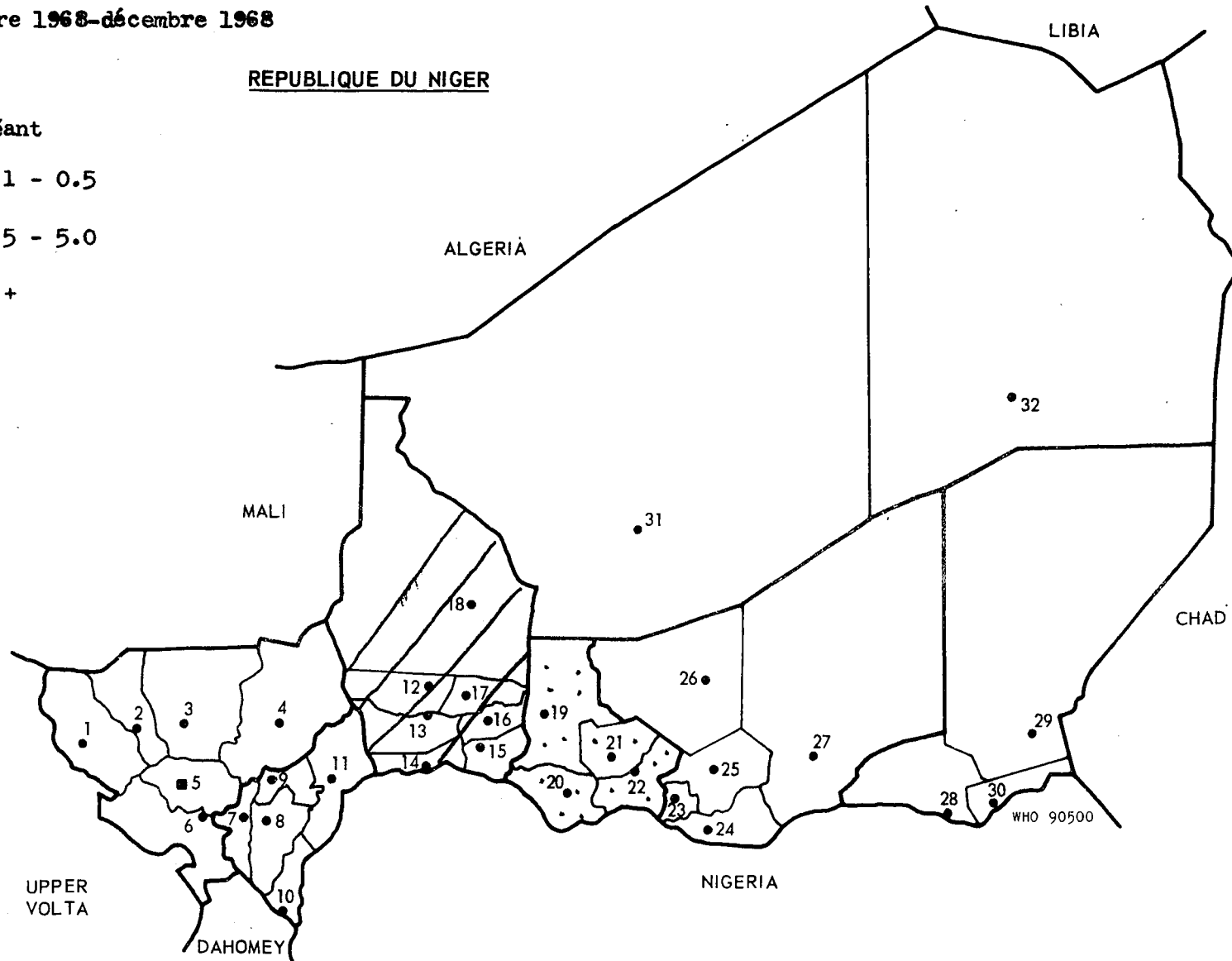


**Figure 7 (2.3)**

**TAUX D'INCIDENCE POUR 100.000 HABITANTS**

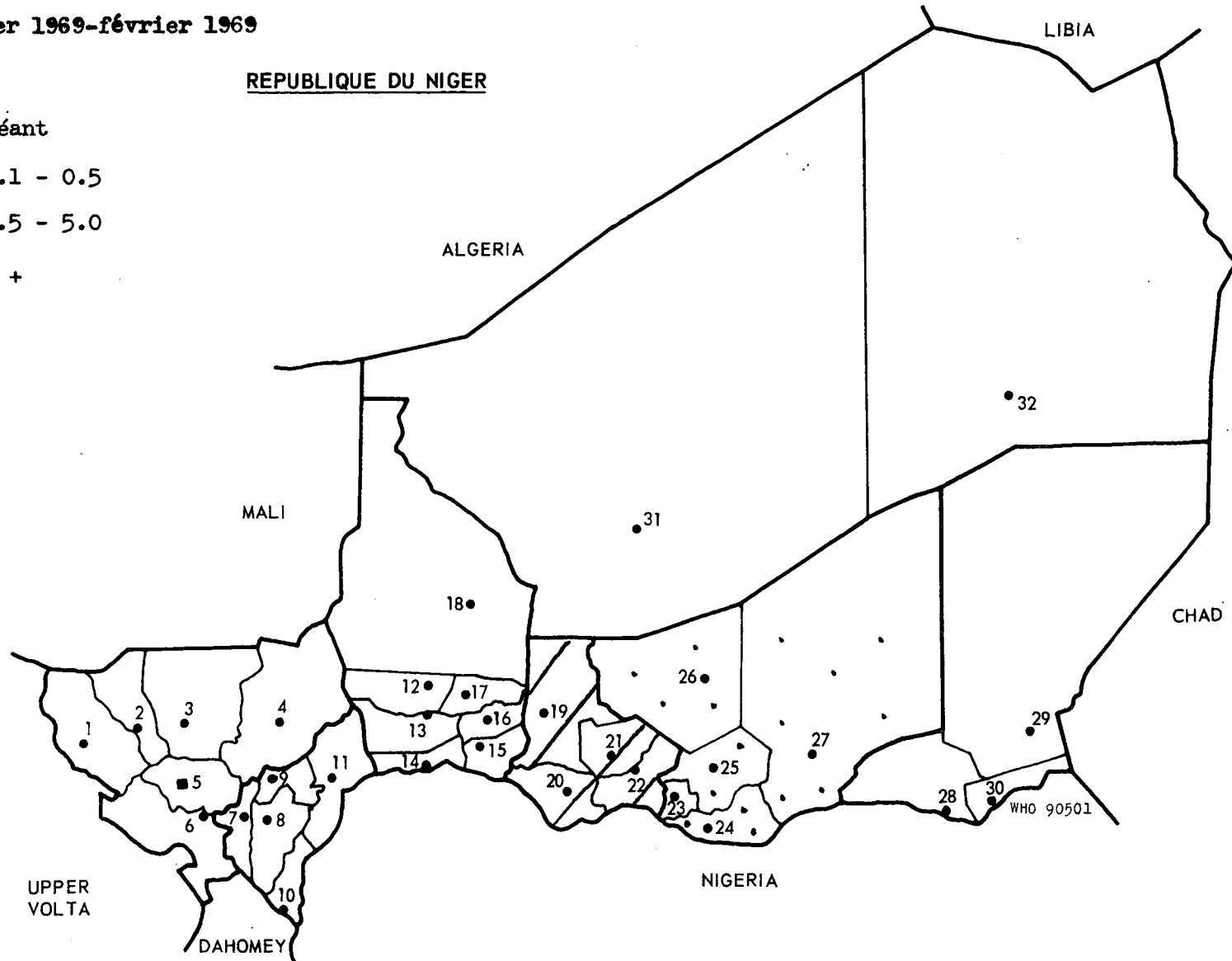
**Octobre 1968-décembre 1968**

- Néant
- ▨ 0.1 - 0.5
- ▩ 0.5 - 5.0
- 5 +



**Figure 8 (2.3)**  
**TAUX D'INCIDENCE POUR 100.000 HABITANTS**  
**Janvier 1969-février 1969**

- Néant
- ▣ 0.1 - 0.5
- ▤ 0.5 - 5.0
- 5 +



WHO 90501

Figure 9 (2.6)

RÉGIONS VACCINÉES CONTRE LA VARIOLE

Janvier 1967-avril 1969

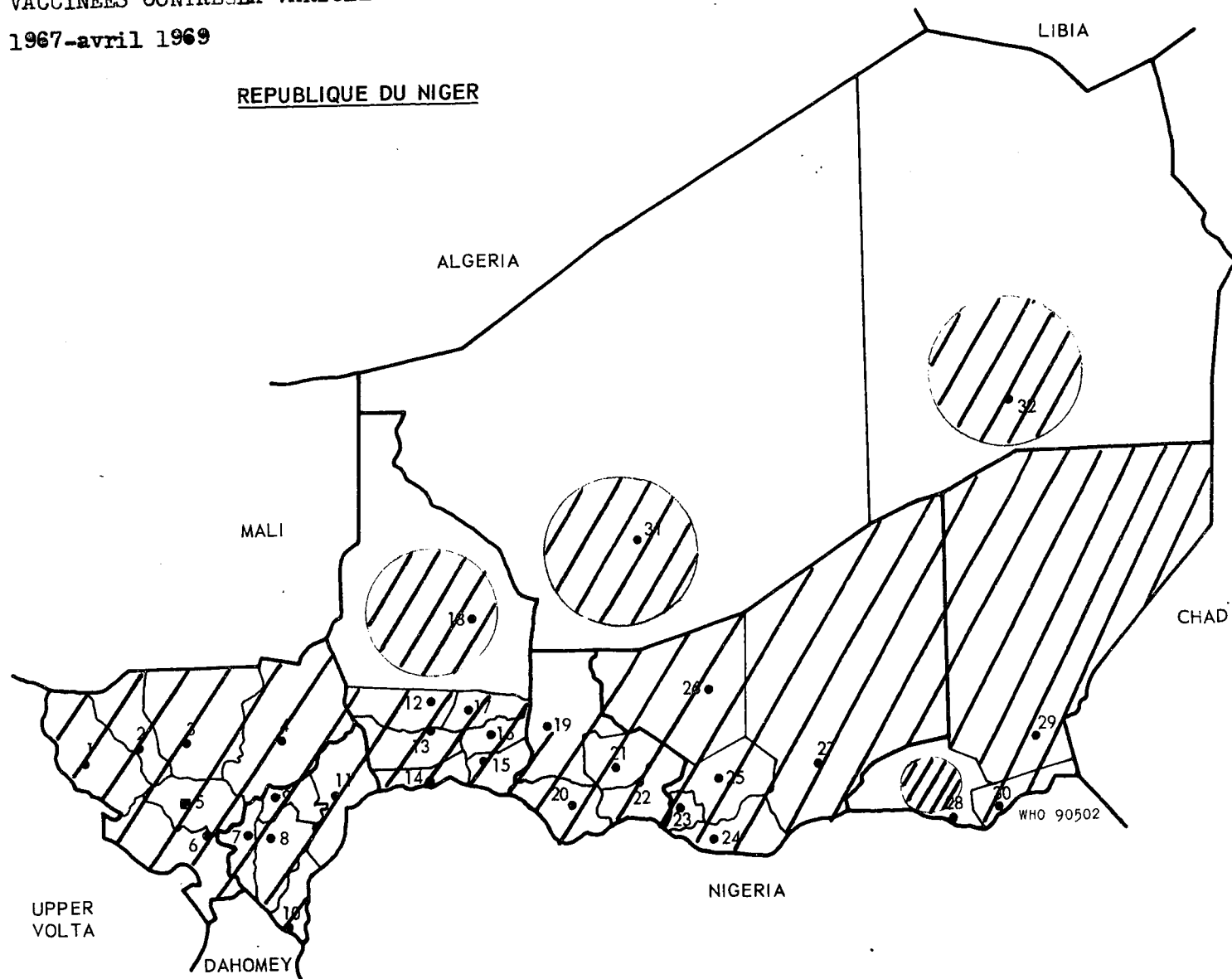


Figure 10 (3.3)  
RÉGIONS PARTIELLEMENT VACCINÉES CONTRE LA ROUGEOLE  
Janvier 1967-avril 1969

