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# WORLD SURVEY OF RABIES 28 FOR YEAR 1992



by

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WORLD HEALTH ORGANIZATION

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## 1. INTRODUCTION

The Twenty-eighth World Survey of Rabies (WSR) for the year 1992 is based on data returned from 118 countries and territories out of 186 countries receiving the questionnaire. In addition, other official sources (Annex 1) have been used, extending the coverage to 139 countries and territories.

The survey reports on five major topics:

- Rabies trends for 1992
  - Human and animal rabies cases and methods of confirmation (Tables 1 and 2)
  - Presence/absence of rabies by country (Annex 1)
  - Elimination/introduction of rabies (2.1.4)
  - Main rabies epidemiological pattern (Annex 2)
  - Trends in individual countries (Annex 3, 6 and 7)
- Rabies post-exposure treatments (Table 3, Annex 4)
- Rabies vaccine production and imports
  - Human vaccines (Table 4)
  - Veterinary vaccines (Table 4)
- Diagnostic techniques in human and veterinary laboratories (Annex 4)
- Rabies vaccine application to dogs (Annex 5)

In this issue we tried to offer the readers better access to the original database (through Annexes 2, 4 and 5) to complement the results usually in Tables 1 to 4. Additional tables were included comprising information on the main rabies epidemiological pattern, the post-exposure treatment rate per 100 000 inhabitants (Annex 2), diagnostic techniques most commonly used for rabies diagnosis, and countries where oral immunization of dogs is carried out (Annex 4).

This issue of the WSR should have been published at the end of 1993. However, many questionnaires reached this unit after the deadline of 30 June 1993.

The WSR is not meant to provide information on the current rabies situation, but its relevance could be increased if the questionnaires were returned promptly.

The editors thank all those who contributed (mainly diagnostic institutes at national level and Ministries of Health and/or Agriculture) and count on their continued collaboration for the preparation of WSR issues to come.

Veterinary Public Health  
Division of Communicable Diseases

## 2. SUMMARY OF REPLIES RECEIVED

### 2.1 Rabies trends for 1992

#### 2.1.1 Number of human cases by source of animal exposure and method of confirmation (Table 1)

Africa Most of the human cases (83%) were diagnosed on clinical grounds only. The source of exposure was unknown for more than 54% of the cases. Involvement of wild animals was negligible.

Americas About 43% of human rabies cases were confirmed by laboratory examination. Dogs were the main source of exposure (54%). For 3% of the total number of reported cases the animal species at the origin of exposure was unknown.

Asia Rabies diagnosis was mainly made on clinical grounds alone (95%). Source of exposure was reported in less than 1% of the cases.

Europe All 20 human rabies cases were confirmed by a laboratory. The offending animal was unknown in two cases. The remaining 18 cases were caused half by wildlife and half by domestic animals.

#### 2.1.2 Number of animal rabies cases by species and method of confirmation (Table 2)

Africa Seventy-seven per cent of the total number of reported animal cases were confirmed in the laboratory in the following species or groups of species: dogs (56%), other domestic animals (32%), and wildlife (12%).

Americas Almost 26 000 animal cases were diagnosed (66% in the laboratory). This figure represents about half of all animal rabies cases reported in this survey. Twenty-nine per cent of all laboratory confirmed cases were diagnosed in dogs. Rabies was almost exclusively reported in wildlife in Canada and the USA.

Asia More than 63% of all diagnosis in animals were made by the laboratory. The dog was the main species involved (87%). Cases in livestock accounted for 8% of the total number of cases confirmed in the laboratory.

Europe The overwhelming majority of cases (97%) were confirmed by laboratory techniques. About 5 100 cases were diagnosed in foxes (42%). This is a reduction of about 4 000 cases in foxes compared to 1991. Livestock were the victims of the disease in 42% of the cases and dogs accounted for less than 6% of the total, followed by cats (3%).

### 2.1.3 Presence/absence of rabies by country

Annex 1 gives names of countries and territories according to their rabies situation in 1992.

### 2.1.4 Elimination/introduction of rabies

None of the 118 countries which replied reported elimination or introduction of rabies.

### 2.1.5 Main rabies epidemiological pattern

Dog rabies was first in importance in 62%, wildlife 34% and bat rabies in 4% of the 83 countries which reported on the pattern of the disease.

Detailed information (by country, by continent) is given in Annex 2.

### 2.1.6 Geographical distribution and trends in individual countries

Annex 3, as well as Annexes 6 and 7 provide information on the distribution of the disease in a given country (i.e. rabies present in the entire country or in limited areas or in border areas) and on the trend of the disease (stable; increasing; decreasing). According to the questionnaire, increase or decrease means at least 10% variation against the number of rabies cases reported during the preceding year.

## 2.2 Rabies post-exposure treatment

Data on the number of persons treated and the animal species involved are given in Table 3 - Number of persons treated against rabies by source of animal exposure and type of treatment: 1992. Annex 4 gives rates of post-exposure treatments in humans.

More than 6.4 million people were reported to have been treated in the 60 out of 92 rabies infected countries reporting on the numbers of persons who received rabies post-exposure treatment. In China alone about 5 million people were vaccinated. India reported 500 000 and Viet Nam about 240 000 treated persons.

Dogs were the origin of exposure in 79% of the human post-exposure treatments administered in Africa, 91% in the Americas, 97% in Asia, and 64% in Europe. In the latter continent, exposure to wildlife species accounted for 10% of the treatments.

Rabies post-exposure treatment mainly consisted in the application of vaccine alone (96% in Africa, 93% in the Americas, 99% in Asia, 97% in Europe). In Belgium, Cuba, Denmark, Israel, Kuwait, Netherlands, Norway, Saudi Arabia, Switzerland and Yugoslavia\*, serum and vaccine were systematically administered together (in more than 40% of the treatments).

## 2.3 Vaccine production and imports

Data provided by each country are given in Table 4 entitled "Human and animal rabies vaccines produced domestically and imported in 1992".

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\* relates to the territory covered by the former Republic of Yugoslavia, except Slovenia

### 2.3.1 Human rabies vaccine production and imports

In response to the questionnaire, 28 out of 118 countries or territories produced human rabies vaccine in 1992. Twenty-one countries produced only vaccines prepared on brain tissues (for information on the vaccine types used and quantities - see Table 4). Six countries (China, Germany, Japan, Netherlands, Russian Federation, USA) only produced rabies vaccines on cell culture. About 25% of all human rabies vaccines manufactured in the 28 countries concerned were produced on nervous tissues (1991 - 90%).

Fifty-five countries reported importing human vaccines (see Table 4 for type and quantity), out of which 77% were of cell culture origin, and 22% of brain tissue origin. Approximately, only 1% of the vaccines imported were manufactured on embryonating eggs.

### 2.3.2 Veterinary vaccine production and imports

Thirty out of 118 countries or territories which returned the questionnaire reported producing animal rabies vaccines. Forty per cent produced only vaccines prepared on brain tissues, 17% only on embryonating eggs and 33% only on tissue culture. The remaining countries generated more than one vaccine type. More than 65% of all veterinary rabies vaccines are of cell culture origin, 33% stem from neural tissue and less than 1% were produced on embryonating egg.

Fifty-three countries or territories reported importing animal rabies vaccines. More than 94% of these vaccines were prepared on cell culture (see Table 4 for quantities).

### 2.4 Diagnostic techniques used in human and veterinary laboratories (Annex 4)

Ninety countries reported on the diagnostic techniques used in veterinary laboratories, and 46 countries on those used in human laboratories.

The Fluorescent Antibody Test (FAT) is the technique most widely used to diagnose rabies in humans (37 out of 46 laboratories). Fifty-two per cent (24 out of 46) laboratories responsible for human rabies diagnosis used the Mouse Inoculation Test (MIT), 44% histological techniques, and 17% other techniques. Thirteen per cent of the countries replied that they were only using the MIT and histological techniques for confirming rabies in humans.

FAT is applied in 80 out of 90 veterinary laboratories which informed about the diagnostic techniques applied. About 26% of these laboratories simultaneously carried out the MIT, 36% histological techniques and 9% other techniques. MIT and/or histology for rabies diagnosis were exclusively used only in 8% (- 7) of the veterinary laboratories.

### 2.5 Vaccine application in animals (Annex 5)

Regarding the characteristics of dog immunization against rabies, vaccination is compulsory in 68% (17) of the African countries, 67% (12) of those belonging to the Americas, 23% (5) of those located in Asia, 78% (25) of the European countries and 29% (4) of the countries or territories of Oceania. In countries where rabies is either present on islands or on the mainland, different vaccination regimes were applied (e.g. Malaysia). Some of the rabies-free countries sharing borders with rabies-infected countries (e.g. Greece) may enforce a policy of compulsory vaccination in border areas and optional vaccination in the rest of the territory.

An indication of the number of dogs immunized in 1992 and an estimate of the vaccination coverage (in %) is given in Annex 5. Coverage was below 25% in half of the countries in Africa which reported on the vaccination rate. Average dog vaccination coverage was 43% for the Americas, 30% in Asia (no data for India and China), and 53% for Europe. It is likely that the dog population was underestimated in most cases.



Table 1: Number of Human Rabies Cases by Source of Animal Exposure and Method of Confirmation, 1992

Africa	Method of Diagnosis			Reported exposure to Domestic Animals			Reported Exposure to Wild Animals					Unknown	
	Laboratory	Clinical	Total	Dog	Cat	Other	Fox	Skunk	Raccoon	Mongoose	Bat		Other
Algeria	2	25	27										27
Botswana	0	0	0										
Cameroun	28		28	26	2								
Central African Rep.	0	7	7	7									
Egypt		61	61	61									
Ethiopia	0	26	26	26									
Gambia	0		0										
Madagascar	0	0	0										
Malawi	17	35	52	52									
Mauritius	0	0	0										
Morocco	5	15	20	15	2	3							
Mozambique	0	42	42										42
Sudan	8	120	128	8									120
Tunisia	25	27	52	20	1								31
Uganda	0	50	50	3									47
Zimbabwe	1	0	1	1									
<b>Africa Total</b>	<b>86</b>	<b>408</b>	<b>494</b>	<b>219</b>	<b>5</b>	<b>3</b>						<b>0</b>	<b>267</b>

Americas	Method of Diagnosis			Reported exposure to Domestic Animals			Reported Exposure to Wild Animals					Unknown	
	Laboratory	Clinical	Total	Dog	Cat	Other	Fox	Skunk	Raccoon	Mongoose	Bat		Other
Bolivia	12	13	25	22	2	0						1	
Brazil	25	29	54	38	2	6	1				13	1	7
British Virgin Islands	0	0	0										
Chile	0	0	0										
Colombia	0	8	8										
Dominican Republic		1	1	1									
Ecuador	4	32	36										
El Salvador	6	16	22										
Guatemala	6		6	6									
Haiti						1	2						
Honduras						1	2						
Mexico	21	14	35	29							6		
Nicaragua	0	3	3										
Paraguay	3	3	6	3									
Peru	17	5	22	18		4							
Uruguay	0	0	0										
USA	1	0	1	1									
Venezuela	0	1	1										
<b>Americas Total</b>	<b>95</b>	<b>124</b>	<b>220</b>	<b>118</b>	<b>4</b>	<b>12</b>	<b>5</b>				<b>19</b>	<b>2</b>	<b>7</b>

Asia	Method of Diagnosis			Reported exposure to Domestic Animals			Reported Exposure to Wild Animals					Unknown	
	Laboratory	Clinical	Total	Dog	Cat	Other	Fox	Skunk	Raccoon	Mongoose	Bat		Other
Bangladesh		2'000	2'000										2'000
Bhutan	0	0	0										
China	1'024		1'024										1'024
India <sup>1)</sup>		30'000	30'000										30'000
Indonesia <sup>2)</sup>	1	1'069	1070 <sup>3)</sup>	1									1'069
Iran	0	19	19	16		3							
Jordan		3	3	3									
Kuwait	0	0	0										
Laos <sup>4)</sup>	242		242										242
Lebanon		3	3	2				1					
Nepal		30	30	27						1		2	
Oman	1	0	1					1					
Sri Lanka	17	95	112	108	4								
Thailand	3	112	115	115	1								1
Viet Nam (Central Part) <sup>5)</sup>	5		5										5
Viet Nam (Southern Part) <sup>6)</sup>	19		19										19
Viet Nam (Northern part)	285		285										285
Yemen	22	0	22	22									
<b>Asia Total</b>	<b>1'597</b>	<b>31'331</b>	<b>31'880</b>	<b>272</b>	<b>5</b>	<b>3</b>	<b>2</b>			<b>1</b>		<b>2</b>	<b>32'645</b>

Table 1: Number of Human Rabies Cases by Source of Animal Exposure and Method of Confirmation, 1992

Europe	Method of Diagnosis			Reported exposure to Domestic Animals			Reported Exposure to Wild Animals					Unknown	
	Laboratory	Clinical	Total	Dog	Cat	Other	Fox	Skunk	Raccoon	Mongoose	Bat		Other
Belgium	0	0	0										
Bulgaria	0		0										
Cyprus	0	0	0										
Czech Republic <sup>4)</sup>	0	0	0										
Denmark	0	0	0										
Estonia	0	0	0										
Finland	0	0	0										
France	1	0	1	1									
Germany	0	0	0										
Gibraltar	0	0	0										
Ireland	0	0	0										
Italy	0	0	0										
Latvia	0	0	0										
Lithuania	2		2	1								1	
Luxembourg													
Malta	0	0	0										
Netherlands	0	0	0										
Romania	3		3					2					1
Russian Federation	9		9	2	1			5				1	
Slovakia <sup>4)</sup>	0	0	0										
Sweden	0	0	0										
Switzerland	0	0	0										
Turkey	5		5	3		1							1
United Kingdom	0	0	0										
<b>Europe Total</b>	<b>20</b>	<b>0</b>	<b>20</b>	<b>7</b>	<b>1</b>	<b>1</b>		<b>7</b>				<b>2</b>	<b>2</b>

Oceania	Method of Diagnosis			Reported exposure to Domestic Animals			Reported Exposure to Wild Animals					Unknown	
	Laboratory	Clinical	Total	Dog	Cat	Other	Fox	Skunk	Raccoon	Mongoose	Bat		Other
Australia	0	0	0										
Cambodia		5	5	5									
Lao People's Dem. Rep.	1		1	1									
Malaysia (Peninsula)	11		11										11
New Caledonia	0	0	0										
Philippines <sup>7)</sup>		300	300	50									250
<b>Oceania Total</b>	<b>12</b>	<b>305</b>	<b>317</b>	<b>56</b>									<b>261</b>

<b>Total for the World</b>	<b>1'832</b>	<b>34'169</b>	<b>34'931</b>	<b>694</b>	<b>15</b>	<b>19</b>		<b>14</b>			<b>1</b>	<b>19</b>	<b>6</b>	<b>35'182</b>
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<sup>1)</sup> Estimated annual average<sup>2)</sup> Only capital Vientiane and close vicinity<sup>3)</sup> Only first semester 1992<sup>4)</sup> Annual average 1986-1990<sup>5)</sup> Concerns Java, Kalimantan, Sumatra and Sulawesi; all other islands are rabies-free (Bali, Nusa Tenggara Timur, Nusa Tenggara Barat, Timor Timur, Maluku, Irian Jaya, Kalimantan Barat)<sup>6)</sup> Part of former Czechoslovakia<sup>7)</sup> Estimated figures<sup>8)</sup> Figures were taken from source no.3 in Annex 1. Data were later corrected to 44 human rabies cases in Indonesia in 1992 (see also data source no.4 in Annex 1).

Table 2: Number of Animal Rabies Cases by Species and Method of Confirmation, 1992

Africa	Method of Diagnosis			Laboratory Confirmed Cases in Domestic Animals					Laboratory Confirmed Cases in Wild Animals					Unknown species
	Laboratory	Clinical	Total	Dog	Cat	Ruminant	Equine	Other	Fox	Skunk	Raccoon	Mongoose	Bat	
Algeria	477	380	857	337	33	86	14							7
Botswana	203	48	251	27	0	138	2				2			34
Cameroon	1	1	2	2										
Central Afr. Rep.	155		155	141	0	5		8						
Côte d'Ivoire	11		11	11		0		0						
Djibouti	0	0	0											
Egypt	0	7	7	0	0	0							0	
Ethiopia	97	0	97	86	7	3							0	1
Gambia	0		0											
Lesotho	0	0	0											
Liberia	0	1	1											
Libyan Arab Jamah.	0		0											
Madagascar	24	141	165	22	1	1							0	
Malawi	224	216	440	189	5	21		3					6	
Mauritius	0	0	0											
Morocco	437	14	451	247	39	103	45	3	2				1	4
Mozambique	11	12	23	11				1						1
Namibia	159	145	303	31	4	85	3		1		0	0	34	
Senegal	1		1	1	0			0						
Seychelles														
South Africa	670	0	670	362	16	108	5	0	12	1	123	1	41	1
Sudan	16	138	154	7	2	4	1	0						2
Swaziland	4	0	4	4										
Tunisia	581		581	356	30	161	33							1
Uganda	5		5	3		2								
Zimbabwe	565	0	565	212	14	158	6	0			4	0	171	
<b>Africa Total</b>	<b>3'640</b>	<b>1'103</b>	<b>4'743</b>	<b>2'049</b>	<b>151</b>	<b>875</b>	<b>109</b>	<b>15</b>	<b>15</b>	<b>1</b>	<b>129</b>	<b>1</b>	<b>394</b>	<b>11</b>

Americas	Method of Diagnosis			Laboratory Confirmed Cases in Domestic Animals					Laboratory Confirmed Cases in Wild Animals					Unknown species	
	Laboratory	Clinical	Total	Dog	Cat	Ruminant	Equine	Other	Fox	Skunk	Raccoon	Mongoose	Bat		Other
Belize	1	0	1	0	0	1									
Bolivia	488	1'376	1'864	401	11	42		1						2	
Brazil	1'387	2'503	3'890	501		736	69	11	3				3	4	
Canada	2'270	107	2'377	118	95	245	20	13	1'176	483	35		52	33	
Chile	10	0	10		2								8		
Colombia <sup>1)</sup>	30		30	86		4									
Cuba	152		152	36	21	25	0	0			70	0	0		
Dominican Republic		45	45	42	10	0	1	3			31			87	
Ecuador <sup>1)</sup>	709		709	648		61									
El Salvador <sup>1)</sup>	96		96	94		2									
Guatemala	89		89	62	3	22		2							
Haiti <sup>1)</sup>	13		13	13											
Honduras <sup>1)</sup>	19		19	18		1									
Mexico	2'358	4'753	7'111	2'077	106			170					5		
Nicaragua <sup>1)</sup>	18		18	14		4									
Panama	15	32	47	0	0	15							0		
Paraguay	415		415	237	8	95	8	7					0	0	
Peru	395		395	348	26	8	3	8	0				0	2	
Uruguay				0	0	0	0	0						0	
USA	8'644		8'644	182	290	207	49	4	397	2'334	4'311	51	647	172	
Vanuatu	0	0	0												
Venezuela <sup>1)</sup>	87		87	83		4									
<b>Americas Total</b>	<b>17'139</b>	<b>8'816</b>	<b>25'955</b>	<b>4'937</b>	<b>572</b>	<b>1'468</b>	<b>150</b>	<b>219</b>	<b>1'576</b>	<b>2'817</b>	<b>4'346</b>	<b>152</b>	<b>717</b>	<b>213</b>	<b>146</b>

Asia	Method of Diagnosis			Laboratory Confirmed Cases in Domestic Animals					Laboratory Confirmed Cases in Wild Animals					Unknown species
	Laboratory	Clinical	Total	Dog	Cat	Ruminant	Equine	Other	Fox	Skunk	Raccoon	Mongoose	Bat	
Bhutan	32	13	45	15	5	12		0						
Indonesia <sup>1)</sup>	54	1'199	1'253	51	2			0					0	1
Iran	335		335	120	7	138	19		8				0	35
Israel	46		46	23	0	4	1	0	13		0	0	5	
Jordan	24		24	12	0	8			3					1
Kuwait	0	0	0											
Laos	136		136											136
Mongolia	0	668	668											
Nepal	20	920	940	16		3							1	
Oman	62	449	511	9	6	24			16		4		3	
Pakistan	1		1	0		1	0							
Saudi Arabia	112	116	228	30	8	23	3		27				21	
Sri Lanka	591		591	539	33	4		4			8		3	
Taiwan														
Thailand	4'643		4'643	4'430	152	45	1	3	1				11	
United Arab Emirates	6		6			6			3					3
Yemen	419	301	720	400	5	1	10		3					
<b>Asia Total</b>	<b>6'481</b>	<b>3'668</b>	<b>10'149</b>	<b>5'653</b>	<b>218</b>	<b>269</b>	<b>34</b>	<b>7</b>	<b>74</b>	<b></b>	<b>12</b>	<b>0</b>	<b>80</b>	<b>140</b>

Table 2: Number of Animal Rabies Cases by Species and Method of Confirmation, 1992

Europe	Method of Diagnosis			Laboratory Confirmed Cases in Domestic Animals					Laboratory Confirmed Cases in Wild Animals					Unknown species
	Laboratory	Clinical	Total	Dog	Cat	Ruminant	Equine	Other	Fox	Skunk	Raccoon	Mongoose	Bat	
Austria	1'117	0	1'117	3	14	41	2	0	910					147
Belgium	34	0	34	0	0	16	1	0	17				0	0
Bulgaria	22	0	22	0	6	9	0	0	7					
Croatia	193	0	193	5	14	4	0	0	166					4
Cyprus	0	0	0	0	0	0	0	0	0					0
Czech Republic <sup>1)</sup>	570	0	570	7	14	0	0	0	526				0	23
Denmark	0	0	0	0	0	0	0	0	0				0	0
Estonia	110	0	110	10	16	7	0	0	34					44
Finland	0	0	0	0	0	0	0	0	0				0	0
France	1'285	0	1'285	30	49	117	21	1	1'000				0	44
Germany	1'425	0	1'425	59	77	131	6	1	1'011		1		5	134
Gibraltar	0	0	0	0	0	0	0	0	0				0	0
Greece	0	0	0	0	0	0	0	0	0				0	0
Hungary	892	0	892	47	101	35	2	0	694					12
Ireland	0	0	0	0	0	0	0	0	0				0	0
Italy	23	0	23	1	0	0	0	0	19				0	3
Latvia	126	0	126	22	18	5	0	0	44					37
Lithuania	86	0	86	19	15	21	1	0	12					8
Luxembourg	2	0	2	0	0	2	0	0	0					0
Malta	0	0	0	0	0	0	0	0	0				0	0
Netherlands	8	0	8	0	0	0	0	0	0				0	0
Norway	1	0	1	0	0	0	0	0	0				0	0
Portugal	0	0	0	0	0	0	0	0	0				0	0
Republic of Moldova	7	0	7	2	1	2	0	0	1					1
Romania	53	0	53	10	7	13	0	1	19					3
Russian Federation	5'239	0	5'239	187	53	4'837	21	2						139
Slovakia <sup>2)</sup>	321	0	321	10	31	1	0	0	267					10
Slovenia <sup>3)</sup>	234	0	234	7	2	1	0	0	196					28
Spain (only Ceuta/Melilla)	12	0	12	12	0	0	0	0	0				0	0
Sweden	0	0	0	0	0	0	0	0	0				0	0
Switzerland	127	0	127	0	3	2	0	0	103				1	17
Turkey	328	397	725	250	11	57	6	1						1
United Kingdom	0	0	0	0	0	0	0	0	0				0	0
Yugoslavia <sup>4)</sup>	139	0	139	9	12	8	1	0	107					1
Europe Total	12'154	397	12'751	690	445	5'319	63	6	6'193	0	1		14	657

Oceania	Method of Diagnosis			Laboratory Confirmed Cases in Domestic Animals					Laboratory Confirmed Cases in Wild Animals					Unknown species
	Laboratory	Clinical	Total	Dog	Cat	Ruminant	Equine	Other	Fox	Skunk	Raccoon	Mongoose	Bat	
Australia	0	0	0	0	0	0	0	0	0					0
Cambodia	0	716	716	0	0	0	0	0	0					0
Hong Kong	0	0	0	0	0	0	0	0	0					0
Japan	0	0	0	0	0	0	0	0	0					0
Leo People's Dem. Rep.	136	106	242	134	2	0	0	0	0					0
Malaysia (Peninsula)	11	1	12	12	0	0	0	0	0					0
New Caledonia	0	0	0	0	0	0	0	0	0					0
New Zealand	0	0	0	0	0	0	0	0	0					0
Philippines <sup>5)</sup>	450	0	450	441	0	0	0	0	0					9
Republic of Korea	0	0	0	0	0	0	0	0	0					0
Singapore	0	0	0	0	0	0	0	0	0					0
Tonga	0	0	0	0	0	0	0	0	0					0
Oceania Total	597	823	1'420	567	2	0	0	0	0					0

Total For the World	40'298	14'807	55'105	13'999	1'368	7'935	256	247	6'798	2'818	4'347	293	732	1'244	335
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<sup>1)</sup> Data include only dog and cat rabies cases<sup>2)</sup> Concerns Java, Kalimantan, Sumatra and Sulawesi; all other islands are rabies-free (Bali, Nusa Tenggara Timur, Nusa Tenggara Barat, Timor Timur, Maluku, Irian Jaya, Kalimantan Barat)<sup>3)</sup> part of former Czechoslovakia<sup>4)</sup> Annual average<sup>5)</sup> relates to the territory covered by the former Republic of Yugoslavia, except Slovenia

Table 3: Number of Persons treated against Rabies by Source of Animal Exposure and Type of Treatment, 1992

Africa	Persons treated for Exposure to Domestic Animals				Persons treated for Exposure to Wild Animals					Persons receiving		
	Dog	Cat	Others	Total	Fox	Rodent	Bat	Others	Total	Vaccine alone	Vaccine & serum	Serum alone
Algeria	3'153	1'588	620	5'361		1'553		10	1'563	4'231	1'817	491
Botswana			620	620				0				
Cameroun	1'441	27	13	1'481		7	1	0	8	1'352	101	6
Central African Republic	2'433	183	26	2'632						2'619	39	
Cote d'Ivoire	251		3	254						251		
Ethiopia	1'849	52	83	1'984				19	19	1'910	87	6
Gambia			83	83						617		
Lesotho										42		
Madagascar	1'392	62	8	1'462		43		31	74	1'439	95	0
Malawi			8	8								
Mauritius	0			0					0	0	0	0
Morocco										18'172		
Mozambique											0	0
Senegal	1'398	26		1'426		2		2	4	1'430		
Sudan										120'460		
Swaziland	10			10						10		
Tunisia	26'224	2'548	1'867	30'639				540	540	34'011	6'187	
Uganda	978	21	192	1'191	10			5	15	1'071		
Zimbabwe			3	3						2'981	22	0
<b>Africa Total</b>	<b>39'129</b>	<b>4'509</b>	<b>3'516</b>	<b>47'154</b>	<b>10</b>	<b>1'605</b>	<b>1</b>	<b>607</b>	<b>2'223</b>	<b>190'616</b>	<b>8'348</b>	<b>503</b>

Americas	Persons treated for Exposure to Domestic Animals				Persons treated for Exposure to Wild Animals					Persons receiving		
	Dog	Cat	Others	Total	Fox	Rodent	Bat	Others	Total	Vaccine alone	Vaccine & serum	Serum alone
Belize	2		6	8						8		
Bolivia	4	0	6	10						3'410	190	
Brazil										141'952	13'118	0
British Virgin Islands										0	0	0
Chile	12'972			12'972						12'972		
Cook Islands										0	0	0
Cuba	658	213	189	1'060			20	115	135		1'195	
Dominican Republic	2'626	30	201	2'857				74	74	2'750	40	
Fiji			0	0								
Mexico	28'332	1'447	2'319	32'098			68	0	68	30'951	1'215	
Panama			0	0						150		
Paraguay	3'185	67	208	3'460				40	40	4'000		
Peru	8'935	400	267	9'602	6	100	80	24	210	8'574	361	0
St Vincent and Grenadines			59	59								
Uruguay	601	21	0	622						247		
Vanuatu										0	0	0
<b>Americas Total</b>	<b>57'315</b>	<b>2'178</b>	<b>3'255</b>	<b>62'748</b>	<b>6</b>	<b>100</b>	<b>168</b>	<b>253</b>	<b>527</b>	<b>205'014</b>	<b>16'119</b>	<b>0</b>

Asia	Persons treated for Exposure to Domestic Animals				Persons treated for Exposure to Wild Animals					Persons receiving		
	Dog	Cat	Others	Total	Fox	Rodent	Bat	Others	Total	Vaccine alone	Vaccine & serum	Serum alone
Bangladesh			57	57						50'000		
Bhutan	2'050			2'050						3'000	0	0
China <sup>1)</sup>										5'000'000		
India <sup>2)</sup>	480'000			480'000						500'000		
Indonesia <sup>3)</sup>	221	79	76	376						244	87	5
Iran	31'248	1'891	3'772	36'911	142			500	642	25'152	12'371	
Israel	1'076	162	3'757	4'995	11	63	6	30	110	651	682	
Jordan	905	38	78	1'021	8	121	1	13	143	748	302	
Kuwait	381	218	68	667	2			18	20	356	259	0
Laos <sup>4)</sup>			5	5						496		
Lebanon	119	3		122	2				2	62	40	22
Mongolia												
Nepal	16'614	60	1'998	18'672		251		447	698	19'339	29	
Oman	366	204	2'053	2'623	99	49		33	181			
Pakistan			55	55								
Saudi Arabia	385	196	36	617	14			53	67		694	
Yemen	2'861	20	87	2'938	3	1		3	7	2'945	1'020	
Sri Lanka			36	36						22'189		0
Viet Nam (Central Part) <sup>5)</sup>										8'009		
Viet Nam (Southern Part) <sup>6)</sup>										115'849		
Viet Nam (Northern Part)	116'048	2'368		118'416						118'416		
<b>Asia Total</b>	<b>652'274</b>	<b>5'239</b>	<b>11'991</b>	<b>669'504</b>	<b>281</b>	<b>485</b>	<b>7</b>	<b>1'097</b>	<b>1'870</b>	<b>5'817'456</b>	<b>15'484</b>	<b>27</b>

Table 3: Number of Persons treated against Rabies by Source of Animal Exposure and Type of Treatment, 1992

Europe	Persons treated for Exposure to Domestic Animals				Persons treated for Exposure to Wild Animals				Persons receiving			
	Dog	Cat	Others	Total	Fox	Rodent	Bat	Others	Total	Vaccine alone	Vaccine & serum	Serum alone
Belgium	47	29	146	222	19	12	5	20	56	104	76	
Bulgaria			47	47								
Czech Republic <sup>1)</sup>	560	169	374	1'103	60			98	158	780	477	4
Denmark	20	3	374	397	1	1	2	8	12		35	
Estonia										491		
Finland	22	18	7	47		2	8	6	16	53	10	0
France	4'912	2'195	599	7'706	307	276	21	260	864	8'023	500	56
Germany			592	592								
Greece	1'282	40	4	1'326	4			62	8	1'200	200	
Hungary	1'228	462	308	2'018	233	19		39	291	4'367	0	0
Iceland			304	304								
Ireland	7			7				2	2	13		
Latvia	3'456	534	75	4'065	136	135		178	389	3'484	970	0
Lithuania	2'346	362	109	2'817	58	76		47	181	3'088	176	26
Luxembourg	33	24	43	100				10	10	76		
Malta			9	9						0	0	0
Netherlands	3			3		1	22		23	0	100	0
Norway											2	
Poland	2'661	918	583	4'162	533	218	3	639	1'393	5'321	34	
Portugal	42		583	625						41	1	
Republic of Georgia			0	0								
Republic of Moldova	6'031	432		6'463	46	128			174	2'261	1'119	
Romania										9'625		
Russian Federation										136'132		
Slovakia <sup>2)</sup>												
Slovenia												
Spain (only Ceuta and Meli)	129	19	2	150		9		6	15	460	28	1
Sweden			2	2						150	25	
Switzerland	21	12	1	34	1	1	1	3	6	2	39	1
Turkey			1	1								
United Kingdom	315	96	22	433	1	6	7	13	27	312	186	0
Yugoslavia <sup>3)</sup>	772	157	31	960	40	7		8	55	451	556	27
Europe Total	23'887	5'490	4'216	33'593	1'439	891	131	1'285	3'746	176'634	4'536	115

Oceania	Persons treated for Exposure to Domestic Animals				Persons treated for Exposure to Wild Animals				Persons receiving			
	Dog	Cat	Others	Total	Fox	Rodent	Bat	Others	Total	Vaccine alone	Vaccine & serum	Serum alone
Australia			9	9								
Cambodia	7'590			7'590								
Hong Kong	2'944	270	7	3'221		252		66	318	3'487	52	0
Japan			7	7						0	0	0
Lao People's Dem. Rep.	800	15	5	820						496		
Malaysia (Peninsula)			5	5								
New Caledonia												
New Zealand			1	1								
Niue Islands			1	1								
Philippines <sup>4)</sup>										45'000	15'000	152
Republic of Korea										0	0	0
Oceania Total	11'334	285	35	11'654	0	252	0	66	318	48'983	15'052	152

Total for the World	783'939	17'701	23'070	824'710	1'736	1'333	307	3'208	8'684	6'488'703	59'539	797
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<sup>1)</sup> Approximate annual number<sup>2)</sup> Annual approximate average<sup>3)</sup> Concerns Java, Kalimantan, Sumatra and Sulawesi; all other islands are rabies-free (Malik, Nusa Tenggara Timur, Nusa Tenggara Barat, Timor Timur, Maluku, Irian Jaya, Kalimantan Barat)<sup>4)</sup> Only capital Vientiane and close vicinity<sup>5)</sup> Only first semester 1992<sup>6)</sup> Annual average 1986-1990<sup>7)</sup> Part of former Czechoslovakia<sup>8)</sup> Annual average<sup>9)</sup> relates to the territory covered by the former Republic of Yugoslavia, except Slovenia

Table 4: Human and Animal Rabies Vaccines produced domestically and imported, 1992

Africa	Animal rabies vaccines (doses)						Human rabies vaccines (doses)					
	produced			imported			produced			imported		
	NTQ	TCQ	EEO	NTQ	TCQ	EEO	NTQ	TCQ	EEO	NTQ	TCQ	EEO
Algeria		147'100					585'150				2'000	
Botswana	0		0		300'000						7'500	
Cameroun				1'815							10'080	
Côte d'Ivoire					500						793	
Djibouti							522'740					
Egypt			6'604				84'960					
Ethiopia	17'140											
Gambia					1'000	981					903	
Lesotho					101'390							
Libyan Arab Jamahiriya					6'000							
Madagascar										20'610		
Malawi					100'000							
Mauritius	0	0	0	0	0	0	0	0	0	0	0	0
Morocco					7'298'800	17'440						
Mozambique							0	0		3'100	0	
Namibia					10'000							
Nigeria			40'000									
Senegal							13'000				25'100	
South Africa					1'451'690							
Sudan				1'558			1'264'830				100'000	
Swaziland					60'000							
Tunisia	400'000			50'000			200'100					
Uganda					80'000						6'000	
Zimbabwe	0	0	0	0	950'000	0	0	0	0	0	18'500	0
<b>Africa Total</b>	<b>417'140</b>	<b>147'100</b>	<b>46'604</b>	<b>53'373</b>	<b>10'359'380</b>	<b>18'421</b>	<b>2'670'780</b>	<b>0</b>	<b>0</b>	<b>23'710</b>	<b>170'876</b>	<b>0</b>

Americas	Animal rabies vaccines (doses)						Human rabies vaccines (doses)					
	produced			imported			produced			imported		
	NTQ	TCQ	EEO	NTQ	TCQ	EEO	NTQ	TCQ	EEO	NTQ	TCQ	EEO
Belize					21'000						700	
Bolivia	200'000			300'000			38'000			15'000		
Brazil	20'000'000						3'500'000					
Chile	760'000						435'000					
Cuba	696'450						85'146					
Dominican Republic		659'500					100'990					
French Polynesia						395						
Guatemala	78'300						160'000					
Mexico	420'160				7'393'730		1'172'766				4'000	
Panama					35'000						150	
Paraguay				100'000						42'019		
Peru	194'110	388'910		70'000	642'550		152'809			31'052		
Uruguay					33'500		3'500					
USA		39'854'742						6'053			130'386	
<b>Americas Total</b>	<b>22'349'020</b>	<b>40'605'152</b>	<b>0</b>	<b>470'000</b>	<b>8'125'175</b>	<b>0</b>	<b>5'648'211</b>	<b>6'053</b>	<b>0</b>	<b>88'771</b>	<b>134'536</b>	<b>0</b>

Asia	Animal rabies vaccines (doses)						Human rabies vaccines (doses)					
	produced			imported			produced			imported		
	NTQ	TCQ	EEO	NTQ	TCQ	EEO	NTQ	TCQ	EEO	NTQ	TCQ	EEO
Bahrain					1'500							
Bangladesh							100'000				2'000	
Bhutan					16'225							
China <sup>21</sup>								22'500'000				
Indonesia <sup>21</sup>	591						94'565				240	
Israel					235'000						11'000	
Jordan					6'000						9'140	
Kuwait					1'000						4'000	
Mongolia	21'500	403'500								90'000	8'329	10'836
Nepal	34'200				3'000		67'470					
Oman					154'000						11'000	
Pakistan			2'895									
Saudi Arabia					50'000						44'600	
Sri Lanka					750'000		140'960				100'000	
Thailand		200'000										
Yemen					150						6'400	
<b>Asia Total</b>	<b>56'291</b>	<b>603'500</b>	<b>2'895</b>	<b>0</b>	<b>1'216'675</b>	<b>0</b>	<b>402'995</b>	<b>22'500'000</b>	<b>0</b>	<b>90'000</b>	<b>196'709</b>	<b>10'836</b>

**Main rabies epidemiological pattern**  
( replies of 83 countries out of 118 replied to the questionnaire)

Africa	Order of importance		
	FIRST	SECOND	THIRD
Algeria	dog	wildlife	
Botswana	dog	wildlife	
Cameroun	dog	wildlife	
Centr. Afr. Rep.	dog		
Côte d'Ivoire	dog		
Egypt	dog	wildlife	
Ethiopia	dog	wildlife	
Gambia	dog	wildlife	bat
Ghana	dog		
Liberia	dog	wildlife	
Madagascar	dog		
Morocco	dog	wildlife	
Mozambique	dog	wildlife	
Namibia	wildlife	dog	bat
Nigeria	dog		
Senegal	dog	wildlife	
Sierra Leone	dog		
South Africa	dog	wildlife	
Sudan	dog		
Swaziland	dog		
Tunisia	dog		
Uganda	dog	wildlife	
Zimbabwe	dog	wildlife	bat
<b>Africa Total (23 countries)</b>			
dog	22 (-96%)	1 (-4%)	
wildlife	1 (-4%)	13 (-52%)	
bat			3 (-12%)

Asia	Order of importance		
	FIRST	SECOND	THIRD
Bangladesh	dog	wildlife	
Bhutan	dog	wildlife	
China	dog	wildlife	
India	dog	wildlife	
Indonesia	dog		
Iran	dog	wildlife	
Israel	wildlife	dog	
Jordan	dog	wildlife	
Laos	dog	wildlife	
Mongolia	wildlife		
Nepal	dog	wildlife	
Oman	wildlife	dog	
Pakistan	dog		
Saudi Arabia	dog	wildlife	
Sri Lanka	dog	wildlife	
Thailand	dog		
Unit. Arab Emir.	wildlife		
Yemen	dog	wildlife	
Viet Nam (North part)	dog		
<b>Asia Total (19 countries)</b>			
dog	16 (-80%)	2 (-10%)	
wildlife	4 (-20%)	11 (-55%)	

World Total			
dog	52 (-62%)	11 (-13%)	2 (-2%)
wildlife	29 (-34%)	27 (-33%)	2 (-2%)
bat	3 (-4%)	7 (8%)	8 (-10%)

Europe	Order of importance		
	FIRST	SECOND	THIRD
Austria	wildlife		
Belgium	wildlife		
Croatia	wildlife		
Czech Republic	wildlife		
Estonia	wildlife		
France	wildlife		
Germany	wildlife	bat	
Hungary	wildlife	dog	
Italy	wildlife		
Latvia	wildlife	dog	
Lithuania	wildlife	dog	
Luxembourg	wildlife		
Netherlands	bat		
Norway (Svalbard Isl.)	wildlife		
Poland	wildlife		
Rep. of Georgia	wildlife	dog	
Rep. of Moldova	dog		
Romania	wildlife	dog	
Russ. Fed.	dog	wildlife	bat
Slovak Republic	wildlife		
Slovenia	wildlife		
Spain (only Ceuta/Mel.)	dog		
Switzerland	wildlife	bat	dog
Turkey	dog		
Yugoslavia	wildlife		
<b>Europe Total (25 countries)</b>			
dog	4 (-16%)	5 (-20%)	1 (-4%)
wildlife	20 (-80%)	1 (-4%)	
bat	1 (-4%)	2 (8%)	1 (-4%)

Americas	Order of importance		
	FIRST	SECOND	THIRD
Belize	wildlife	dog	bat
Bolivia	dog	wildlife	bat
Brazil	dog	bat	wildlife
Canada	wildlife	dog	bat
Chile	bat		
Cuba	wildlife	dog	bat
Dominican Rep.	dog	wildlife	
Guatemala	dog		
Mexico	dog	bat	wildlife
Panama	bat		
Paraguay	dog	bat	
Peru	dog	bat	
USA	wildlife	bat	dog
<b>Americas Total (13 countries)</b>			
dog	7 (-54%)	3 (-24%)	1 (-8%)
wildlife	4 (-31%)	2 (-15%)	2 (-15%)
bat	2 (-15%)	5 (-38%)	4 (-31%)

Oceania	Order of importance		
	FIRST	SECOND	THIRD
Laos	dog		
Malaysia (Peninsula)	dog		
Philippines	dog		



Rabies trends and geographical distribution  
by country and continent

	Geographical distribution	Trend		Geographical distribution	Trend
<b>Africa</b>			<b>Americas</b>		
Algeria	most parts	stable	Belize	limited areas	decrease
Botswana	most parts	stable	Bolivia	most parts	increase
Cameroun	most parts	stable	Brazil	most parts	decrease
Central African Rep.	most parts	increase	Canada	most parts	stable
Côte d'Ivoire	most parts	decrease	Chile	limited areas	stable
Egypt	most parts	stable	Cuba	limited areas	stable
Ethiopia	most parts	stable	Dominican Rep.	limited areas	increase
Gambia	most parts	increase	Guatemala	most parts	decrease
Liberia	limited areas	increase	Mexico	limited areas	decrease
Madagascar	most parts	stable	Panama	limited areas	increase
Malawi	most parts	increase	Paraguay	most parts	increase
Morocco	most parts	stable	Peru	most parts	decrease
Mozambique	most parts	increase	USA	most parts	increase
Namibia	most parts	increase			
Nigeria	most parts	increase	<b>Europe</b>		
Senegal	most parts	increase	Austria	most parts	decrease
South Africa	most parts	increase	Belgium	border areas	increase
Sudan	most parts	increase	Bulgaria	limited areas	increase
Swaziland	most parts	stable	Estonia	most parts	decrease
Tunisia	limited areas	decrease	France	limited areas	decrease
Uganda	most parts	decrease	Germany	most parts	decrease
Zimbabwe	most parts	stable	Hungary	most parts	stable
			Italy	border areas	increase
<b>Asia</b>			Latvia	most parts	decrease
Bangladesh	most parts	increase	Lithuania	most parts	increase
Bhutan	most parts	stable	Luxembourg	limited areas	decrease
China	most parts	increase	Netherlands	limited areas	decrease
Indonesia	most parts	decrease	Poland	most parts	increase
Iran	most parts	increase	Rep. of Moldova	limited areas	increase
Israel	most parts	stable	Romania	limited areas	stable
Jordan	most parts	increase	Russian Fed.	most parts	increase
Laos	most parts	increase	Norway (only Svalb. Isl.)	limited areas	increase
Lebanon	limited areas	increase	Slovak Republic	most parts	decrease
Mongolia	most parts	increase	Switzerland	border areas	increase
Nepal	most parts	stable	Turkey	limited areas	decrease
Oman	most parts	decrease	Yugoslavia	limited areas	increase
Pakistan	most parts	stable			
Saudi Arabia	limited areas	stable			
Sri Lanka	most parts	decrease			
Thailand	most parts	decrease			
United Arab Emir.	border areas	stable			
Yemen	most parts	increase			
<b>Oceania</b>					
Cambodia	limited areas	increase			
Laos People's Dem. Rep.	most parts	increase			
Malaysia (Peninsula)	border areas	increase			
Philippines	most parts	stable			

Laboratory technique for rabies diagnosis

	Laboratory technique for rabies diagnosis <sup>1)</sup>								Rate post-exp. treatment <sup>2)</sup>	Oral immunization: target animal	
	in humans				in animals						
	FAT	MIT	HIST	Other	FAT	MIT	HIST	Other			
<b>Africa</b>											
Algeria					x	x				21.40	
Botswana	x				x					49.44	
Cameroun	x	x	x		x	x				12.62	
Central African Republic					x	x				86.72	
Côte d'Ivoire					x					2.13	
Egypt					x						
Ethiopia					x			x		3.88	
Gambia										72.80	
Lesotho					x						
Liberia					x			x			
Libyan Arab Jamahiriya					x			x			
Madagascar	x	x	x	x	x	x	x	x		12.52	
Malawi			x		x					0.09	
Morocco					x	x	x			72.42	
Namibia					x	x	x				
Nigeria			x								
Senegal					x	x				19.26	
South Africa					x						
Sudan					x						
Tunisia	x	x			x	x				479.58	
Uganda					x					380.14	
Zimbabwe					x					7.29	
<b>total</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>20</b>	<b>8</b>	<b>6</b>	<b>1</b>		<b>30.40</b>	
<b>Americas</b>											
Belize			x					x			
Bolivia	x				x					47.55	
Brazil	x	x	x		x	x	x			94.40	
Canada					x						red fox
Chile	x	x			x	x					
Cuba	x	x	x		x	x				9.98	
Dominican Republic	x	x			x	x				40.39	
Guatemala	x				x						
Mexico	x	x			x	x				37.26	
Panama					x	x	x				
Paraguay					x						
Peru	x	x	x		x	x	x			44.32	
Uruguay						x	x			20.10	
USA	x				x						raccoon
<b>total</b>	<b>9</b>	<b>6</b>	<b>4</b>		<b>12</b>	<b>8</b>	<b>5</b>				<b>2</b>
<b>Asia</b>											
Bangladesh										46.88	
Bhutan	x		x		x			x		143.06	
China										441.04	
India					x	x	x			58.86	
Indonesia	x	x	x		x	x	x			0.21	
Iran	x	x		x	x	x		x		66.17	
Israel					x					107.21	
Jordan	x				x					32.37	
Kuwait	x									31.12	
Laos										11.98	
Lebanon										4.55	
Mongolia						x	x				
Nepal							x			98.71	
Oman	x	x			x					168.79	
Pakistan						x					
Saudi Arabia					x					4.15	
Sri Lanka	x		x		x			x		130.51	
Thailand					x						
United Arab Emirates					x	x	x	x			
Viet Nam (Northern part)										365.35	
Yemen	x				x					26.04	
<b>total</b>	<b>8</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>12</b>	<b>7</b>	<b>6</b>	<b>2</b>			<b>0</b>

	Laboratory technique for rabies diagnosis <sup>1)</sup>								Rate post-exp. treatment <sup>2)</sup>	Oral immunization: target animal	
	in humans				in animals						
	FAT	MIT	HIST	Other	FAT	MIT	HIST	Other			
<b>Europe</b>											
Austria					x						red fox
Belgium					x				2.23		red fox
Bulgaria					x	x	x				
Cyprus					x	x	x				
Czech Republic					x	x			7.04		red fox
Denmark				x	x			x	7.72		
Estonia	x	x	x		x	x	x				
Finland	x	x		x	x				0.94		raccoon dog
France	x			x	x			x	13.65		red fox
Germany					x				0.74		red fox
Gibraltar					x		x				
Greece					x	x			13.18		
Iceland									119.22		
Hungary		x			x				41.38		red fox
Ireland				x		x	x		0.20		
Italy					x	x					red fox
Latvia	x	x			x	x	x				red fox
Lithuania	x	x	x		x	x					red fox
Luxembourg					x	x		x	26.46		red fox
Netherlands	x				x				0.02		
Norway					x						
Poland	x	x		x					10.90		
Portugal					x	x			6.04		
Republic of Georgia											red fox
Republic of Moldova			x		x	x					red fox
Romania	x	x	x		x	x	x		41.49		
Russian Federation	x	x	x		x	x	x				red fox
Slovak Republic	x	x			x	x	x				red fox
Spain					x	x	x				
Sweden	x				x	x			0.02		
Switzerland					x				0.51		red fox
Turkey					x	x	x				
United Kingdom		x	x	x	x	x	x		0.75		
Yugoslavia					x				4.03		
total	11	11	5	6	30	20	12	3			16
<b>Oceania</b>											
Australia			x		x						
Cambodia									89.62		
Hong Kong	x	x	x		x	x	x		60.11		
Japan	x				x				0.01		
Lao People's Dem. Rep.						x	x				
Malaysia (Peninsula)					x	x	x				
Malaysia (Island)							x				
New Zealand	x		x		x		x				
Philippines	x								73.19		
Republic of Korea	x		x		x	x					
Singapore								x			
total	5	1	4		6	4	5	1			0
<b>World total</b>	<b>37</b>	<b>24</b>	<b>20</b>	<b>8</b>	<b>80</b>	<b>47</b>	<b>34</b>	<b>7</b>			<b>18</b>

1) FAT - Fluorescence Antibody Test

MIT - Mouse Inoculation Test

HIST - Histological technique (smear staining)

2) Reported number of patients per 100 000 inhabitants who received post-exposure treatment in 1992

Veterinary Vaccine Application to Dogs

Country	Status <sup>1)</sup>	Number of dogs immunized	Coverage (in %)
<b>Africa</b>			
Algeria	comp.		
Botswana	comp.	99'490	
Cameroon	comp.		6
Central African Republic	comp.	11'078	30
Côte d'Ivoire	opt.		
Djibouti	comp.	300	10
Egypt	opt.	10'020	0
Ethiopia	opt.	17'140	1
Gambia	comp.	1'133	20
Lesotho	comp.	85'894	60
Liberia	comp.;opt.	0	0
Libyan Arab Jamahiriya	comp.		50
Madagascar	opt.		
Malawi	opt.	57'956	8
Mauritius	forb.		
Morocco	comp.	4'831	
Mozambique	comp.	20'138	54
Namibia	comp.	23'291	30
Senegal	opt.		
South Africa	comp.;opt.	455'665	
Sudan	opt.	674	1
Swaziland	comp.	52'260	70
Tunisia	comp.	344'215	50
Uganda	comp.	34'119	
Zimbabwe	comp.	481'911	30
<b>Africa total</b>		<b>1'700'115</b>	<b>26</b>
<b>Americas</b>			
Bahamas	opt.		
Belize	opt.	11'064	44
Bolivia	comp.	310'467	35
Brazil	comp.	5'095'398	
British Virgin Islands	comp.;opt.	300	30
Canada	opt.		70
Chile	comp.	347'053	35
Cuba	comp.	504'629	67
Dominican Republic	comp.;opt.	35'913	24
French Polynesia	opt.	300	0
Guatemala	comp.	106'915	
Mexico	comp.	9'110'888	77
Panama	comp.;opt.	4'909	
Paraguay	comp.	73'280	25
Peru	comp.	861'457	37
Uruguay	opt.	32'519	70
USA	comp.;opt.		
Vanuatu	forb.		
<b>Americas total</b>		<b>16'495'092</b>	<b>43</b>
<b>Asia</b>			
Bahrain	opt.	1'500	45
Bangladesh <sup>1)</sup>		5'000	
Bhutan	comp.;opt.	15'000	50
India (Himachal Pradesh)	opt.		
Indonesia	comp.		70
Iran	opt.		
Israel	comp.		60
Jordan	comp.	4'200	18
Kuwait	opt.	1'026	30
Laos		7'230	
Mongolia	opt.	21'500	42
Nepal	comp.;opt.;forb.	23'590	
Oman	opt.	1'886	1
Pakistan	opt.		20
Saudi Arabia	opt.		50
Sri Lanka	opt.	453'958	21
Thailand		1'053'303	15
United Arab Emirates	opt.	199	20
Yemen	opt.	96	1
Viet Nam (Northern part)		950'000	6
<b>Asia total</b>		<b>2'538'486</b>	<b>30</b>

## Veterinary Vaccine Application to Dogs

Country	Status <sup>1)</sup>	Number of dogs immunized	Coverage (in %)
<b>Europe</b>			
Austria	opt.	108'751	
Belgium	comp.;opt.		
Cyprus	opt.	100	
Czech Republic	comp.	930'000	85
Denmark	opt.	33'748	5
Estonia	comp.		
Finland	comp.;opt.	115'000	50
France	comp.;opt.	2'650'000	30
Germany	comp.;opt.		
Gibraltar	comp.	1'900	99
Greece	comp.;opt.	90'000	25
Hungary	comp.	1'679'029	99
Iceland	forb.		
Ireland	comp.;forb.	500	0
Italy	comp.;opt.	82'318	
Latvia	comp.	100'411	65
Lithuania	comp.	132'000	70
Luxembourg	comp.	20'000	80
Malta	comp.		
Netherlands	comp.;opt.		20
Norway	comp.;opt.;forb.	150	0
Portugal	comp.	520'446	80
Republic of Moldova	comp.	421'299	92
Romania	comp.	1'569'324	91
Russian Federation	comp.		
Slovak Republic	comp.	234'231	40
Spain	comp.	1'800'000	79
Sweden	forb.		
Switzerland	comp.	420'000	95
Turkey	opt.	295'973	20
United Kingdom	forb.		0
Yugoslavia	comp.		
<b>Europe total</b>		<b>11'205'180</b>	<b>54</b>
<b>Oceania</b>			
Australia	forb.		
Cambodia	opt.	850	
Hong Kong	comp.	39'151	60
Japan	comp.	4'041'703	100
Lao People's Dem. Rep.	opt.	7'230	10
Malaysia (Peninsula) <sup>2)</sup>	comp.	4'758	9
Malaysia (Island)	forb.		
New Caledonia	comp.;opt.	0	0
New Zealand	forb.		
Papua New Guinea	forb.		
Philippines	opt.		
Republic of Korea	opt.		
Singapore	forb.		0
Tonga	opt.		0
<b>Oceania total</b>		<b>4'093'692</b>	<b>26</b>
<b>Grand total</b>		<b>36'032'565</b>	

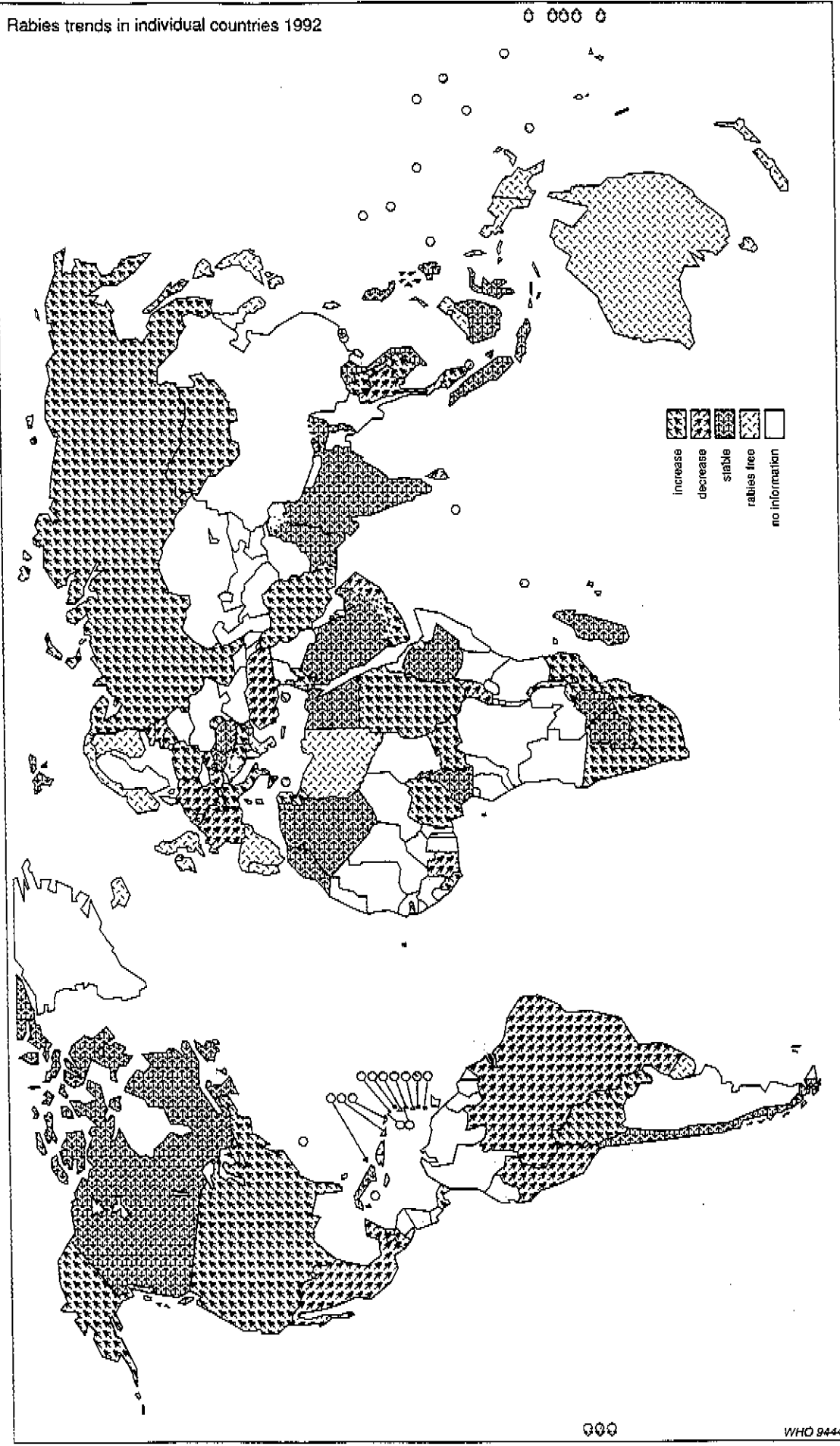
<sup>1)</sup> comp. = compulsory

opt. = optional

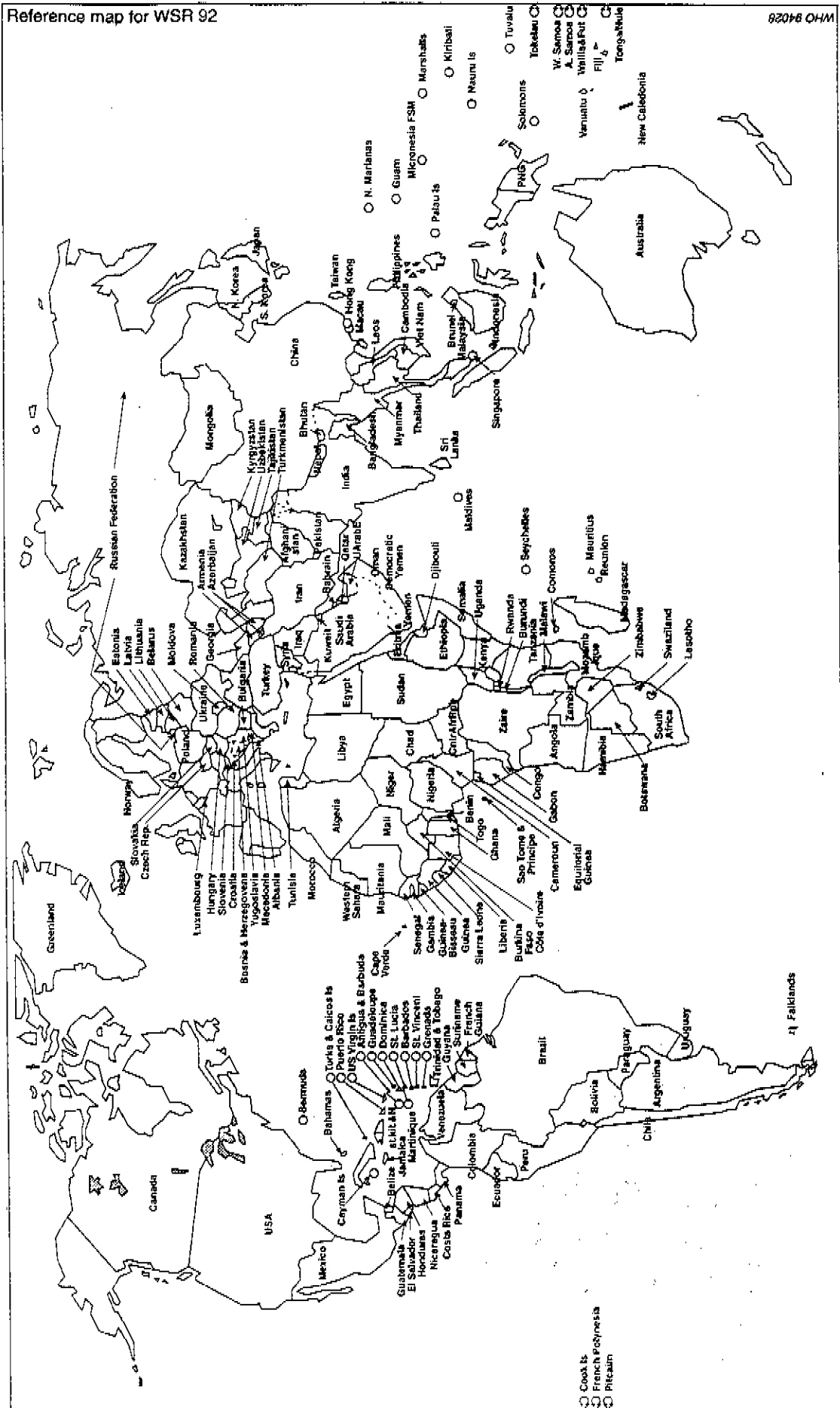
forb. = forbidden



Rabies trends in individual countries 1992



The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, or subject, or concerning the delimitation of its frontiers or boundaries. Dotted lines represent approximate border lines for which there may not yet be full agreement.



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