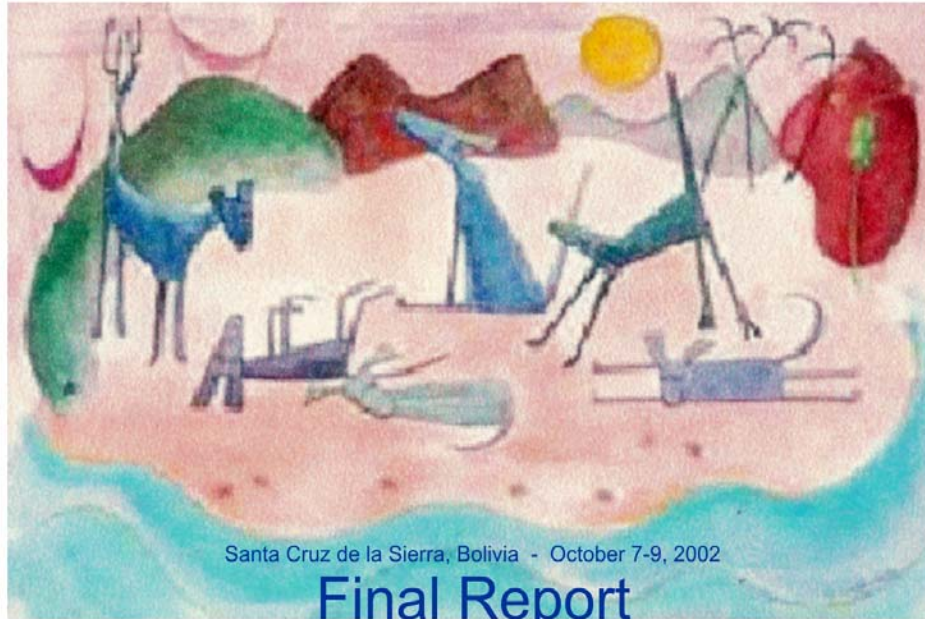


IX REDIPRA

Meeting of Directors of National Programs for Rabies Control in Latin America



Santa Cruz de la Sierra, Bolivia - October 7-9, 2002

Final Report

PAN-AMERICAN FOOT-AND-MOUTH DISEASE CENTER



PAN-AMERICAN HEALTH ORGANIZATION
Pan-American Sanitary Bureau, Regional Office of the
WORLD HEALTH ORGANIZATION

Public Veterinary Health



**Pan-American Health Organization
World Health Organization**

IX MEETING OF DIRECTORS OF NATIONAL PROGRAMS FOR RABIES CONTROL IN LATIN AMERICA

Washington, D.C., April 24-25, 2003

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IX MEETING OF DIRECTORS OF NATIONAL PROGRAMS FOR RABIES CONTROL IN LATIN AMERICA

FINAL REPORT

Santa Cruz de la Sierra – Bolivia, October 7-9, 2002

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Background

1. One of the priorities of the Veterinary Public Health Program of the Pan American Health Organization is to provide technical cooperation to the countries of the Americas for the elimination of human rabies transmitted by dogs. Initially, the countries made a commitment to eliminate urban rabies from the major cities of the Region at the III Inter-American Meeting, at the Ministerial Level, on Animal Health (RIMSA III). This commitment was ratified at the XXXI Meeting of the Directing Council of PAHO held in 1983. That same year the I Meeting of Directors of Animal Programs for Prevention and Control of Rabies (I REDIPRA) was convened in Guayaquil, Ecuador. At this meeting strategies were approved and an “Action Plan for the elimination of urban rabies from the major cities of Latin America by the end of the 1980s” was defined.
2. Implementation of this “Action Plan” was evaluated at the II and III REDIPRA, held in Brasilia, Brazil, in 1988, and in Porto Alegre, Brazil, in 1989, respectively. At the end of the 1980s, PAHO together with the countries evaluated the progress of the Plan and its results were presented at the RIMSA VII held in Washington, D.C. in April 1991. Resolution II was issued at this meeting, recommending the Director of PAHO to continue providing technical cooperation to the countries and to expand the Plan to marginal areas and small villages to make possible the elimination of human rabies transmitted by dogs. This Resolution was corroborated by the XXXV Meeting of the Directing Council of PAHO in September 1991.
3. During IV REDIPRA, held in Mexico City in October 1992, the countries were informed about the expansion of the plan to eliminate human rabies transmitted by dogs to small settlements and rural areas and the timetable for reaching the goal of elimination was extended to the year 2000. Also emphasized was the need to implement epidemiological surveillance of sylvatic rabies, in particular rabies transmitted by vampire bats.
4. Due to the progress of national programs it was necessary to define procedures for the recognition of rabies-free cities, areas and countries. Therefore, PAHO convened a meeting of experts in Santo Domingo, Dominican Republic, in November 1994 to establish technical bases for recognition of rabies-free areas and animal quarantine requirements, which were the main topics of REDIPRA V held in that city the following year. In that meeting the countries recommended the development of strategies for the prevention and control of rabies in border areas of risk, to establish regional commissions for the elimination of rabies and to prepare guidelines for the development and evaluation of educational programs of rabies, among others.
5. In April 1997 the VI REDIPRA was held in Quito, Ecuador. The meeting sought to analyze the achievements of the program to eliminate rabies transmitted by dogs and to adjust the action plan for consolidation of the final attack phase. In addition, there was

discussion of strategies for reference diagnosis and for assuring the quality of rabies biologics.

6. VII REDIPRA, held in Puerto Vallarta, Mexico, in October 1998, evaluated progress of the strategic plan for elimination of human rabies transmitted by dogs in Latin American and Caribbean countries. The meeting analyzed and adjusted activities for the consolidation phase of the plan projected for the biennium 1999-2000. Strategies and activities for the protection and maintenance of rabies-free areas were defined, as well as surveillance, prevention and control of sylvatic rabies.
7. VIII REDIPRA was held in Lima, Peru, October 16-18, 2000. The meeting evaluated progress of the regional plan and defined technical cooperation priorities for the biennium 2001-2002.
8. As convened by the Director of PAHO, Dr. George Alleyne, IX REDIPRA was held in Santa Cruz de la Sierra, Bolivia, October 7-9, 2002. Annex A presents the agenda of the meeting.

Objectives

9. The objectives of IX REDIPRA were the following:
 - a) To learn about the progress and weak and strong points of the execution of the plan of action for elimination of human rabies transmitted by dogs during the biennium 2001-2002.
 - b) To analyze progress and contribution of laboratory diagnosis in the epidemiological surveillance of human, canine and wild rabies, and
 - c) To define technical cooperation strategies and priority activities for the biennium 2003-2004.

Participants

10. Seventy-one professionals from 21 countries participated in the meeting. They included 20 Official Delegates; 21 staff members from PAHO; 30 observers; the National Directors of Programs for the Control and Eradication of Rabies in Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, the Dominican Republic, Uruguay and Venezuela. A representative of the Center for Disease Control and

Prevention of the United States (CDC), in its condition of WHO Collaborating Center, also participated.

11. Annex B presents the list of participants.

Methodology and Program of Activities

12. The meeting was divided into four parts: a) epidemiological surveillance and situation of rabies in the Americas; b) situation of rabies in Latin American countries; c) proposals of cooperation from PANAFTOSA/PAHO and d) working groups.
13. Part a) epidemiological surveillance and situation of rabies in the Americas, was conducted by PAHO staff members, by the CDC representative and professionals working in official diagnostic laboratories of Latin American countries. The topic was laboratory diagnosis as an instrument of epidemiological surveillance. PAHO staff members reported on: the rabies situation in the world and in the Americas; fulfilment of resolutions of IX REDIPRA; evaluation of National Programs for the Control of Rabies of Mexico, Peru, Bolivia and Brazil. The CDC submitted to consideration the present situation and perspectives of control of sylvatic rabies in the Americas.
14. Part b) situation of rabies in Latin American countries – Reports were presented by the official delegates within regional panels. Each country reported on the progress of the program for the elimination of rabies transmitted by dogs during the period 2001-2002, and on its achievements and limitations.
15. Part c) Proposals of cooperation from PANAFTOSA/PAHO – Presentation was made of cooperation proposals from PANAFTOSA for the Regional System of Reference Laboratories of Rabies; the Regional System of Epidemiological Surveillance of Rabies in the Americas (SIRVERA) and the outline and implementation of an Electronic System of Management and Data Analysis Applied to Rabies.
16. Part d) – Working Groups – Participants discussed and analyzed strategies for continuing implementation of the plan to eliminate rabies transmitted by dogs and definition of subregional priorities of technical cooperation for the biennium 2003-2004.

Development of the Event

Opening Ceremony

17. Dr. Javier Torres Goitia Caballero, Minister of Health and Social Security of Bolivia, presided the opening ceremony. The officers were Dr. Edwin Saucedo Ramírez, Director of the Departmental Service of Health of Santa Cruz de la Sierra, Bolivia; Dr. Ana Maria Navarro, President of VIII REDIPRA; Dr. José Antonio Pages, PAHO/WHO Representative in Bolivia; Dr. Albino J. Belotto, Coordinator of the Veterinary Public Health Program of PAHO and Dr. Eduardo Correa Melo, Director of the Pan American Foot-and-Mouth Disease Center.

Election of Officers

18. Dr. Ana Maria Navarro, as President of the previous REDIPRA, opened the meeting and invited official delegates of the countries to elect officers of the IX REDIPRA. The officers elected were: President, Dr. Virgilio Prieto, official representative of the host country; Vice President, Dr. Gelin Gedeon, official delegate of Haiti; Secretary, Dr. Ana Maria Navarro, representative of Peru, and Rapporteur, Dr. Fernando Vargas Pino, representative of Mexico.

Situation of rabies in the world and new perspectives for control of the disease in asia

19. Dr. Albino Belotto made a presentation stressing some comparative aspects of the problem of rabies in dogs, control activities, the significant reduction of cases in dogs and humans in the American continent as compared to the seriousness of this zoonosis in Africa and Asia. He analyzed some epidemiological WHO indicators and mentioned that every 10 to 15 minutes somebody dies from rabies in the world and every hour 1,000 persons receive anti-rabies treatment. He highlighted that in Asia 35 to 55 thousand persons die every year due to rabies and 7 million receive anti-rabies treatment. In Africa between 5 to 15 thousand persons die and 500 thousand receive anti-rabies treatment. Thus, it is estimated that at world level 40 to 70 thousand persons die due to attacks from dogs.

20. Dr. Belotto stressed the contrasting rabies vaccination activities in animals. In Western Europe, for example, the use of oral vaccines has eliminated the problem in foxes and the disease is not present in dogs. On the other hand, in the Eastern region, rabies in dogs is becoming a serious problem, just as it was in the Americas some years ago. Dr. Belotto mentioned the excessive anti-rabies treatments given to attacked persons in the Asiatic countries and that the available biologics are Semple type nervous tissue; that in India 50% of attacked individuals are vaccinated; in Pakistan 75% and in Bangladesh 95%. Other countries, such as Thailand, try to reduce costs using intradermic vaccination. He commented that it is evident that efforts are directed towards the consequences of the problem – attention to the attacked persons – and not to its origin, which is the elimination of rabies in dogs.
21. Dr. Belotto concluded his presentation indicating that the activities carried out by the American countries are satisfactory and must be consolidated. At the same time he emphasized there are new challenges to be met, such as sylvatic rabies in various species, the incorporation of modern anti-rabies vaccines at reduced prices to health systems, and the transfer of production technologies, among others.

Epidemiological situation of rabies in the Americas

22. Dr. Correa Melo, Director of PANAFTOSA, reported on the rabies situation in Latin America. He started his presentation thanking the Directors of the National Programs for providing the information on rabies occurrence in the countries, which has made possible the issuing of weekly and annual epidemiological bulletins. He stressed that in the last five years rabies cases in humans and animals had a significant reduction. In humans there was a decline of 49.1% and in animals 60.5%. He highlighted that this situation was observed in all the regions, with exception of the Latin Caribbean. He indicated that last year cases in humans were due to dog bites, with 73.7%; and in bats, with 10.5%. He concluded with a reference to various epidemiologic indicators and described some critical points to be considered in several countries, within a regional or subregional scope, to achieve the final objective of the program, which is the elimination of canine rabies by the end of 2005.

Report on the recommendations of IX REDIPRA

23. The report presented by Dr. Albino Belotto, Coordinator of the Veterinary Public Health Program of PAHO, referred to the following activities:

- Continuation of intercountry meetings similar to the meeting held in Guatemala for the Central American countries, when anti-rabies treatment programs were revised;
- Evaluation of the National Programs of Rabies in Mexico, Peru, Bolivia and Brazil was performed;
- The proposal for the Regional System of Reference Laboratories for Rabies is in process. This will integrate qualified laboratories to collaborate with the countries in the characterization of strains of rabies virus; production and quality control of biologics; transfer of technology, and applied capacitation ;
- The strengthening of intercountry cooperation continues with the execution of the TCC in force: Belize, Guatemala and the Dominican Republic; Paraguay and Brazil; Venezuela, Guyana and Trinidad Tobago, and Venezuela and Aruba;
- Efforts to define strategies and methodologies for sylvatic rabies are limited, except international activities such as those found in São Paulo, Brazil, on rabies in bats; or intercountry activities, as performed in the United States and Mexico on rabies in skunks, and
- In several countries there are some interesting cases of community participation, such as municipalities and NGOs in Mexico and Brazil, or the support of the private sector to massive vaccination campaigns for the prevention of rabies in Haiti.

Situation of Rabies in the countries, prevention and control strategies, their progress and limitations

24. Presentation was then made of the national and rabies programs in the countries at the regional panels organized and coordinated by advisors on Veterinary Public Health of PAHO. The moderator for the Andean area was Dr. José Fernando Dora; for Brazil and the Southern Cone, Dr. Sergio Garay; for North America and Mexico, Dr. Maria Cristina Schneider and for Central America and the Latin Caribbean, Dr. Rosario Cabrera. The following items are highlighted in the presentations:

- All the National Programs for the Control of Rabies depend on the Ministries of Health, with adjustment to the structure of each country. It is pointed out that in some cases there is concern regarding the permanence and continuity of the Programs, especially in countries where the disease is non-existent or its incidence is very limited;
- Surveillance Systems are in operation in accordance with the epidemiologic conditions of each country which, with the exception of Uruguay, recognize the recording of cases of rabies in humans transmitted by dogs, in large or small numbers, and/or by wildlife.
- Likewise, this applies to the decreasing trend of cases in dogs in the majority of the countries and the increasing trend of rabies in bats;
- Massive anti-rabies canine vaccination continues as a priority strategy in all the countries and its coverage depends on the availability of resources and on its application in risk areas; however, there are countries where this is the most serious restriction to their efforts;
- A significant progress has been made in laboratory diagnosis, in traditional techniques such as IFD and in antigenic characterization, and the National programs have been able to determine the circulation of the rabies virus, to locate its distribution and to guide strategies;
- Sylvatic rabies is a potential risk as it can reintroduce the virus in the urban cycle, affecting humans and animal species near them. There are antecedents of this situation;
- The gradual substitution in the use of human anti-rabies vaccines type Brain of Suckling Mice (BSM) for cell cultures type, especially in countries which do not produce the former, has been noted, and
- It is necessary to implement new methodologies to evaluate the fulfilment, effectivity and efficiency of the National Program for the Control of Rabies and the competition between provinces, departments and local entities that will stimulate their participation and strengthen the Program.

Report on the Evaluation of National Programs for the Control of Rabies in Mexico, Peru, Bolivia and Brazil

25. This topic was presented by Dr. Hugo Tamayo. He mentioned the purposes of this activity, the methodology, the criteria for integration of external missions which, due to the international origin of their members, consolidates a teaching-learning interactive

spirit, a scientific-technical basis, impartiality and transparency in the process of evaluation.

The results have strengthened National Programs of the evaluated countries as the levels of political decision were informed on the following: regional objectives and commitments; the importance of the epidemiological situation of the country within the regional scope; the strength and weakness of the National Program; alternative solutions always guided towards the goal of eliminating canine rabies and consequently human rabies. This undoubtedly contributes to the improvement of the population's health, which is the essential purpose of health policy. Some participating countries, such as Colombia, requested to be considered for future evaluations.

Epidemiological surveillance of rabies in wildlife

26. The topic was presented by Dr. Charles Rupprecht, of CDC, who pointed out that starting in 1492 canine rabies originating from Europe, besides affecting this animal species, extended to other small carnivorous animals of the Americas. He mentioned that subsequent studies established the presence of virus of bat origin, which transfers to coyotes, skunks and raccoons. He emphasized that while control of canine rabies has been gradual and consistent, this transfer is being observed in dogs and cats and finally to humans. This is an alert that justifies efforts to maintain active surveillance of rabies in wildlife.

Laboratory diagnosis as an instrument of epidemiological surveillance

27. This topic was discussed in a panel with the participation of Drs. Nina Aleida (INLASA/Bolivia), Maria Luiza Carrieri (Instituto Pasteur/Brazil) and Edith Miller (National Institute of Hygiene, Venezuela) and Dr. Charles Rupprecht as moderator. The panelists emphasized the following limiting features of the quality of diagnosis: laboratories do not correspond to a biosecurity 3 level; collection and forwarding of samples frequently hold contamination risks during the cleaning of instruments and in the preservation of biologic material; the selection of the sample, due to difficulties in its extraction and forwarding (marrow, cerebellum, hippocampus) does not always ensure identification of the virus; undue application of the IFD technique and reading of slides of false positives and negatives, and lack of continuous staff capacitation. With the use of the panel of monoclonals it was possible to learn about the results of the laboratories which have incorporated in their routine the antigenic characterization

of the virus. This has improved their surveillance system and new control strategies have been established.

Regional system of reference laboratories for rabies

28. This was a presentation of Drs. Eduardo Correa and Ivanete Kotait on the proposal for the establishment of the Regional System of Reference Laboratories for Rabies. They explained that the system tries to strengthen various activities, such as diagnosis, production and quality control, using the infrastructure, technology and present operational capacity, which can be shared among the countries.

Drs. Correa and Kotait informed the results of a survey on rabies laboratories of the region and announced the convocation of a meeting of laboratories for the next year.

This received the reassurance of the countries representatives and they requested the Director of PANAFTOSA to hasten the implementation of the regional system of laboratories.

Regional System of Epidemiological Surveillance of Rabies: proposal of revision and adjustment

29. In her presentation Dr. Ivanete Kotait referred to the rabies weekly and monthly report sent by the countries of the region, and their opportune forwarding, frequency and quality. This analysis determined a proposal to cancel the weekly report and to maintain the monthly and annual reports. PANAFTOSA would be required to promote the establishment of an immediate occasional report on the occurrence of cases of rabies in humans and domestic and wild animals, in geographic areas where there has been no record of cases in the last 12 months. This proposal was analyzed in the subsequent sessions of the working groups.

Management System and Data Analysis Applied in Rabies

30. In this system, presented by Dr. Reinaldo Ferreira, staff member of PANAFTOSA, through the use of a software support would be given to the countries in the epidemiologic and management analysis of information of the Rabies Program, based on georeferenced data, to evaluate the execution of the program by regions, districts, departments or local entities. This support had a favorable reception; however,

PANAFTOSA was recommended to prepare and send to the countries the outlines and specifications of the system, as well as information on the geopolitical and administrative structure that the aforementioned software is expected to incorporate.

Working groups

31. At the end of the presentations and panels, they divided in three groups with the participation of the Directors of National Programs of Rabies in the countries and professionals of the Veterinary Public Health Program of PAHO. The groups were integrated by country representatives as follows:

Group I: Bolivia, Colombia, Ecuador, Peru and Venezuela.

Group II: Brazil, Mexico, Argentina, Chile, Paraguay and Uruguay.

Group III: Cuba, Haiti, the Dominican Republic, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama.

32. Each group nominated a moderator and a rapporteur to facilitate the presentation of reports during the plenary session. Each group was supported by at least one staff member of PAHO.

33. The specific objectives of the groups were the following:

- To analyze national plans for the elimination of rabies and the program of prevention and control activities for the biennium 2003-2004;
- To identify regional and intercountry areas of technical cooperation required for the biennium 2003-2004, and
- To analyze proposals of technical cooperation presented by PANAFTOSA.

Recommendations

34. The recommendations of the meeting which summarize those approved by the working groups are presented below. They were evaluated and complemented during the final plenary session. Priority cooperation activities of PAHO for the biennium 2003-2004, approved by the same procedure, are also presented.

- a) That PAHO/WHO send executive communications to the high sectoral authorities of the countries with set backs or low progress indicators of the National Program for the Control of Rabies, so that the necessary action can be taken to strengthen its technical and political features.

- b) That PAHO/WHO, due to the diversity of human anti-rabies vaccination programs, take measures to standardize them, to evaluate vaccine quality and to issue technical vaccination guidelines.
- c) That in consideration to recommendations of WHO on the use of anti-rabies vaccines prepared in cell culture, to their availability and to the attention given by some countries to this biologic and corresponding vaccination outlines, it is suggested to the countries that due to its high cost, the change in the vaccination system be carefully evaluated to ensure and guarantee the permanent availability of vaccines to all exposed persons.
- d) That PAHO/WHO, in view of the need to ensure the quality of anti-rabies vaccines produced in the region, inform the Ministers of Health and Agriculture about the possibility of auditing vaccine-producing laboratories through a team of auditors and based on previously established guidelines.
- e) That action for the control and prevention of rabies requires an active and permanent participation of the municipalities and community organizations, therefore PAHO could be requested to promote local governments participation in a stronger involvement and commitment in the activities and objectives of the National Programs for the Control of Rabies.
- f) That in view of the support given by the National Directors of Rabies Programs to the proposal presented by PANAFTOSA/PAHO to establish a Regional System of Rabies Reference Laboratories, and with a view to ensure its operation within an established period, PAHO/WHO is requested to prepare a working chart with priority of goals to be achieved.
- g) That the Data Bank on Rabies of the WHO (RABNET-WHO) be fed by the same Regional System of Epidemiological Surveillance of Rabies in the Americas (SIRVERA) through PANAFTOSA/PAHO. To this end, there must be harmonization of criteria on the required information for REDIPRA and for the Regional System of Epidemiological Surveillance of Rabies (SIRVERA).
- h) That PANAFTOSA/PAHO, within 30 days, send to the Directors of National Programs of Rabies in the countries an adjustment proposal for the Regional System of Epidemiological Surveillance of Rabies (SIRVERA) for evaluation and forwarding, within 30 days, with comments and proposals to define the system.
- i) That due to the interest of the Directors of National Programs of Rabies in the incorporation of the Software “Management System and Analysis of Data applied to Rabies” presented by PANAFTOSA/PAHO, the Center is requested to send technical details of the system, its scope, required equipment and personnel capacitation needed by the countries for its implementation.

- j) That, with the support of PAHO/WHO, the countries develop projects for technical cooperation between them, not only on specific border topics but also to incentivate the development of some programmatic features of wider scope.

Priority technical cooperation action from PAHO for the biennium 2003-2004

- a) To attend evaluation requests from National Rabies Programs from at least four countries of the region.
- b) To hold a meeting of laboratories which integrate the Regional System of Reference Laboratories for Rabies.
- c) To prepare a chart for the establishment of the Regional System of Reference Laboratories for Rabies.
- d) To hold a Meeting for Consultation on the Standardization of Outlines of Human Rabies Treatment.
- e) To prepare, by joint cooperation of PAHO/CDC, a Manual of Epidemiological Surveillance of Sylvatic Rabies.
- f) To organize at least one subregional capacitation event on:
 - medical treatment to exposed persons
 - diagnosis
 - vaccine quality control
- g) To study, within the ambit of the Regional System of Reference Laboratories for Rabies, the quality of human and veterinary rabies vaccines produced in the region.
- h) To hold at least one meeting on the "Participation of Municipalities in the Control of Zoonosis"
- i) To detail and send for consideration of the countries of the region the proposal for revision and adjustment of the Regional System of Epidemiological Surveillance for Rabies (SIRVERA), prior to its implementation.
- j) To send to the consideration of the countries of the region the proposal for the software on "System Management and Analysis of Data applied to Rabies", prior to its implementation.

ANNEXES

ANNEX A

PROGRAM

Monday, October 7

- 08:00-09:00** Inscriptions
- 09:00-09:30** Opening of the Meeting
- 09:30-10:00** Interval
- 10:30-10:40** Topic 1. "Situation of Rabies in the World"
Dr. François-Xavier Meslin, CSR/EPH/WHO , Geneve, Switzerland
- 10:40-11:20** Topic 2. "New Perspectives for the Control of Rabies in Asia"
Dr. Elizabeth Miranda, WHO/WPRO, Manila, the Philippines
- 11:20-12:00** Topic 3. "Situation of Rabies in the Americas"
Dr. Eduardo Correa Melo, Director PANAFTOSA/HCV/PAHO
- 12:00-12:30** Topic 4. "Report on the Fulfilment of Recommendations of VIII REDIPRA"
Dr. Albino Belotto, Coordinator HCV/PAHO
- 12:30-13:30** Lunch
- 13:30-14:30** Panel 1: "Situation of Rabies in the Andean Region"
Moderator: Dr. José Fernando Dora, Consultant PAHO/Venezuela
Panelists: Directors of National Programs
- 14:30-15:30** Panel 2: "Situation of Rabies in Brazil and the Southern Cone"
Moderator: Dr. Sergio Garay, Consultant PAHO/Brazil
Panelists: Directors of National Programs
- 15:30-16:00** Interval
- 16:00-17:00** Panel 3: "Situation of Rabies in North America"
Moderator: Dr. Cristina Schneider, Assessor HCV/PAHO
Panelists: Directors of National Programs
- 17:00-18:00** Panel 4: "Situation of Rabies in Central America and Latin Caribbean"
Moderator: Dr. Rosario Cabrera, Consultant PAHO/Dominican Republic
Panelists: Directors of National Programs
- 18:00-18:30** Topic 5. "Evaluation of National Programs for the Control of Rabies of Mexico, Peru, Bolivia and Brazil"
Dr. Hugo Tamayo, PANAFTOSA/HCV/PAHO

Tuesday, October 8

- 08:30-09:30** Topic 6. “Present Situation and Perspectives of Control of Sylvatic Rabies in the Americas”
Dr. Charles E. Rupprecht – CDC/Atlanta
- 09:30-10:30** Panel 5. “Laboratory Diagnosis as an Instrument of Epidemiological Surveillance” - PANAFTOSA/HCV/PAHO
Moderator: Dr. Charles E. Rupprecht – CDC/Atlanta
- “Immunofluorescence for Virologic Diagnosis”
Dr. Nina Aleida – Chief, Diagnosis Laboratory of Bolivia
 - “Characterization by Monoclonal Antibodies”
Dr. Maria Luiza Carrieri – Chief, Pasteur Institute Laboratory, São Paulo, Brazil
 - “Quality Guarantee of Rabies Diagnosis”
Dr. Edith Miller – National Institute of Hygiene, Venezuela
- 10:30-10:45** Discussion
- 10:45-11:00 Interval
- 11:00-11:15** Topic 7. “Proposal: Regional System of Reference Laboratories of Rabies”
Dr. Eduardo Correa Melo – Director PANAFTOSA/HCV/PAHO
Dr. Ivanete Kotait – PANAFTOSA/HCV/PAHO
- 11:15-11:30** Discussion
- 11:30-12:00** Topic 8. “Evaluation of the Regional System of Epidemiological Surveillance for Rabies in the Americas (SIRVERA): Proposal of Revision and Adjustment”
Dr. Ivanete Kotait – PANAFTOSA/HCV/PAHO
- 12:00-12:30** Topic 9. “Management System and Analysis of Data Applied to Rabies”
Mr. Reinaldo Ferreira Moreira – PANAFTOSA/HCV/PAHO
- 12:30-14:00** Lunch
- 14:00-18:30** Working Groups: Subregional Priorities of Action and of Technical Cooperation for the Biennium 2003-2004

Wednesday, October 9

- 08:30-10:30** Continuation of the Working Groups
- 10:30-10:50** Interval
- 10:50-12:30** Presentation and Discussion of the Results of the Working Groups
- 12:30-14:00** Lunch
- 14:00-15:00** Programming of Activities for the Biennium 2003-2004
- 15:00-16:00** Conclusions and Recommendations
- 16:00** Closing of the Meeting

ANNEX B
LIST OF PARTICIPANTS

LIST OF PARTICIPANTS

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ANNEX C

**SUMMARY OF THE SITUATION OF RABIES PROGRAMS
IN LATIN AMERICA**

SUMMARY OF THE SITUATION OF RABIES PROGRAMS IN LATIN AMERICA

In regard to the IX Meeting of Directors of National Programs for the Control of Rabies in Latin America (IX REDIPRA), to be held in Santa Cruz de la Sierra, Bolivia, October 7-9, 2002 the Directors of the Programs sent to the Pan American Foot-and-Mouth Disease Center/Pan American Health Organization (PANAFTOSA/PAHO) information on the rabies situation, in reply to the enclosed Guide. Consolidated data per country, subregion and region in the Americas is found in the annexed tables.

The tables summarize the situation of the national programs in the following areas:

- 1) Epidemiological situation and trend of human and animal rabies, period 1997-2001;
- 2) Post-exposure Rabies Prophylaxis (PEP) and availability of immunobiologics for human use, biennium 2000-2001;
- 3) Availability of vaccines, vaccination coverage and canine rabies action;
- 4) Existence of laboratories for diagnosis and quality control of rabies vaccines in 2001 and
- 5) Resources assigned to the National Programs, biennium 2000-2001.

1. EPIDEMIOLOGICAL SITUATION AND TENDENCIES OF HUMAN AND ANIMAL RABIES

During 1997-2001, in Latin America cases of human and animal rabies were reduced by significant rates. Human cases declined by 49.1% and in dogs by 60.5% (Table 1).

This decreasing trend can be observed when analysis is made of human and animal rabies rates; the reduction of the human rabies rate per 100,000 individuals is 54.2% and the decline of canine rabies rate per 100,000 animals is 65.7% (Tables 2 and 3).

1.1 Rabies in Human

In all the subregions integrating the Project for Elimination of Rabies in the Americas, there is a decrease of the disease, except in the Latin Caribbean. The largest proportional reduction of cases occurred in the Southern Cone (83.3%), followed by Mexico (69.6%), the Andean Area (69%), Central America (58.8%) and Brazil (16%). In the Latin Caribbean human rabies cases increased by 800% (Table 1).

In the subregions, rabies rates per 100,000 individuals also had reductions: the Southern Cone (80%); the Andean area (71.8); Mexico (70.8%); Central America (60.8%) and Brazil (18.8%). The increase of the rate in Latin Caribbean was 525%.

1.2 Rabies in Dogs

The subregions responsible for the reduction of the number of canine rabies cases in Latin America were: Southern Cone (95.4%), Mexico (80.2%) and Central America (66.2%). In contrast to this, the Latin Caribbean proportion of cases increased by 21.3% (Table 1).

In regard to rates per 100,000 dogs, the same tendency is observed. Reductions were noted in the Southern cone (95.3%); Mexico (83.8%); Central America (65.1); Brazil (57.6%); and the Andean Area (55.6%). In the Latin Caribbean the rate per 100,000 dogs increased by 38.3% (Table 3).

1.3 Rabies in Bovines

In Latin America the number of rabies cases in bovines was reduced by 25.8%. At subregional level reductions were as follows: Central America (44.6%); Latin Caribbean (33.3%); Brazil (31.6%) and the Southern Cone (30.3%). In Mexico the increase was 279.5% and in the Andean Area it was 10.1%.

1.4 Rabies in Bats

Rabies in bats showed an important increase of 220.3%, due probably to a better epidemiological surveillance. The largest increase was in Brazil (818.2%), followed by the Andean Area (225%) and the Southern Cone (117.9%). There was a considerable reduction in Mexico (20%). There were no more cases in Central America and the Latin Caribbean maintained its previous occurrence frequency (Table 1).

1.5 Rabies in other wild animals

In Latin America rabies in other wild animals declined by 5.7% while some subregions showed increases: Central America (200%); Mexico (185.7%); Brazil (72%) and the Andean Area (50%). In the Latin Caribbean there was a reduction of 33.3% and in the Southern Cone there were no cases (Table 1).

1.6 Rabies in major cities

Human rabies cases in major cities decreased by 80.6%. The Southern Cone and the Latin Caribbean had a reduction of 100%. Brazil, the Andean Area and Central America had reductions of 80%, 65.5% and 60%, respectively. Mexico did not present information for major cities.

The reduction of rabies in dogs was 43.9%. In regard to subregions, the largest reduction was in the Southern Cone (95.5%) followed by the Andean Area (43%) and Central America (7.2%). Brazil, which in 1997 had no cases, reported 298 in 2001 in its main cities, while the incidence in the Latin Caribbean increased by 14.7%.

Mexico did not report information on rabies in its major cities (Table 4).

2. POST-EXPOSURE RABIES PROPHYLAXIS (PEP) AND AVAILABILITY OF IMMUNOBIOLOGICS FOR HUMAN USE

The information provided by the countries shows an increase of 13% in the number of persons exposed to aggressions from animals which are potential rabies carriers. The number of persons who received Post-exposure Rabies Prophylaxis (PEP) also increased although there is a reduction in the proportion of persons treated (7.0%). The increase in

the rates of exposed and treated persons per 100,000 inhabitants was 8.3% and 2.6%, respectively (Table 5).

Concomitantly with the figures at the regional level, in each one of the subregions, with the exception of the Latin Caribbean, there was an increase in the number of exposed persons. The proportion of individuals who received complete PEP treatment increased only in the Southern Cone (3.6%) and in the Latin Caribbean (1.1%); in the other subregions the reduction was as follows: 5.3% in the Andean Area; 0.5% in Brazil; 1.8% in Central America and 5.7% in Mexico (Table 5).

The rates of exposed persons increased in the following order: Central America (5.0%); Brazil (5.4%); Andean Area (15.9%); Mexico (19%) and Latin Caribbean (31.7%). Only the Southern Cone shows a reduction in this indicator.

PEP rates increased in the Southern Cone (13%); in Brazil (4.5%) and in the Latin Caribbean (54.1%). In Central America, Andean Area and in Mexico reduction rates of PEP were 43.3%, 20.9% and 18.8%, respectively (Table 6).

The availability of locally-produced rabies vaccines, (Fuenzalida- and Palacios- type), remained similar in the biennium (2,749,566 and 2,739,947). In regard to the volume of doses imported (intraregionally) by the countries in 2001 (133,000 doses) there was a reduction of 31.8% compared to the previous year (Table 7).

For the period 2000-2001 the volume of vaccines in cell culture, imported and available in the region, fluctuated between 474,876 and 322,372 doses. In 2001 there was an increase of 9,586 doses of this immunobiologic as compared with the amount locally produced in 2000 (Table 7).

There is availability of heterologous hiperimmune rabies serum in 5 countries and only 2 countries produce it (Brazil and Colombia). The homologous rabies serum is not produced in the countries of the region and its importation was reported by 6 countries (Table 8).

There are 64,828 Centers for Attention to Exposed Persons distributed in Latin American countries.

With reference to the Centers for Observation of Animals, the countries informed the existence of 315, with different degrees of complexity and diversity in service rendering (Table 9).

3. VACCINE AVAILABILITY, VACCINATION COVERAGE AND MEASURES TO CONTROL CANINE RABIES

During the biennium there were available 108,658,848 doses, of which 65,436,270 are Fuenzalida- and Palacios-type and 43,222,578 are cell culture type. In regard to the Fuenzalida and Palacios vaccine, 10 countries reported local production and only one country has reported its importation. The vaccine in cell culture is produced in 5 countries and 9 countries reported its importation (Table 10).

Application was made of 89,536,498 doses of vaccines in pet animals during the biennium, 42,960,730 in 2000 and 46,575,768 in 2001. Vaccine doses in pet animals increased in the Andean Area, Brazil, Central America and Mexico (Table 10).

Canine vaccination coverage in Latin America was 63.9% and 64.9% in 2000 and 2001, respectively. Coverage only increased by 2% in Central America, 3.2% in the Andean Area and 5.7% in Brazil. In the Southern Cone there was a decline of 2.7%, in Mexico of 7.7% and in the Latin Caribbean of 0.9% (Table 11).

During the biennium, 28,183 canine rabies cases were notified in the region; 27,389 (97.2%) were investigated and 6,931 (24.6%) were controlled. These figures are strongly influenced by information from Nicaragua (Table 14).

The program area totals 18,023,692 Km². Of these, the rabies-affected area reaches 9,625,881 Km² (53.4%) and the area with no record of the disease is 8,397,811 Km² (46.6%). Canine vaccination coverage in the affected area is 81.1% and in the non-affected area 48.6%.

4. DIAGNOSTIC LABORATORIES AND QUALITY CONTROL OF RABIES VACCINES

With the exception of Costa Rica and Nicaragua, all the countries of the Region count on rabies diagnostic laboratories. The countries reported a total of 101 laboratories capable of performing diagnostic tests using the direct technique of immunofluorescence. Diagnostic confirmation tests through isolation of the virus in mice can be carried out in 54 laboratories and 9 laboratories can perform isolation in cell cultures (Table 15).

In regard to titration tests for rabies antibody in vaccinated persons, the countries report 20 laboratories, of which 13 are capable to perform this test in mice and 7 in cell culture.

Ten laboratories are reported to have the capacity to perform antigenic characterization of isolated strains of the rabies virus. For genetic characterization tests there are 4 laboratories.

Tests for control of vaccines (potency) are performed in 18 laboratories of the Region (15).

5. BUDGET ASSIGNED TO NATIONAL PROGRAMS

During 2001, recording is made of 821 veterinarians, 10,849 doctors, 7,976 professionals in other specialities, 5,960 technicians and inspectors and 761 administrative staff incorporated to the Programs for Control of Rabies in Latin America (Table 16).

The budget assigned to the National Programs for Control of Rabies in Latin America for 2000, excluding Brazil, is estimated at US\$10,980,892 and at US\$22,215,289 for 2001.

Table 1
Cases of Rabies in Humans, Canines and Other Animal Species Selected, by Subregion and Country.
Latin America, 1997-2001.

Subregion/Country	Human rabies					Rabies in dogs					Rabies in bovines					Others domestic animals					Bats					Other wild animals								
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
Latin America	114	87	73	59	58	3918	3600	2499	1958	1547	3125	3298	3225	3326	2320	596	575	593	542	396	64	37	95	128	205	158	149	150	141	149				
Andean Area	42	21	29	18	13	1217	690	519	613	593	179	96	140	169	197	95	61	48	39	44	4	4	6	5	13	6	5	5	9	9				
Bolivia	11	5	10	9	7	347	195	135	358	362	47	27	41	36	35	22	11	14	9	14	0	0	0	0	0	2	3	3	1	0				
Colombia	5	0	3	1	0	144	106	110	66	37	39	2	0	22	54	4	3	0	4	13	0	0	0	0	3	0	0	0	8	8				
Ecuador	9	7	5	3	3	323	149	103	79	76	23	32	20	14	22	38	29	15	6	3	1	0	0	0	0	1	1	1	0	1				
Perú	12	9	9	4	2	295	150	76	54	36	26	20	49	97	86	17	15	12	17	10	3	4	6	5	10	3	0	1	0	0				
Venezuela	5	0	2	1	1	108	90	95	56	82	44	15	30	0	0	14	3	7	3	4	0	0	0	0	0	0	1	0	0	0				
Southern Cone	6	9	4	1	1	589	395	401	57	27	195	134	126	129	136	39	22	22	6	7	39	13	47	80	85	8	1	4	0	0				
Argentina	1	0	0	0	1	6	4	15	4	2	82	35	31	32	25	9	3	5	1	5	9	3	9	12	22	6	1	2	0	0				
Chile	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	30	9	38	67	63	0	0	0	0	0				
Paraguay	5	9	4	1	0	582	391	386	53	25	113	99	95	97	111	29	19	17	4	2	0	1	0	1	0	2	0	2	0	0				
Uruguay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Brasil	25	28	25	26	21	945	1746	970	761	511	2570	2556	2628	2660	1759	363	388	424	417	270	11	6	10	30	101	25	30	27	31	43				
Central America	17	8	3	8	7	538	268	158	179	182	130	108	209	79	72	28	20	12	19	26	3	0	14	3	0	1	23	7	0	3				
Belize	0	0	0	0	0	22	0	0	0	1	1	...	6	0	1	0	...	0	0	0	0	0	...	0	0	0	0	...	3	0	0			
Costa Rica	0	0	0	0	2	0	0	0	0	0	3	5	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
El Salvador	10	3	0	1	4	217	125	9	35	95	25	8	5	7	13	10	9	2	8	20	0	0	0	1	0	0	1	0	0	2				
Guatemala	6	3	2	6	1	225	109	142	126	68	18	9	3	7	3	14	8	2	4	4	0	0	0	0	0	1	0	2	0	1				
Honduras	1	1	0	1	0	46	30	4	18	17	3	0	6	3	9	1	0	0	4	0	3	0	0	0	0	0	22	0	0	0				
Nicaragua	0	1	1	0	0	28	4	3	0	1	5	8	3	2	3	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0				
Panamá	0	0	0	0	0	0	0	0	0	0	75	78	184	60	41	2	3	8	3	2	0	0	14	0	0	0	0	0	0	0				
México	23	15	9	4	7	521	394	317	244	103	39	395	108	271	148	29	59	40	27	15	5	12	9	5	4	7	20	12	13	20				
Latin Caribbean	1	6	3	2	9	108	107	134	104	131	12	9	14	18	8	42	25	47	34	34	2	2	9	5	2	111	70	95	88	74				
Cuba	0	1	0	1	0	34	32	40	34	30	9	8	7	14	5	29	17	39	23	25	2	2	8	5	2	63	54	75	69	59				
Haití	0	5	3	1	9	38	47	58	39	58	1	0	1	1	0	2	3	2	2	0	0	0	1	0	0	0	0	0	0	0				
Dominican Republic	1	0	0	0	0	36	28	36	31	43	2	1	6	3	3	11	5	6	9	9	0	0	0	0	0	48	16	20	19	15				

... Without information.

Source: Bulletin of Epidemiologic Surveillance of Rabies in the Americas, XXVII – XXXI, 1995-1999

Table 2
Distribution of Human and Canine Populations by Subregion and Country.
Latin America, 1997-2001

Subregion/Country	1997		1998		1999		2000		2001											
	Human Population %	Canine Population %	Human Population %	Canine Population %	Human Population %	Canine Population %	Human Population %	Canine Population %	Human Population %	Canine Population %										
LATIN AMERICA	479,990,378	100	55,607,570	100	487,877,013	100	56,795,773	100	496,186,609	100	57,614,095	100	489,024,450	100	61,269,869	100	500,786,250	100	65,128,785	100
Andean Area	106,916,206	22	12,282,732	22	108,994,748	22	12,516,239	22	111,311,276	22	12,777,984	22	112,868,571	23	13,034,038	21	115,476,552	23	13,607,003	21
Bolivia	7,767,061	7	1,499,433	12	7,950,102	7	1,525,928	12	8,137,226	7	1,545,347	12	8,137,226	7	1,356,202	10	8,274,325	7	1,552,721	11
Colombia	40,064,092	37	4,006,409	33	40,826,815	37	4,082,682	33	41,589,018	37	4,158,902	33	42,299,301	37	4,229,301	32	43,035,394	37	4,384,339	32
Ecuador	11,936,858	11	1,705,265	14	12,174,628	11	1,739,233	14	12,646,095	11	1,806,585	14	12,609,622	11	1,801,376	14	12,785,959	11	1,826,566	13
Perú	24,371,043	23	2,437,104	20	24,800,768	23	2,480,076	20	25,232,226	23	2,523,223	20	25,661,690	23	2,687,215	21	26,748,972	23	2,824,034	21
Venezuela	22,777,152	21	2,634,521	21	23,242,435	21	2,688,320	21	23,706,711	21	2,743,927	21	24,160,732	21	2,959,944	23	24,631,902	21	3,019,343	22
Southern Cone	58,531,238	12	6,840,524	12	59,317,139	12	6,943,146	12	60,103,620	12	7,037,009	12	60,897,887	12	6,892,132	11	61,705,874	12	6,943,552	11
Argentina	35,671,894	61	3,550,000	52	36,124,931	61	3,600,000	52	36,578,355	61	3,650,000	52	37,034,563	61	3,699,000	54	37,507,370	61	3,745,000	54
Chile	14,622,354	25	2,240,991	33	14,821,714	25	2,280,263	33	15,017,760	25	2,310,425	33	15,209,308	25	2,240,341	33	15,407,579	25	2,268,819	33
Paraguay	5,085,328	9	508,533	7	5,218,832	9	521,883	8	5,355,843	9	535,584	8	5,496,450	9	549,637	8	5,633,359	9	563,328	8
Uruguay	3,151,662	5	541,000	8	3,151,662	5	541,000	8	3,151,662	5	541,000	8	3,157,566	5	403,154	6	3,157,566	5	366,405	5
Brasil	159,636,413	33	15,963,641	29	161,790,311	33	16,179,031	28	163,947,554	33	16,394,755	28	165,399,657	34	20,104,478	33	167,583,978	33	20,352,482	31
Central America	33,080,708	7	4,167,227	7	34,184,564	7	4,405,669	8	35,270,921	7	4,487,565	8	31,020,274	6	3,959,674	6	34,193,209	7	4,035,997	6
Belize	230,000	1	23,000	1	238,500	1	23,850	1	243,390	1	24,339	1	...	...	...	...	...	...	...	...
Costa Rica	3,681,157	11	490,820	12	3,768,865	11	502,512	11	3,856,191	11	514,158	11	2,032,034	7	289,689	7	2,230,531	7	318,644	8
El Salvador	5,905,460	18	884,185	21	6,031,326	18	1,001,071	23	6,154,311	17	1,019,998	23	6,376,037	21	713,861	18	6,496,890	19	759,964	19
Guatemala	10,517,450	32	1,606,194	39	10,799,132	32	1,606,194	36	11,111,461	32	1,635,854	36	11,385,338	37	1,680,336	42	11,678,411	34	1,655,537	41
Honduras	5,607,099	17	640,421	15	5,758,184	17	668,924	15	6,115,819	17	670,658	15	6,178,455	20	662,816	17	6,183,678	18	688,880	17
Nicaragua	4,420,856	13	522,607	13	4,824,945	14	603,118	14	4,980,469	14	622,558	14	5,048,410	16	612,972	15	5,048,410	15	612,972	15
Panamá	2,718,686	8	...	...	2,763,612	8	...	...	2,809,280	8	...	...	...	...	...	...	2,555,289	7	...	...
México	95,127,496	20	14,058,193	25	96,648,935	20	14,439,932	25	98,132,418	20	14,564,863	25	99,096,644	20	15,305,419	25	101,654,760	20	18,172,565	28
Latin Caribbean	26,698,317	6	2,295,253	4	26,941,316	6	2,311,756	4	27,420,820	6	2,351,919	4	19,741,417	4	1,974,128	3	20,171,877	4	2,017,186	3
Cuba	11,035,922	41	1,103,599	48	11,122,308	41	1,112,231	48	11,142,691	41	1,114,269	47	11,187,673	57	1,118,768	57	11,229,688	56	1,122,969	56
Haití	7,491,762	28	374,588	16	7,647,498	28	382,374	17	7,803,230	28	390,161	17	...	...	...	...	...	...	...	...
Dominican Republic	8,170,633	31	817,066	36	8,171,510	30	817,151	35	8,474,899	31	847,489	36	8,553,744	43	855,360	43	8,942,189	44	894,217	44

... Without information.

Source: Reports of the countries to the VIII REDIPRA, 2002 and IX REDIPRA, 2002.

Table 3
Rates of Rabies in Humans and Dogs by Subregion and Country.
Latin America, 1997-2001

Subregion/Country	Rates of Human Rabies (X 100,000)					Rates of Canine Rabies (X 100,000)				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
LATIN AMERICA	0.024	0.018	0.015	0.012	0.012	7.0	6.3	4.3	3.2	2.4
Andean Area	0.039	0.019	0.026	0.016	0.011	9.9	5.5	4.1	4.7	4.4
Bolivia	0.142	0.063	0.123	0.111	0.085	23.1	12.8	8.7	26.4	23.3
Colombia	0.012	0.000	0.007	0.002	0.000	3.6	2.6	2.6	1.6	0.8
Ecuador	0.075	0.057	0.040	0.024	0.023	18.9	8.6	5.7	4.4	4.2
Perú	0.049	0.036	0.036	0.016	0.007	12.1	6.0	3.0	2.0	1.3
Venezuela	0.022	0.000	0.008	0.004	0.004	4.1	3.3	3.5	1.9	2.7
Southern Cone	0.010	0.015	0.007	0.002	0.002	8.6	5.7	5.7	0.8	0.4
Argentina	0.003	0.000	0.000	0.000	0.003	0.2	0.1	0.4	0.1	0.1
Chile	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.0	0.0	0.0
Paraguay	0.098	0.172	0.075	0.018	0.000	114.4	74.9	72.1	9.6	4.4
Uruguay	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.0	0.0	0.0
Brasil	0.016	0.017	0.015	0.016	0.013	5.9	10.8	5.9	3.8	2.5
Central America	0.051	0.023	0.009	0.026	0.020	12.9	6.1	3.5	4.5	4.5
Belize	0.000	0.000	0.000	...	...	95.7	0.0	0.0	...	...
Costa Rica	0.000	0.000	0.000	0.000	0.090	0.0	0.0	0.0	0.0	0.0
El Salvador	0.169	0.050	0.000	0.016	0.062	24.5	12.5	0.9	4.9	12.5
Guatemala	0.057	0.028	0.018	0.053	0.009	14.0	6.8	8.7	7.5	4.1
Honduras	0.018	0.017	0.000	0.016	0.000	7.2	4.5	0.6	2.7	2.5
Nicaragua	0.000	0.021	0.020	0.000	0.000	5.4	0.7	0.5	0.0	0.2
Panamá	0.000	0.000	0.000	...	0.000	...	...	...	...	...
México	0.024	0.016	0.009	0.004	0.007	3.7	2.7	2.2	1.6	0.6
Latin Caribbean	0.004	0.022	0.011	0.010	0.045	4.7	4.6	5.7	5.3	6.5
Cuba	0.000	0.009	0.000	0.009	0.000	3.1	2.9	3.6	3.0	2.7
Haití	0.000	0.065	0.038	...	...	10.1	12.3	14.9	...	...
Dominican Republic	0.012	0.000	0.000	0.000	0.000	4.4	3.4	4.2	3.6	4.8

... Without information.

Source: Bulletin of Epidemiologic Surveillance of Rabies in the Americas, XXIX – XXXIII, 1997-2001.

Report of the countries to the VIII REDIPRA, 2000 and IX REDIPRA, 2002

Table 4
**Rabies Cases in Humans and Dogs, by Country and Major Cities.
Latin America, 1997-2001**

Country / Major City	Human rabies					Rabies in Dogs				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
LATIN AMERICA	67	45	33	17	13	1780	1209	1022	1008	999
Andean Area	29	8	13	11	10	889	600	360	460	507
Bolivia	11	5	10	7	7	347	223	184	307	362
Beni	0	0	0	0	0	1	0	0	0	0
Chuquisaca	1	0	0	0	2	10	5	4	22	20
Cochabamba	4	4	8	3	1	187	116	85	79	78
La Paz	3	0	0	2	2	11	13	24	81	50
Oruro	0	0	0	0	0	2	2	9	3	14
Pando	0	0	0	0	0	4	0	0	0	0
Potosí	0	0	1	0	0	0	3	3	1	6
Santa Cruz	3	1	1	1	2	130	83	59	115	184
Tarija	0	0	0	1	0	2	1	0	6	10
Colombia	0	0	0	0	0	29	134	20	12	9
Arauca	0	0	0	...	...	6	0	0	...	...
Armenia	0	0	0	...	...	0	1	0	...	...
Barranquilla	0	0	0	0	0	8	60	15	10	4
Bogotá	0	0	0	0	0	1	0	0	0	1
Cartagena	0	0	0	0	0	0	0	0	1	3
Monteria	0	0	0	0	0	14	2	1	1	0
Quibdo	0	0	0	...	...	0	0	0	...	...
Santa Marta	0	0	0	...	...	0	0	3	...	...
Sincelejo	0	0	0	...	...	0	71	1	...	...
Valledupar	0	0	0	0	0	0	0	0	0	1
Ecuador	8	1	1	3	2	203	64	42	74	50
Ambato	0	0	...	0	0	11	2	...	0	0
Azoguez	...	...	...	0	1	...	...	...	3	13
Cuenca	2	1	...	0	1	59	31	28	52	33
Guayaquil	2	0	...	0	0	47	12	4	3	0
Ibarra	...	...	...	0	0	...	...	...	0	0
Latacunga	...	...	...	2	0	...	...	...	5	4
Loja	0	0	...	0	0	0	0	...	0	0
Manchala	0	0	...	0	0	24	8	1	2	0
Portoviejo	0	0	...	0	0	9	9	...	0	0
Quito	2	0	1	1	0	47	2	9	8	0
RioBamba	2	0	...	...	...	6	0	...	...	...
Santo Domingo	...	...	...	0	0	...	...	...	1	0
Peru	5	2	0	0	0	198	87	20	9	3
Arequipa	0	0	0	0	0	0	0	0	0	0
Cajamarca	...	...	...	0	0	...	...	...	0	1
Callao	0	0	0	0	0	2	0	0	0	0
Chiclayo	0	0	0	...	...	0	0	0	...	...
Cnel. Portillo	2	1	0	0	0	48	10	0	0	0
Cusco	0	0	0	0	0	10	2	0	0	0
Huancayo	3	0	0	0	0	46	6	3	0	0
Ica	...	...	...	0	0	...	...	...	0	0
Iquitos	...	...	...	0	0	...	...	...	0	0
Lima	0	0	0	0	0	0	0	0	0	0
Piura	0	1	0	0	0	77	66	12	9	1

... Without information.

Source: Reports of the countries to the VIII REDIPRA, 2000 and IX REDIPRA, 2002.

Table 4 (Cont.)
Rabies Cases in Humans and Dogs, by Country and Major Cities

Country / Major City	Human Rabies					Rabies in Dogs				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
Puno	...	...	...	0	0	...	...	...	0	1
Santa	0	0	0	0	0	2	0	0	0	0
Tacna	...	...	...	0	0	...	...	...	0	0
Trujillo	0	0	0	0	0	13	3	5	0	0
Venezuela	5	0	2	1	1	112	92	94	58	83
Barinas	0	0	0	...	...	1	0	0	...	...
Barquisimeto	0	0	0	...	...	0	0	0	...	...
Ciudad Bolívar	0	0	0	...	...	1	0	0	...	...
Guasdalito	0	0	0	...	...	10	0	0	...	...
Jejeras	1	0	0	...	...	0	1	0	...	...
Maracaibo	4	0	2	1	0	81	64	92	50	81
Mauroa	0	0	0	...	...	1	0	0	...	...
San Cristobal	0	0	0	0	0	18	26	2	8	2
San Felipe	0	0	0	...	...	0	1	0	...	...
Urdaneta	...	...	...	0	1	...	...	...	0	0
Southern Cone	2	6	3	1	0	340	204	235	30	14
Argentina	0	0	0	0	0	0	0	0	0	0
Capital y Gran B. Aires	...	...	...	0	0	...	...	...	0	0
Chaco	...	...	...	0	0	...	...	...	0	0
Corrientes	...	...	...	0	0	...	...	...	0	0
Formosa	...	...	...	0	0	...	...	...	0	0
Goya	...	...	...	0	0	...	...	...	0	0
Jujuy	...	...	...	0	0	...	...	...	0	0
Misiones	...	...	...	0	0	...	...	...	0	0
Orán	...	...	...	0	0	...	...	...	0	0
Roque Saenz Peña	...	...	...	0	0	...	...	...	0	0
Salta	...	...	...	0	0	...	...	...	0	0
Santiago del Estero	...	...	...	0	0	...	...	...	0	0
Tucumán	...	...	...	0	0	...	...	...	0	0
Chile	0	0	0	0	0	1	0	0	0	0
Arica	0	0	0	...	...	1	0	0	...	...
Rancagua	0	0	0	...	...	0	0	0	...	...
Paraguay	2	6	3	1	0	339	204	235	30	14
Asunción	0	1	0	0	0	96	24	38	2	0
Caaguazú	0	1	0	0	0	2	5	4	2	0
Capiatá	0	0	0	0	0	38	53	31	2	0
Ciudad del Este	1	1	1	0	0	17	5	3	0	11
Cnel. Oviedo	0	0	0	0	0	6	3	3	1	1
Concepción	0	0	0	0	0	1	0	0	0	0
Encarnación	0	0	0	1	0	5	2	20	14	2
Fernando de la Mora	0	0	0	0	0	45	14	28	1	0
Lambare	0	0	1	0	0	28	11	21	1	0
Luque	1	1	0	0	0	42	26	23	6	0
Pedro J. Caballero	0	1	1	0	0	0	8	5	0	0
San Lorenzo	0	1	0	0	0	59	53	59	1	0
Uruguay	0	0	0	0	0	0	0	0	0	0
Artigas	0	0	0	0	0	0	0	0	0	0
Las Piedras	0	0	0	0	0	0	0	0	0	0

...Without information.

Source: Reports of the countries to the VIII REDIPRA, 2000 and IX REDIPRA, 2002.

Table 4 (Cont.)
Rabies Cases in Humans and Dogs, by Country and Major Cities, 1997-2001.
(Cont.)

Country / Major City	Human Rabies					Rabies in Dogs				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
Maldonado	0	0	0	0	0	0	0	0	0	0
Mercedes	0	0	0	0	0	0	0	0	0	0
Minas	0	0	0	0	0	0	0	0	0	0
Montevideo	0	0	0	0	0	0	0	0	0	0
Paysandú	0	0	0	0	0	0	0	0	0	0
Rivera	0	0	0	0	0	0	0	0	0	0
Salto	0	0	0	0	0	0	0	0	0	0
Tacuarembó	0	0	0	0	0	0	0	0	0	0
Brasil	5	8	5	1	1	0	0	0	353	298
Aracaju	0	0	0	0	0	0	0	0	3	7
Belém	0	0	0	0	0	0	0	0	1	0
Belo Horizonte	0	0	0	0	0	0	0	0	0	0
Boa Vista	...	...	...	0	0	...	...	...	0	0
Brasília	...	...	...	0	0	...	...	...	28	0
Campo Grande	0	0	0	0	0	0	0	0	0	0
Cuiabá	0	0	0	0	0	0	0	0	194	117
Curitiba	...	...	...	0	0	...	...	...	0	0
Florianópolis	0	0	0	0	0	0	0	0	0	0
Fortaleza	3	1	0	0	0	...	...	...	6	8
Goiania	0	1	1	0	0	...	...	...	8	0
João Pessoa	0	0	1	0	0	...	...	...	0	0
Macapá	0	0	0	0	0	0	0	0	0	0
Macció	0	1	2	0	0	...	...	...	23	23
Manaus	0	0	0	0	0	0	0	0	0	0
Natal	0	0	0	0	0	0	0	0	0	0
Palmas	0	0	0	0	0	0	0	0	0	0
Porto Alegre	...	...	...	0	0	...	...	...	0	0
Porto Velho	1	4	1	0	0	...	...	...	42	52
Recife	0	1	0	0	0	...	...	...	8	23
Rio Branco	1	0	0	1	0	...	...	...	29	52
Rio de Janeiro	0	0	0	0	0	0	0	0	0	0
Salvador	0	0	0	0	1	0	0	0	4	15
São Luis	0	0	0	0	0	0	0	0	5	1
São Paulo	0	0	0	0	0	0	0	0	0	0
Teresina	0	0	0	0	0	0	0	0	1	0
Vitória	0	0	0	0	0	0	0	0	1	0
Central America	5	5	2	4	2	152	144	143	133	141
Belice	0	0	0	0	0	15	5	0	0	0
Belize City	0	0	0	...	...	0	0	0	...	...
Belmopan	0	0	0	...	...	0	0	0	...	...
Benque	0	0	0	...	...	6	2	0	...	...
Corozal	0	0	0	...	...	0	0	0	...	...
Dangriga	0	0	0	...	...	0	0	0	...	...
O/Walk	0	0	0	...	...	0	0	0	...	...
P. Gorda	0	0	0	...	...	0	0	0	...	...
S. Elena	0	0	0	...	...	0	1	0	...	...
S. Ignacio	0	0	0	...	...	9	2	0	...	...
S. Pedro	0	0	0	...	...	0	0	0	...	...

...Without information.

Source: Reports of the countries to the VIII REDIPRA, 2000 and IX REDIPRA, 2002.

Table 4 (Cont.)
Cases of Rabies in Humans and Dogs, by Country and Major Cities.
Latin America. 1997-2001.

(Cont.)

Country / Major City	Human Rabies					Rabies in Dogs				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
El Salvador	1	2	0	0	1	65	30	26	11	46
Apopa	0	1	0	...	...	9	0	1	...	...
Candelaria de la Front	0	0	0	...	...	3	1	0	...	...
Cojutepeque	0	0	0	0	0	3	5	8	0	6
La Libertad	0	0	0	0	0	4	2	0	0	0
La Unión	...	...	...	0	0	...	...	...	0	19
Metapan	0	0	0	0	0	2	0	0	0	0
San Marcos	0	0	0	0	0	4	3	0	1	0
San Miguel	0	0	0	0	1	11	6	7	4	10
San Salvador	0	1	0	0	0	19	10	4	2	2
Soyapango	0	0	0	0	0	9	3	6	2	5
Usulután	...	...	...	0	0	...	...	...	1	2
Zacatecoluca	1	0	0	0	0	1	0	0	1	2
Guatemala	4	2	1	4	1	44	105	114	121	94
Alta Verapaz	...	1	...	0	0	0	8	1	0	6
Chimaltenango	...	...	...	0	0	1	6	9	2	2
El Quiché	1	...	...	0	0	2	5	1	11	18
Escuintla	1	...	...	0	0	3	7	2	3	4
Guatemala	...	...	...	0	0	10	21	34	18	18
Huehuetenango	...	...	...	0	0	16	22	23	44	21
Jutiapa	...	...	...	0	0	1	2	2	4	2
Quezaltenango	1	...	...	4	1	9	17	20	30	13
San Marcos	1	1	1	0	0	0	12	18	8	7
Suchitepequez	...	...	...	0	0	2	5	4	1	3
Honduras	0	0	0	0	0	0	0	0	1	0
Catamacas	0	0	0	0	0	0	0	0	0	0
Choluteca	0	0	0	0	0	0	0	0	1	0
Comayagua	0	0	0	0	0	0	0	0	0	0
Danli	0	0	0	0	0	0	0	0	0	0
Distrito Central	...	...	...	0	0	...	...	...	0	0
Distrito Federal	0	0	0	...	...	0	0	0	...	...
Juticalpa	0	0	0	0	0	0	0	0	0	0
La Ceiba	0	0	0	0	0	0	0	0	0	0
Progreso, Yoro	0	0	0	0	0	0	0	0	0	0
San Pedro Sula	0	0	0	0	0	0	0	0	0	0
Tela	0	0	0	0	0	0	0	0	0	0
Nicaragua	0	1	1	0	0	28	4	3	0	1
Boaco	0	0	0	0	0	0	0	0	0	0
Carazo	...	...	...	0	0	...	...	...	0	0
Chinandega	0	0	0	0	0	2	0	0	0	0
Chontales	...	...	...	0	0	...	...	...	0	1
Esteli	0	0	1	0	0	0	0	0	0	0
Granada	0	0	0	0	0	0	0	0	0	0
Jinotega	...	...	...	0	0	...	...	...	0	0
León	0	0	0	0	0	19	4	2	0	0
Madriz	...	...	...	0	0	...	...	...	0	0
Managua	0	0	0	0	0	6	0	1	0	0
Masayá	0	1	0	0	0	1	0	0	0	0
Matagalpa	0	0	0	0	0	0	0	0	0	0

...Without information.

Source: Reports of the countries to the VIII REDIPRA, 2000 and IX REDIPRA, 2002.

Table 4 (Cont.)
Rabies Cases in Humans and Dogs, by Country and Major Cities.
Latin America, 1997-2001.

(Cont.)

Country / Major City	Human Rabies					Rabies in Dogs				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
Nueva Segovia	...	...	...	0	0	...	...	...	0	0
Reg. Autónoma Atl. No	...	...	...	0	0	...	...	...	0	0
Reg. Autónoma Atl. Su	...	...	...	0	0	...	...	...	0	0
Rivas	...	...	...	0	0	...	...	...	0	0
Panama	0	0	0	0	0	0	0	0	0	0
Bocas del Toro	0	0	0	0	0	0	0	0	0	0
Chiriquí	...	...	...	0	0	...	...	...	0	0
Cocle	0	0	0	0	0	0	0	0	0	0
Colón	0	0	0	0	0	0	0	0	0	0
Comarca Kuna Yala	...	...	...	0	0	...	...	...	0	0
Comarca Nogbé Buglé	...	...	...	0	0	...	...	...	0	0
Darien	0	0	0	0	0	0	0	0	0	0
Herrera	0	0	0	0	0	0	0	0	0	0
Los Santos	0	0	0	0	0	0	0	0	0	0
Panamá	0	0	0	...	...	0	0	0	...	...
Panamá Este	...	...	...	0	0	...	...	...	0	0
Panamá Metropolitana	...	...	...	0	0	...	...	...	0	0
Panamá Oeste	...	...	...	0	0	...	...	...	0	0
San Blas	0	0	0	...	...	0	0	0	...	...
San Miguelito	...	...	...	0	0	...	...	...	0	0
Veraguas	0	0	0	0	0	0	0	0	0	0
Mexico	22	13	7	0	0	365	229	244	0	0
Chiapas	1	0	0	...	...	19	20	4	...	...
Chihuahua	1	4	1	...	...	1	0	0	...	...
D.F.	0	0	0	...	...	11	5	3	...	...
Guerrero	1	1	2	...	...	7	10	7	...	...
Jalisco	1	1	0	...	...	0	0	1	...	...
México	1	1	2	...	...	122	56	39	...	...
Oaxáca	5	0	1	...	...	7	6	5	...	...
Puebla	5	4	1	...	...	136	115	150	...	...
Veracruz	5	1	0	...	...	36	11	12	...	...
Yucatán	2	1	0	...	...	26	6	23	...	...
Latin Carribbean	4	5	3	0	0	34	32	40	32	39
Cuba	0	0	0	0	0	0	0	0	0	0
Bayamo	0	0	0	...	...	0	0	0	...	...
Camagüey	0	0	0	...	...	0	0	0	...	...
Ciego de Avila	0	0	0	...	...	0	0	0	...	...
Cienfuegos	0	0	0	...	...	0	0	0	...	...
Gerona	0	0	0	...	...	0	0	0	...	...
Guantanamo	0	0	0	...	...	0	0	0	...	...
Holguín	0	0	0	...	...	0	0	0	...	...
La Habana	0	0	0	...	...	0	0	0	...	...
Matanzas	0	0	0	...	...	0	0	0	...	...
Pinar de Rio	0	0	0	...	...	0	0	0	...	...
Sancti Spiritus	0	0	0	...	...	0	0	0	...	...
Santa Clara	0	0	0	...	...	0	0	0	...	...
Santiago de Cuba	0	0	0	...	...	0	0	0	...	...
Tunas	0	0	0	...	...	0	0	0	...	...

... Without information.

Source: Reports of the countries to the VIII REDIPRA, 2000 and IX REDIPRA, 2002.

Table 5
Number of Exposed Persons and Persons Receiving Post-Exposure Anti-Rabies Treatment (PEP), by
Subregion and Country. Latin America. 1997-2001.
(Cont.)

Country / Major City	Human Rabies					Rabies in Dogs				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
Haití	3	5	3	0	0	0	4	0	0	0
Cap-Haitien	0	0	0	...	...	0	0	0	...	...
Fort-Liberté	0	0	0	...	...	0	0	0	...	...
Gonaives	0	0	0	...	...	0	0	0	...	...
Hinche	0	0	0	...	...	0	0	0	...	...
Jacmel	0	0	0	...	...	0	0	0	...	...
Jerémie	0	0	0	...	...	0	0	0	...	...
Les Cayes	0	0	0	...	...	0	0	0	...	...
Port-au-Prince	3	5	3	...	...	0	4	0	...	...
Port-de-Paix	0	0	0	...	...	0	0	0	...	...
Saintmarc	0	0	0	...	...	0	0	0	...	...
Dominican Republic	1	0	0	0	0	34	28	40	32	39
Bani	...	...	...	0	0	...	...	...	0	0
Bánica	0	0	0	...	...	2	0	0	...	...
Barahona	...	...	...	0	0	...	...	...	0	0
Bonao	...	...	...	0	0	...	...	...	0	0
Cotui	0	0	0	0	0	0	0	2	1	0
Dajabón	0	0	0	0	0	10	7	8	11	7
Distrito Nacional	0	0	0	...	...	2	2	5	...	...
El Seybo	...	...	...	0	0	...	...	...	2	8
Hato Mayor	...	...	...	0	0	...	...	...	3	3
Higüey	...	...	...	0	0	...	...	...	0	0
Hondo Valle	0	0	0	...	...	0	4	0	...	...
Jimani	...	...	...	0	0	...	...	...	1	0
La Romana	...	...	...	0	0	...	...	...	2	1
La Veja	...	...	...	0	0	...	...	...	0	0
Mao	0	0	0	...	...	0	0	0	...	...
Miches	0	0	0	...	...	0	0	0	...	...
Moca	...	...	...	0	0	...	...	...	0	0
Monte Cristy	0	0	0	...	...	0	0	0	...	...
Monte Plata	0	0	0	0	0	0	0	2	0	1
Nagua	0	0	0	0	0	0	0	0	0	1
Puerto Plata	...	...	...	0	0	...	...	...	0	0
Samaná	0	0	0	...	...	0	1	0	...	...
San Cristobal	0	0	0	0	0	0	0	0	0	1
San Fco. de Macoris	...	...	...	0	0	...	...	...	0	0
San Juan de la Maguan	0	0	0	0	0	2	0	0	1	1
San Pedro de Macoris	0	0	0	0	0	17	13	23	10	14
Santo Domingo DN	...	...	...	0	0	...	...	...	1	2
Seybo	1	0	0	...	...	0	0	0	...	...
Stgo.Rodriguez	0	0	0	0	0	0	0	0	0	0
Villa Altagracia	0	0	0	...	...	0	1	0	...	...
Yamasá	0	0	0	...	...	1	0	0	...	...

... Without information.

NA Not available.

Source: Reports of the countries to the VIII REDIPRA, 2000 and IX REDIPRA, 2002.

Table 6
Rates of Exposure and Post-Exposure Rabies Prophylaxis (PEP), by Subregion and Country.
Latin America, 1997-2001.

Subregion / Country	Exposed Persons					Number and Proportion of Persons who received complete PEP treatment									
	1997	1998	1999	2000	2001	1997 (%)	1998 (%)	1999 (%)	2000 (%)	2001 (%)	1997 (%)	1998 (%)	1999 (%)	2000 (%)	2001 (%)
LATIN AMERICA	883,870	884,705	933,260	954,941	998,415	316,153	35.8	297,439	33.6	310,734	33.3	346,491	36.3	338,397	33.9
Andean Area	150,335	163,075	189,221	190,004	188,167	25,103	16.7	21,745	13.3	21,585	11.4	20,669	10.9	21,441	11.4
Bolivia	8,282	7,989	9,147	4,216	9,147	2,623	31.7	2,712	33.9	3,526	38.5	770	18.3	3,526	38.5
Colombia	15,435	20,206	26,895	27,253	23,500	1,568	10.2	1,468	7.3	1,236	4.6	2,039	7.5	846	3.6
Ecuador	16,058	14,303	12,554	11,165	10,664	8,475	52.8	5,782	40.4	5,053	40.3	3,818	34.2	3,912	36.7
Perú	75,520	75,711	86,684	99,595	95,092	8,205	10.9	7,167	9.5	6,588	7.6	7,527	7.6	6,193	6.5
Venezuela	35,040	44,866	53,941	47,775	49,764	4,232	12.1	4,616	10.3	5,182	9.6	6,515	13.6	6,964	14.0
Southern Cone	126,930	131,071	124,839	124,633	129,330	27,523	21.7	38,440	29.3	40,966	32.8	34,489	27.7	32,746	25.3
Argentina	62,900	68,173	58,550	65,435	69,257	9,614	15.3	16,867	24.7	15,857	27.1	16,988	26.0	18,431	26.6
Chile	40,492	38,272	45,048	37,512	41,466	14,677	36.2	18,240	47.7	20,914	46.4	15,163	40.4	12,932	31.2
Paraguay	22,335	23,500	20,129	20,569	17,404	3,191	14.3	3,300	14.0	4,158	20.7	2,279	11.1	1,306	7.5
Uruguay	1,203	1,126	1,112	1,117	1,203	41	3.4	33	2.9	37	3.3	59	5.3	77	6.4
Brasil	404,383	394,941	413,874	418,387	447,684	240,678	59.5	210,003	53.2	214,869	51.9	268,326	64.1	264,106	59.0
Central America	57,035	53,393	55,220	57,610	61,895	2,206	3.9	7,085	13.3	11,305	20.5	1,522	2.6	1,292	2.1
Belize	164	134	105	...	...	55	33.5	42	31.3	34	32.4	...	...	...	...
Costa Rica	1,367	1,290	1,275	990	1,115	24	1.8	10	0.8	4	0.3	13	1.3	48	4.3
El Salvador	30,584	24,497	24,878	25,303	28,637	0	0.0	5,836	23.8	4,848	19.5	0	0.0	0	0.0
Guatemala	8,795	11,940	13,290	15,053	16,416	815	9.3	...	...	5,000	37.6	ND	...	ND	...
Honduras	3,685	3,913	3,450	4,226	3,316	247	6.7	195	5.0	343	9.9	288	6.8	225	6.8
Nicaragua	12,351	11,524	11,489	12,014	12,392	979	7.9	922	8.0	984	8.6	1,221	10.2	1,019	8.2
Panamá	89	95	733	24	19	86	96.6	80	84.2	92	12.6	ND	...	ND	...
México	96,954	97,851	102,718	118,318	123,348	17,678	18.2	16,957	17.3	18,077	17.6	18,438	15.6	15,367	12.5
Latin Caribbean	48,233	44,374	47,388	45,989	47,991	2,965	6.1	3,209	7.2	3,932	8.3	3,047	6.6	3,445	7.2
Cuba	31,039	30,525	31,760	30,797	30,830	1,172	3.8	1,230	4.0	1,244	3.9	1,027	3.3	838	2.7
Haití	144	264	168	...	...	141	97.9	259	98.1	165	98.2	...	...	...	...
Dominican Republic	17,050	13,585	15,460	15,192	17,161	1,652	9.7	1,720	12.7	2,523	16.3	2,020	13.3	2,607	15.2

... Without information.

Source: Reports of the countries to the VIII REDIPRA, 2000 and IX REDIPRA, 2002.

Table 7

Available Anti-rabies Vaccines and Applied for Human Use by Origin, and Type of Vaccine, Subregion and Country. Latin America, 2000-2001.

Subregion /Country	Available Doses										Applied Doses		
	Fuenzalida Type					Cell Culture Type							
	Imported		Local Production		Total	Imported		Local Production		Total	2000	2001	Total
	2000	2001	2000	2001		2000	2001	2000	2001				
LATIN AMERICA	194,900	133,000	2,749,566	2,739,947	5,817,413	474,876	322,372	4,990	14,576	816,814	1,820,762	1,879,286	3,700,048
Andean Area	0	0	472,566	501,789	974,355	2,878	1,388	4,990	14,476	23,732	294,932	266,067	560,999
Bolivia	0	0	5,798	6,089	11,887	0	0	0	0	0	5,693	5,353	11,046
Colombia	0	0	21,000	0	21,000	1,700	1,300	4,990	14,476	22,466	14,519	4,309	18,828
Ecuador	0	0	150,000	120,000	270,000	0	0	0	0	0	105,000	96,000	201,000
Perú	...	...	145,768	175,700	321,468	1,178	88	0	0	1,266	112,570	103,181	215,751
Venezuela	0	0	150,000	200,000	350,000	0	0	...	...	0	57,150	57,224	114,374
Southern Cone	100,000	75,500	470,000	435,000	1,080,500	895	1,050	0	0	1,945	258,114	257,963	516,077
Argentina	...	...	120,000	135,000	255,000	...	...	...	...	0	118,916	129,017	247,933
Chile	0	0	350,000	300,000	650,000	0	0	0	0	0	105,591	88,916	194,507
Paraguay	100,000	75,500	0	0	175,500	95	250	0	0	345	32,907	39,350	72,257
Uruguay	...	...	...	...	0	800	800	0	0	1,600	700	680	1,380
Brasil	0	0	1,710,000	1,700,000	3,410,000	310,000	150,000	0	0	460,000	1,031,914	1,094,408	2,126,322
Central America	68,000	57,500	77,000	85,000	287,500	600	15,700	0	0	16,300	70,418	115,536	185,954
Belice	...	...	...	...	0	...	...	...	...	0	0	0	0
Costa Rica	...	...	...	...	0	100	300	0	0	400	65	240	305
El Salvador	0	0	72,000	79,000	151,000	0	0	0	0	0	ND	39,276	39,276
Guatemala	50,000	45,500	0	0	95,500	0	15,000	0	0	15,000	50,000	62,645	112,645
Honduras	...	...	5,000	6,000	11,000	...	...	...	...	0	3,915	2,456	6,371
Nicaragua	18,000	12,000	0	0	30,000	...	...	...	...	0	16,368	10,391	26,759
Panamá	0	0	0	0	0	500	400	0	0	900	70	528	598
México	0	0	0	0	0	159,603	147,934	0	0	307,537	140,344	120,763	261,107
Latin America	26,900	0	20,000	18,158	65,058	900	6,300	0	100	7,300	25,040	24,549	49,589
Cuba	0	0	20,000	0	20,000	900	6,300	0	100	7,300	10,900	6,300	17,200
Haití	...	...	...	...	0	...	...	...	...	0	0	0	0
Dominican Republic	26,900	0	0	18,158	45,058	...	...	...	...	0	14,140	18,249	32,389

...Without information.

NA Not available.

Source: Reports of the countries to the VIII REDIPRA,2000 and IX REDIPRA, 2002.

Table 8
Available Hyperimmune Anti-rabies Serum and Applied by Origin, Type, Subregion and Country.
Latin America, 2000-2001.

Subregion / Country	Available quantity (in ml)										Applied Quantity (in ml)		
	Heterologous Serum					Homologous Serum							
	Imported		Local Production		Total	Imported		Local Production		Total	2000	2001	Total
	2000	2001	2000	2001		2000	2001	2000	2001				
LATIN AMERICA	6,585	5,610	490,000	604,590	1,106,785	113,548	70,371	0	0	183,919	456,925	611,432	1,068,357
Andean Area	6,585	5,610	0	4,590	16,785	60,000	0	0	0	60,000	65,035	8,864	73,899
Bolivia	1085	3010	0	0	4,095	0	0	0	0	0	975	1,610	2,585
Colombia	0	0	0	4590	4,590	0	0	0	0	0	2,190	2,575	4,765
Ecuador	0	0	0	0	0	60000	0	0	0	60,000	58,500	0	58,500
Perú	2400	1400	0	0	3,800	0	0	0	0	0	1,360	1,120	2,480
Venezuela	3100	1200	0	0	4,300	...	...	...	...	0	2,010	3,559	5,569
Southern Cone	0	0	0	0	0	100	100	0	0	200	86	98	184
Argentina	...	...	...	...	0	100	100	...	...	200	86	98	184
Chile	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraguay	0	0	0	0	0	0	0	0	0	0	0	0	0
Uruguay	...	...	...	...	0	...	...	...	...	0	0	0	0
Brasil	0	0	490,000	600,000	1,090,000	11,000	17,000	0	0	28,000	357,030	564,005	921,035
Central America	0	0	0	0	0	4,000	12,325	0	0	16,325	7,320	6,194	13,514
Belize	...	...	...	...	0	...	...	...	...	0	0	0	0
Costa Rica	...	...	...	...	0	...	...	...	...	0	0	0	0
El Salvador	0	0	0	0	0	0	4325	0	0	4,325	0	2,170	2,170
Guatemala	...	...	...	...	0	4000	8000	0	0	12,000	7,320	4,000	11,320
Honduras	...	...	0	0	0	...	...	0	0	0	0	24	24
Nicaragua	...	...	0	0	0	...	...	0	0	0	0	0	0
Panamá	0	0	0	0	0	0	0	0	0	0	0	0	0
México	0	0	0	0	0	36,548	39,046	0	0	75,594	25,554	30,371	55,925
Latin Caribbean	0	0	0	0	0	1,900	1,900	0	0	3,800	1,900	1,900	3,800
Cuba	...	...	...	...	0	1900	1900	0	0	3,800	1,900	1,900	3,800
Haití	...	...	...	...	0	...	...	...	...	0	0	0	0
Dominican Republic	...	...	...	...	0	...	...	...	...	0	0	0	0

... Without information.

Source: Reports of the countries to the VIII REDIPRA, 2000 and IX REDIPRA, 2002.

Table 9

Number of Centers of Attention to Exposed Persons and Observation of Aggressive Dogs, by Subregion and Country. Latin America, 2001.

Subregion / Country	Number of Units	
	Centers of attention to exposed persons	Centers of observation of animals
LATIN AMERICA	64,828	315
Andean Area	14,945	24
Bolivia	314	5
Colombia	1,620	6
Ecuador	1,650	2
Perú	6,539	11
Venezuela	4,822	0
Southern Cone	2,682	3
Argentina	56	...
Chile	2,580	1
Paraguay	19	1
Uruguay	27	1
Brasil	8,908	170
Central America	4,974	10
Belize	...	...
Costa Rica	934	3
El Salvador	562	0
Guatemala	1,291	0
Honduras	1,267	7
Nicaragua	164	0
Panamá	756	0
México	17,622	90
Latin Caribbean	15,697	18
Cuba	15,666	17
Haití	...	...
Dominican Republic	31	1

... Without information.

Source: Reports of the countries to the IX REDIPRA, 2002.

Table 10

Available Anti-rabies Vaccines and Applied for Canine Use by Origin and Type of Vaccine, Subregion and Country. Latin America, 2000-2001.

Subregion / Country	Available Doses										Applied Doses		
	Non-cellular Vaccine					Cell Culture Type							
	Imported		Local Production		Total	Imported		Local Production		Total	2000	2001	Total
	2000	2001	2000	2001		2000	2001	2000	2001				
LATIN AMERICA	1,081,420	1,196,800	32,623,265	30,534,785	65,436,270	16,763,030	18,063,580	6,537,200	1,858,768	43,222,578	42,960,730	46,575,768	89,536,498
Andean Area	1,081,420	1,196,800	803,265	887,175	3,968,660	758,870	1,932,000	6,224,450	1,737,410	10,652,730	5,942,359	6,779,178	12,721,537
Bolivia	1,081,420	1,196,800	192,000	466,050	2,936,270	0	0	0	0	0	976,469	1,257,704	2,234,173
Colombia	0	0	0	0	0	127,870	97,000	4,000,000	0	4,224,870	2,223,312	1,732,562	3,955,874
Ecuador	0	0	50,000	0	50,000	181,000	1,385,000	0	0	1,566,000	180,000	1,330,988	1,510,988
Perú	0	0	370,120	239,880	610,000	0	0	1,976,940	1,544,170	3,521,110	1,989,441	1,946,787	3,936,228
Venezuela	0	0	191,145	181,245	372,390	450,000	450,000	247,510	193,240	1,340,750	573,137	511,137	1,084,274
Southern Cone	0	0	1,250,000	1,200,000	2,450,000	400,000	430,000	0	40,000	870,000	1,407,486	1,168,054	2,575,540
Argentina	0	0	850,000	850,000	1,700,000	0	0	0	0	0	850,000	850,000	1,700,000
Chile	0	0	400,000	350,000	750,000	0	0	0	0	0	120,177	94,832	215,009
Paraguay	0	0	0	0	0	400,000	430,000	0	0	830,000	437,309	223,222	660,531
Uruguay	...	...	...	...	0	...	...	...	40,000	40,000	0	0	0
Brasil	0	0	28,512,000	26,000,000	54,512,000	0	0	0	0	0	18,707,979	20,449,841	39,157,820
Central America	0	0	1,418,000	1,647,610	3,065,610	1,610,000	1,060,000	0	0	2,670,000	2,565,544	2,674,554	5,240,098
Belice	...	...	...	...	0	...	...	...	...	0	0	0	0
Costa Rica	0	0	0	0	0	0	10,000	0	0	10,000	0	8,970	8,970
El Salvador	0	0	718,000	847,610	1,565,610	0	0	0	0	0	566,370	666,990	1,233,360
Guatemala	0	0	0	0	0	1,200,000	800,000	0	0	2,000,000	1,100,759	1,139,822	2,240,581
Honduras	0	0	700,000	800,000	1,500,000	0	0	0	0	0	452,070	620,583	1,072,653
Nicaragua	0	0	0	0	0	400,000	250,000	0	0	650,000	442,719	231,495	674,214
Panamá	0	0	0	0	0	10,000	0	0	0	10,000	3,626	6,694	10,320
México	0	0	0	0	0	13,994,160	14,641,580	0	0	28,635,740	13,722,168	14,893,470	28,615,638
Latin Caribbean	0	0	640,000	800,000	1,440,000	0	0	312,750	81,358	394,108	615,194	610,671	1,225,865
Cuba	0	0	640,000	800,000	1,440,000	0	0	0	0	0	579,443	569,925	1,149,368
Haití	...	...	...	...	0	...	...	...	...	0	0	0	0
Dominican Republic	0	0	0	0	0	0	0	312,750	81,358	394,108	35,751	40,746	76,497

...Without information.

Source: Reports of the countries to the VIII REDIPRA, 2000 and IX REDIPRA, 2002.

Table 11
**Estimated Canine Population, Number and Coverage of Vaccinated Dogs, both Observed and Eliminated,
 by Subregion and Country. Latin America, 2000-2001.**

Subregion / Country	Estimated Canine Population		Number and Proportion of Dogs											
			Observed				Eliminated				Vaccinated			
	2000	2001	2000	%	2001	%	2000	%	2001	%	2000	%	2001	%
LATIN AMERICA	61,269,869	65,128,785	245,534	0.4	247,717	0.4	742,255	1.2	841,437	1.3	39,129,360	63.9	42,300,687	64.9
Andean Area	13,034,038	13,607,003	138,422	1.1	138,079	1.0	160,830	1.2	177,519	1.3	5,993,253	46.0	6,690,489	49.2
Bolivia	1,356,202	1,552,721	...	...	...	...	8,450	0.6	3,589	0.2	976,469	72.0	1,257,704	81.0
Colombia	4,229,301	4,384,339	9,271	0.2	14,699	0.3	13,387	0.3	22,290	0.5	2,223,312	52.6	1,732,562	39.5
Ecuador	1,801,376	1,826,566	6,011	0.3	5,899	0.3	36,487	2.0	35,248	1.9	180,991	10.0	1,197,868	65.6
Perú	2,687,215	2,824,034	77,272	2.9	66,765	2.4	38,599	1.4	39,722	1.4	1,989,441	74.0	1,946,787	68.9
Venezuela	2,959,944	3,019,343	45,868	1.5	50,716	1.7	63,907	2.2	76,670	2.5	623,040	21.0	555,568	18.4
Southern Cone	6,892,132	6,943,552	24,122	0.3	23,943	0.3	48,803	0.7	33,055	0.5	1,332,557	19.3	1,155,121	16.6
Argentina	3,699,000	3,745,000	0	0.0	0	0.0	0	0.0	0	0.0	849,950	23.0	850,000	22.7
Chile	2,240,341	2,268,819	10,910	0.5	13,299	0.6	47,082	2.1	31,893	1.4	120,177	5.4	94,832	4.2
Paraguay	549,637	563,328	12,580	2.3	10,037	1.8	1,721	0.3	1,162	0.2	362,430	65.9	210,289	37.3
Uruguay	403,154	366,405	632	0.2	607	0.2	0	0.0	0	0.0	0	0.0	0	0.0
Brasil	20,104,478	20,352,482	ND	ND	ND	ND	117,996	0.6	169,568	0.8	14,931,026	74.3	16,286,771	80.0
Central America	3,959,674	4,035,997	13,011	0.3	13,033	0.3	1,381	0.0	2,706	0.1	2,535,167	64.0	2,664,313	66.0
Belize	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Costa Rica	289,689	318,644	25	0.0	31	0.0	6	0.0	9	0.0	0	0.0	18,572	5.8
El Salvador	713,861	759,964	0	0.0	0	0.0	0	0.0	0	0.0	566,370	79.3	666,990	87.8
Guatemala	1,680,336	1,655,537	ND	ND	ND	ND	ND	ND	ND	ND	1,101,129	65.5	1,139,752	68.8
Honduras	662,816	688,880	3,289	0.5	3,240	0.5	792	0.1	2,228	0.3	421,323	63.6	601,495	87.3
Nicaragua	612,972	612,972	9,697	1.6	9,762	1.6	583	0.1	469	0.1	442,719	72.2	231,495	37.8
Panamá	...	...	0	0.0	0	0.0	0	0.0	0	0.0	3,626	0.0	6,009	0.0
México	15,305,419	18,172,565	30,976	0.2	34,034	0.2	309,400	2.0	336,329	1.9	13,722,168	89.7	14,893,525	82.0
Latin Caribbean	1,974,128	2,017,186	39,003	2.0	38,628	1.9	103,845	5.3	122,260	6.1	615,189	31.2	610,468	30.3
Cuba	1,118,768	1,122,969	27,500	2.5	27,491	2.4	103,317	9.2	118,910	...	579,443	51.8	569,925	50.8
Haití	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dominican Republic	855,360	894,217	11,503	1.3	11,137	1.2	528	0.1	3,350	0.4	35,746	4.2	40,543	4.5

Without information.

NA Not available. Source: Reports of the countries to the VIII REDIPRA, 2000 and IX REDIPRA, 2002.

Table 12
Number of Vaccinated Dogs, by Rabies-affected and Non-affected Countries and Political Divisions.
Latin America, 2000-2001.

Country / Political Divisions	2000	2001
Argentina	849,950	850,000
Affected	357,450	316,200
Chaco	72,750	60,600
Corrientes	70,750	53,700
Formosa	34,750	30,500
Jujuy	49,700	50,300
Misiones	52,000	50,700
Salta	77,500	70,400
Not Affected	492,500	533,800
Belice	0	0
Bolivia	976,469	1,257,704
Affected	926,608	1,196,841
Chuquisaca	57,305	73,537
Cochabamba	295,521	394,743
La Paz	276,051	387,272
Oruro	59,890	64,030
Potosi	41,351	46,944
Santa Cruz	133,287	160,461
Tarija	63,203	69,854
Not Affected	49,861	60,863
El Beni	43,111	49,227
Pando	6,750	11,636
Brasil	14,931,026	16,286,771
Affected	9,182,561	10,185,429
Acre	58,470	60,272
Alagoas	227,579	256,545
Amazonas	228,636	252,680
Bahia	1,332,039	1,445,706
Ceara	597,476	715,055
Distrito Federal	198,863	192,245
Espirito Santo	347,341	392,850
Goias	752,740	846,865
Maranhao	378,083	398,238
Mato Grosso	373,308	415,902
Mato Grosso do Sul	323,500	354,043
Minas Gerais	1,842,640	2,175,191
Para	668,464	676,588
Paraiba	304,794	310,715
Parana	149,827	189,162
Pernambuco	645,548	666,675
Piaui	291,136	310,310
Rondonia	179,793	220,490
Sergipe	161,473	172,863
Tocantins	120,851	133,034

Source: Reports of the countries to the IX REDIPRA, 2002.

Table 12
**Number of Vaccinated Dogs, by Rabies-affected and Non-affected Countries and Political Divisions.
Latin America, 2000-2001.**

Country / Political Divisions	2000	2001
Not affected	5,748,465	6,101,342
Amapa	38,102	44,591
Rio de Janeiro	1,566,462	1,628,320
Rio Grande do Norte	210,370	232,346
Rio Grande do Sul	0	0
Roraima	27,305	30,300
Santa Catarina	0	0
Sao Paulo	3,906,226	4,165,785
Chile	120,177	94,832
Not affected	120,177	94,832
I - Región (Tarapaca)	19,387	21,456
II - Región (Antofagasta)	0	0
III - Región (Atacama)	0	0
IV - Región (Coquimbo)	410	6,089
IX - Región (Araucania)	0	0
Region Metropolitana	60,373	21,865
V - Región (Valparaiso)	0	0
VI - Región (O'Higgins)	0	0
VII - Región (Maule)	8,247	7,959
VIII - Región (Bio-Bio)	23,540	25,024
X - Región (Los Lagos)	8,220	12,439
XI - Región (Aisen)	0	0
XII - Región (Magallanes)	0	0
Colombia	2,223,312	1,732,562
Affected	995,606	768,101
Atlantico	155,759	138,963
Bolívar	135,032	146,720
Cesar	51,218	52,397
Córdoba	58,346	86,055
Cundinamarca	427,739	186,885
Magdalena	87,081	95,351
Putumayo	29,389	7,739
Sucre	51,042	53,991
Not affected	1,227,706	964,461
Costa Rica	0	18,572
Affected	0	730
Puntarenas	0	730
Not affected	0	17,842
Alajuela	0	5,695
Guanacaste	0	2,009
Heredia	0	825
Limon	0	392
Cuba	579,443	569,925
Affected	521,421	525,433

Source: Reports of the countries to the IX REDIPRA, 2002.

Table 12
Number of Vaccinated Dogs, by Rabies-affected and Non-affected Countries and Political Divisions.

Country / Political Divisions	2000	2001
Camaguey	92,341	28,520
Ciego de Avila	50,526	15,510
Cienfuegos	21,879	31,499
Ciudad de la Habana	106,120	137,727
Holguin	0	38,522
La Habana	17,170	49,301
Las Tunas	33,297	48,909
Matanzas	34,472	66,255
Pinar del Rio	86,234	29,383
Sancti Spiritus	40,980	34,195
Villa Clara	38,402	45,612
Not affected	58,022	44,492
Granma	25,346	11,279
Guantanamo	0	7,979
Isla de la Juventud	7,656	5,039
Santiago de Cuba	25,020	20,195
Ecuador	180,991	1,197,868
Affected	156,597	933,496
Azuay	9,339	84,537
Canar	111	33,100
Chimborazo	4,469	24,407
Cotopaxi	2,994	49,510
El Oro	19,639	56,013
Esmeraldas	209	27,246
Guayas	81,803	263,328
Los Rios	5,347	55,000
Morona-Santiago	793	13,201
Napo	25	6,058
Pastaza	1,442	7,044
Pichincha	26,417	247,679
Sucumbios	761	14,028
Tungurahua	3,248	52,345
Not affected	24,394	264,372
Bolivar	7,900	17,059
Carchi	3,279	21,094
Imbabura	3,861	34,000
Loja	52	64,179
Manabi	9,217	115,616
Orellana	11	6,572
Zamora-Chinchiipe	74	5,852
El Salvador	566,370	666,990
Affected	474,108	568,191
Chalatenango	25,947	27,585
Cuscatlan	27,133	40,807
La Libertad	41,228	40,376

Source: Reports of the countries to the IX REDIPRA, 2002

Table 12
Number of Vaccinated Dogs, by Rabies-affected and Non-affected Countries and Political Divisions.
Latin America 2000-2001

Country / Political Divisions	2000	2001
La Paz	32,825	46,661
La Union	32,620	43,667
Morazan	36,376	36,845
San Miguel	51,838	59,014
San Salvador	119,613	134,140
San Vicente	24,660	27,382
Santa Ana	41,306	55,043
Usulután	40,562	56,671
Not affected	92,262	98,799
Ahuachapán	33,791	40,750
Cabanas	23,973	23,262
Sonsonate	34,498	34,787
Guatemala	1,101,129	1,139,752
Affected	1,101,129	1,139,752
Alta Verapaz	79,203	63,749
Baja Verapaz	25,660	20,727
Chimaltenango	42,124	48,363
Chiquimula	34,615	41,015
El Progreso	14,172	14,610
Escuintla	49,246	57,621
Guatemala	153,280	134,144
Huehuetenango	100,595	107,954
Ixcán	2,629	5,415
Ixil	0	13,825
Izabal	52,890	39,818
Jalapa	35,675	35,265
Jutiapa	54,451	52,964
Peten	24,499	37,434
Quezaltenango	81,535	92,583
Quiché	51,526	53,001
Retalhuleu	27,786	30,356
Sacatepequez	20,756	21,707
San Marcos	89,552	92,709
Santa Rosa	39,546	33,402
Solola	23,800	32,748
Suchitepequez	37,831	39,923
Totonicapán	41,333	49,123
Zacapa	18,425	21,296
Haití	0	0
Honduras	421,323	601,495
Affected	153,576	167,030
Not affected	267,747	434,465
México	13,722,168	14,893,525
Affected	9,071,935	9,918,984

Source: Reports of the countries to the IX REDIPRA, 2002.

Table 12
**Number of Vaccinated Dogs, by Rabies-affected and Non-affected Countries and Political Divisions.
Latin America, 2000-2001.**

Country / Political Divisions	2000	2001
Campeche	103,680	122,554
Chiapas	294,901	402,027
Coahuila	199,650	238,381
Distrito Federal	1,067,874	1,110,219
Durango	168,915	194,698
Guerrero	418,085	429,936
Mexico	2,475,850	2,700,705
Michoacan	734,906	816,366
Morelos	348,982	328,223
Oaxaca	369,389	381,137
Puebla	1,267,697	1,585,485
Tlaxcala	330,356	319,785
Veracruz	1,044,708	1,014,481
Yucatan	246,942	274,987
Not affected	4,650,233	4,974,541
Aguascalientes	77,475	83,600
Baja California	163,513	207,534
Baja California Sur	55,217	61,897
Chihuahua	253,769	269,320
Colima	69,245	71,002
Guanajuato	666,896	765,442
Hidalgo	567,045	531,318
Jalisco	543,281	523,226
Nayarit	138,486	140,433
Nuevo Leon	284,734	339,164
Queretaro	158,651	180,377
Quintana Roo	79,311	98,272
San Luis Potosi	391,692	355,210
Sinaloa	228,467	267,455
Sonora	272,760	313,971
Tabasco	276,231	291,156
Tamaulipas	257,352	281,432
Zacatecas	166,108	193,732
Nicaragua	442,719	231,495
Affected	34,373	13,959
Chontales	34,373	13,959
Not affected	408,346	217,536
Boaco	12,197	9,317
Carazo	18,571	7,945
Chinandega	46,556	21,563
Esteli	103	94
Granada	20,649	2,654
Jinotega	16,065	5,579
Leon	41,196	18,732
Madriz	2,448	6,038
Managua	150,051	107,091

Source: Reports of the Countries to the IX REDIPRA, 2002.

Table 12
Number of Vaccinated Dogs, by Rabies-affected and Non-affected Countries and Political Divisions.
Latin America 2000-2001.

Country / Political Divisions	2000	2001
Masaya	35,119	3,422
Matagalpa	45,530	22,805
Nueva Segovia	813	62
Reg. Aut. Atlantico Norte	3,245	1,764
Reg. Aut. Atlantico Sul	1,578	0
Rio San Juan	27	3,829
Rivas	14,198	6,641
Panamá	3,626	6,009
Not affected	3,626	6,009
Chiriqui	853	2,285
Cocle	0	61
Colon	326	960
Darien	223	0
Panama	2,224	2,206
San Blas	0	400
Veraguas	0	97
Paraguay	362,430	210,289
Affected	311,755	185,864
Alto Parana	43,577	5,750
Caaguazu	3,904	1,990
Central	168,370	143,469
Cordillera	27,614	3,770
Guaira	15,213	9,910
Itapua	35,896	18,500
Paraguari	15,493	1,725
Presidente Hayes	1,688	750
Not affected	50,675	24,425
Alto Paraguay	0	0
Amambay	4,008	0
Boqueron	0	0
Caazapa	3,712	1,850
Canindeyu	1,791	2,000
Concepcion	15,606	2,500
Misiones	10,803	8,850
Neembucu	3,873	6,100
San Pedro	10,882	3,125
Perú	1,989,441	1,946,787
Affected	258,580	402,827
Cajamarca	1,809	141,816
Piura	150,973	146,567
Puno	105,798	114,444
Not affected	1,730,861	1,543,960
Amazonas	1,626	37,397
Ancash	106,485	32,213
Apurimac	34,094	28,877

Source: Reports of the countries to the IX REDIPRA, 2002.

Table 12
**Number of Vaccinated Dogs, by Rabies-affected and Non-affected Countries and Political Divisions.
Latin America, 2000-2001.**

Country / Political Divisions	2000	2001
Arequipa	108,407	154
Ayacucho	67,443	68,914
Callao	64,573	72,582
Cuzco	154,170	0
Huancavelica	0	48,671
Huanuco	68,453	3,544
Ica	847	78,799
Junin	168,377	119,784
La Libertad	152,432	131,739
Lambayeque	5,981	76,596
Lima	663,897	689,141
Loreto	31,755	1,747
Madre de Dios	10,212	8,823
Moquegua	12,720	19
Pasco	41	21,034
San Martin	3,876	72,475
Tacna	23,340	49
Tumbes	16,918	15,200
Ucayali	35,214	36,202
República Dominicana	35,746	40,543
Affected	33,937	36,045
Dajabón	19,217	254
Distrito Nacional	2,214	4,628
El Seybo	140	6,902
Hato Major	216	2,173
Independencia	1,232	4,930
La Altagracia	5	11
Maria Trinidad Sánchez	70	73
Monte Plata	180	93
San Cristóbal	194	656
San Juan	9,532	345
San Pedro de Macoris	617	15,797
Sánchez Ramírez	320	183
Not affected	1,809	4,498
Azua	159	34
Bahoruco	7	0
Barahona	226	78
Duarte	12	41
Eliás Piña	12	2
Espaillat	8	0
La Romana	483	0
La Vega	111	262
Monseñor Nouel	0	0
Monte Cristi	125	8
Pedernales	5	2,839
Peravia	1	6

Source: Report of the countries to the IX REDIPRA, 2002.

Table 12
**Number of Vaccinated Dogs, by Rabies-affected and Non-affected Countries and Political Divisions.
Latin America, 2000-2001.**

Country / Political Divisions	2000	2001
Puerto Plata	0	505
Salcedo	455	165
Samaná	0	85
Santiago	56	319
Santiago Rodríguez	146	116
Valverde	3	38
Uruguay	0	0
Not affected	0	0
Artigas	0	0
Canelones	0	0
Cerro Largo	0	0
Colonia	0	0
Durazno	0	0
Flores	0	0
Florida	0	0
Lavalleja	0	0
Maldonado	0	0
Montevideo	0	0
Paysandu	0	0
Rio Negro	0	0
Rivera	0	0
Rocha	0	0
Salto	0	0
San Jose	0	0
Soriano	0	0
Tacuarembó	0	0
Treinta y Tres	0	0
Venezuela	623,040	555,568
Affected	245,050	232,512
Miranda	22,685	12,016
Tachira	70,211	67,407
Zulia	152,154	153,089
Not affected	377,990	323,056
Amazonas	3,575	2,590
Anzoategui	14,000	20,965
Apure	20,416	26,324
Aragua	71,022	42,230
Barinas	49,315	24,147
Bolivar	4,630	5,254
Carabobo	51,017	34,494
Cojedes	13,360	6,672
Delta Amacuro	14,087	6,772
Distrito Federal	20,302	23,825
Falcon	4,623	13,706
Guarico	21,837	28,342

Source: Reports of the countries to the IX REDIPRA, 2002.

Table 12

**Number of Vaccinated Dogs, by Rabies-affected and Non-affected Countries and Political Divisions.
Latin America, 2000-2001.**

Country / Political Divisions	2000	2001
Lara	13,403	3,952
Merida	21,532	14,400
Monagas	6,310	3,513
Nueva Esparta	7,411	1,333
Portuguesa	16,425	9,290
Sucre	5,592	1,700
Trujillo	8,003	10,617
Yaracuy	11,130	42,930
Total:	39,129,360	42,300,687

Table 13

Territorial Extension (in Km²), Number of Human and Canine Populations and Canine Vaccination Coverage in Affected and Non-affected Areas by Rabies transmitted by Dogs. Latin America. 2001.

Subregion / Country	Area ¹							
	Affected				Not affected			
	Area (in Km ²)	Human population	Canine population	Coverage (%)	Area (in Km ²)	Human population	Canine population	Coverage (%)
LATIN AMERICA	9,625,881	234,485,739	32,775,261	81.1	8,397,811	266,300,511	32,353,524	48.6
Andean Area	1,387,479	44,615,553	6,057,349	58.3	3,369,849	70,860,999	7,549,654	41.8
Bolivia	821,190	7,859,279	1,474,777	81.2	277,391	415,046	77,944	78.0
Colombia	135,640	15,170,067	1,571,480	48.9	1,032,243	27,865,327	2,812,859	34.0
Ecuador	206,586	10,184,925	1,454,990	64.2	82,945	2,601,034	371,576	71.0
Perú	141,913	4,398,609	464,243	86.8	1,143,305	22,350,363	2,359,791	65.0
Venezuela	82,150	7,002,673	1,091,859	21.3	833,965	17,629,229	1,927,484	17.0
Southern Cone	634,343	9,151,655	913,995	54.9	3,482,643	52,554,219	6,029,557	10.8
Argentina	498,406	4,761,671	475,000	66.6	2,281,944	32,745,699	3,270,000	16.0
Chile	0	0	0	0.0	754,813	15,407,579	2,268,819	4.0
Paraguay	135,937	4,389,984	438,995	42.3	270,870	1,243,375	124,333	20.0
Uruguay	0	0	0	0.0	175,016	3,157,566	366,405	0.0
Brasil	7,422,223	97,739,360	11,866,864	85.8	1,089,013	69,844,618	8,485,618	71.9
Central America	160,629	19,053,316	2,527,701	74.8	318,504	15,139,893	1,508,296	51.4
Costa Rica	11,276	384,966	54,994	1.3	36,245	1,845,565	263,650	7.0
El Salvador	17,468	5,555,870	643,273	88.3	3,567	941,020	116,691	85.0
Guatemala	108,889	11,678,411	1,655,537	68.8	0	0	0	0.0
Honduras	16,618	1,289,434	173,897	96.1	88,225	4,894,244	514,983	84.0
Nicaragua	6,378	144,635	0	0.0	114,950	4,903,775	612,972	35.0
Panamá	0	0	0	0.0	75,517	2,555,289	...	...
México	0	59,050,960	10,921,864	90.8	0	42,603,800	7,250,701	68.6
Latin Caribbean	21,207	4,874,895	487,488	115.2	137,802	15,296,982	1,529,698	3.2
Cuba	0	0	0	0.0	110,861	11,229,688	1,122,969	4.0
Dominican Republic	21,207	4,874,895	487,488	7.4	26,941	4,067,294	406,729	1.0

... Without information.

Source: Reports of the countries for the IX REDIPRA, 2002.

Table 14
Control of Rabies Cases, by Subregion and Country.
Latin America, 2000-2001.

Subregion / Country	Number of cases					
	Notified		Investigated		Controlled	
	2000	2001	2000	2001	2000	2001
LATIN AMERICA	13,862	14,321	13,451	13,938	3,402	3,529
Andean Area	682	667	317	231	592	595
Bolivia	360	417	...	...	342	397
Colombia	67	34	67	34	53	26
Ecuador	90	88	85	78	82	75
Perú	103	43	103	34	55	17
Venezuela	62	85	62	85	60	80
Southern Cone	30	56	30	56	30	56
Argentina	4	2	4	2	4	2
Chile	0	0	0	0	0	0
Paraguay	26	54	26	54	26	54
Uruguay	0	0	0	0	0	0
Brasil	577	716	591	890	546	544
Central America	12,231	12,672	12,171	12,551	1,935	2,154
Belice	...	...	...	...	...	...
Costa Rica	0	0	0	0	0	0
El Salvador	60	140	ND	19	0	19
Guatemala	144	132	144	132	ND	ND
Honduras	13	8	13	8	13	8
Nicaragua	12,014	12,392	12,014	12,392	1,922	2,127
Panamá	0	0	0	0	0	0
México	244	117	244	117	201	87
Latin Caribbean	98	93	98	93	98	93
Cuba	34	30	34	30	34	30
Haití	...	...	...	...	...	...
Dominican Republic	64	63	64	63	64	63

NA Not available

Source: Reports of the countries to the VIII REDIPRA, 2000 and IX REDIPRA, 2002.

Table 15
Laboratories for Diagnosis and Quality Control of Vaccines by type of tests performed, Subregion and Country. Latin America, 2001.

Subregion / Country	Number of laboratories by type of tests performed								
	I.F.	Viral isolation		Antibody Titration		Viral typification		Vaccine potency	Other tests
		Mice	Cells	Mice	Cells	Antigenic	Genetic		
LATIN AMERICA	101	54	9	13	7	10	4	18	18
Andean Area	27	10	5	5	4	5	2	8	5
Bolivia	3	1	1	1	1	1	0	1	0
Colombia	3	2	2	1	2	1	1	3	4
Ecuador	4	2	0	0	0	0	0	1	0
Perú	12	2	1	1	1	1	1	1	1
Venezuela	5	3	1	2	0	2	0	2	0
Southern Cone	13	4	2	3	2	3	2	4	0
Argentina	10	2	1	1	1	2	1	2	0
Chile	1	1	1	1	1	1	1	1	0
Paraguay	2	1	0	1	0	0	0	1	0
Uruguay	0	0	0	0	0	0	0	0	0
Brasil	32	29	1	2	1	1	0	2	3
Central America	6	4	0	1	0	0	0	2	6
Belize	...	...	...	...	...	...	...	...	...
Costa Rica	0	0	0	0	0	0	0	0	1
El Salvador	2	3	0	1	0	0	0	1	0
Guatemala	2	0	0	0	0	0	0	0	2
Honduras	1	0	0	0	0	0	0	0	2
Nicaragua	0	0	0	0	0	0	0	0	0
Panamá	1	1	0	0	0	0	0	1	1
México	17	5	0	0	0	1	0	1	3
Latin Caribbean	6	2	1	2	0	0	0	1	1
Cuba	4	2	1	2	0	0	0	1	1
Haití	...	...	...	...	...	...	...	...	...
Dominican Republic	2	0	0	0	0	0	0	0	0

... Without information.

Source: Reports of the countries to the VIII REDIPRA, 2000 and IX REDIPRA, 2002.

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