



Organización Panamericana de la Salud

Oficina Regional de la
Organización Mundial de la Salud

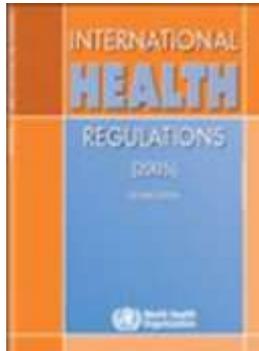
Presentation conducted during the *International Workshop of the Oswaldo Cruz Institute/FIOCRUZ for Leptospirosis Research Based on Country Needs & the 5th Global Leptospirosis Environmental Action Network (GLEAN) Meeting* on November 10-12, 2015, in Rio de Janeiro, Brazil .



LEPTOSPIROSIS HUMANA EN LA REGIÓN DE LAS AMÉRICAS

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OPS/CHA/IR, Washington DC

Contexto



IHR

<http://www.paho.org/english/ad/dp/cd/eer-ihrs.htm>



<http://www.glean-lepto.org/>



Americas

Natural disaster analysis

http://www.izs.it/vet_italiana/2012/48_2/193.pdf

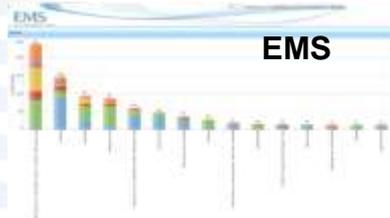


Figure 2
Number of leptospirosis cases reported by country (World Health Organization, 2012)



WHO
Burden of
Leptospirosis

<http://www.who.int/zoonoses/diseases/lerg/en/index4.html>

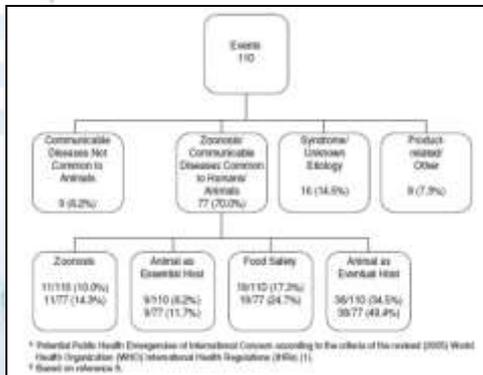


EMS



Risk and drivers analysis

<http://www.mdpi.com/1660-4601/9/11/3883>



Importance of the animal/human interface

http://new.paho.org/journal/index.php?option=com_docman&task=doc_download&gid=250&Itemid

Objetivos de trabajo

Apoyar a los países a **predecir, detectar, prevenir y responder** a los brotes de leptospirosis, así reduciendo la mortalidad y casos severos durante brotes, al igual que reduciendo el número de casos en áreas de riesgo, especialmente relacionados al medio ambiente.

Photos: SILAIS Chinandega, Nicaragua



Contexto

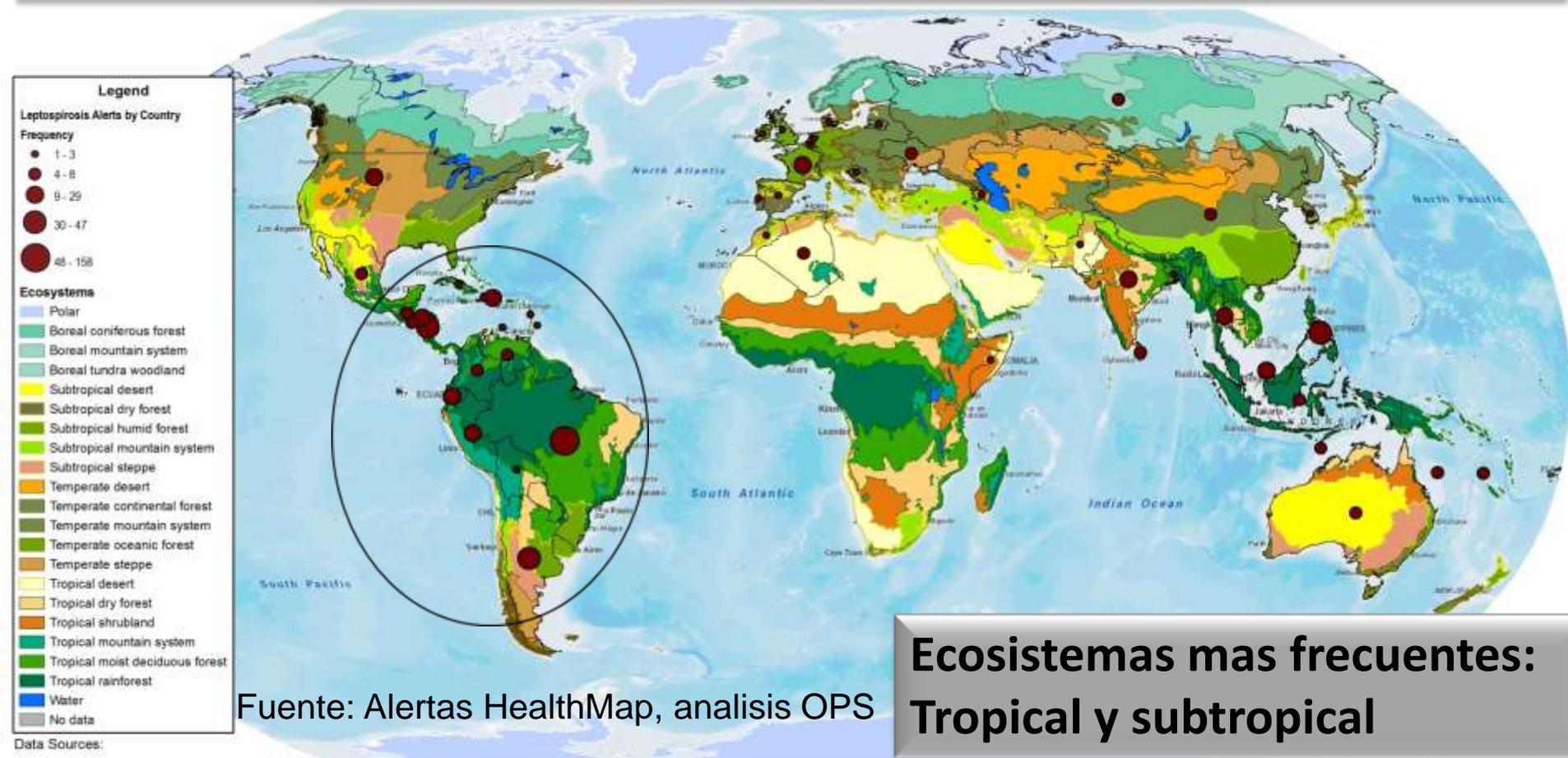
Enfoque “Una Salud”



La exposición indirecta a través del agua y la tierra contaminada por la orina de animales infectados es la vía más común de exposición de esta enfermedad en todo el mundo, que es un ejemplo perfecto de la interfaz animal-humano-ecosistema.

Américas: la región del mundo con mayor número de alertas por leptospirosis

Alertas globales por leptospirosis y ecosistemas, 2010 - 2014

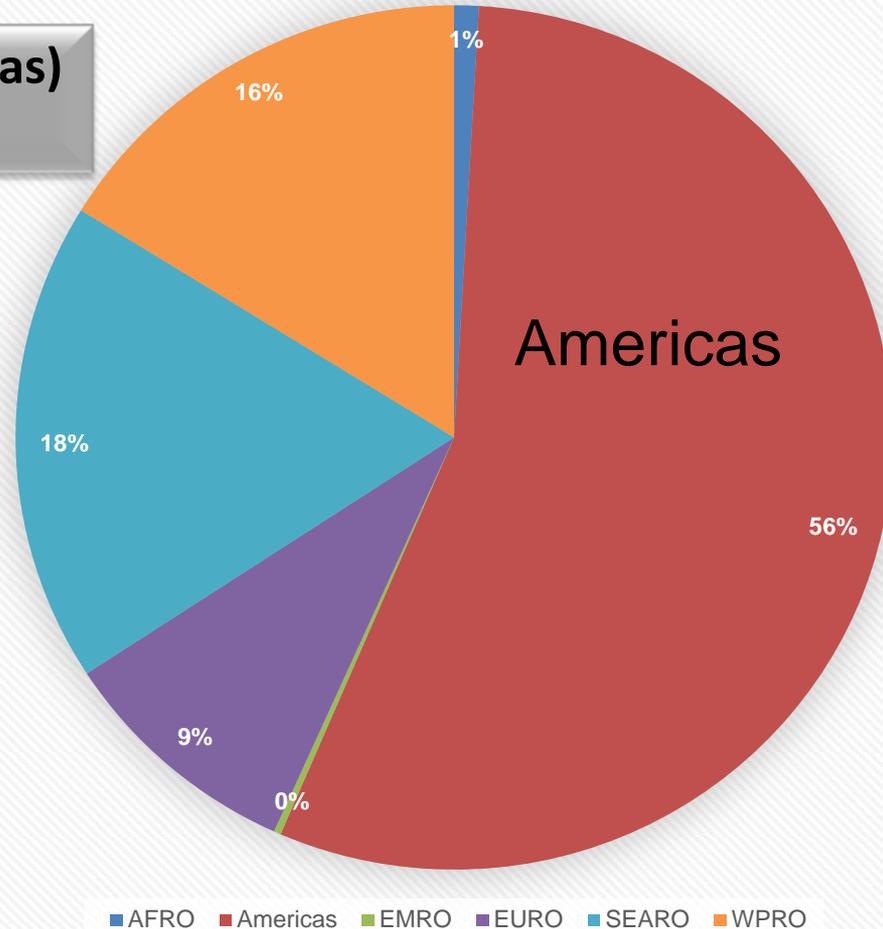


- Analizando la base de datos *HealthMap* (vigilancia en línea en tiempo real de amenazas emergentes para la salud), **772 alertas** de leptospirosis fueron reportados globalmente entre 2010 y 2014

Américas la región del mundo con mayor número de alertas por leptospirosis

Alertas globales por leptospirosis por región, 2010 - 2014

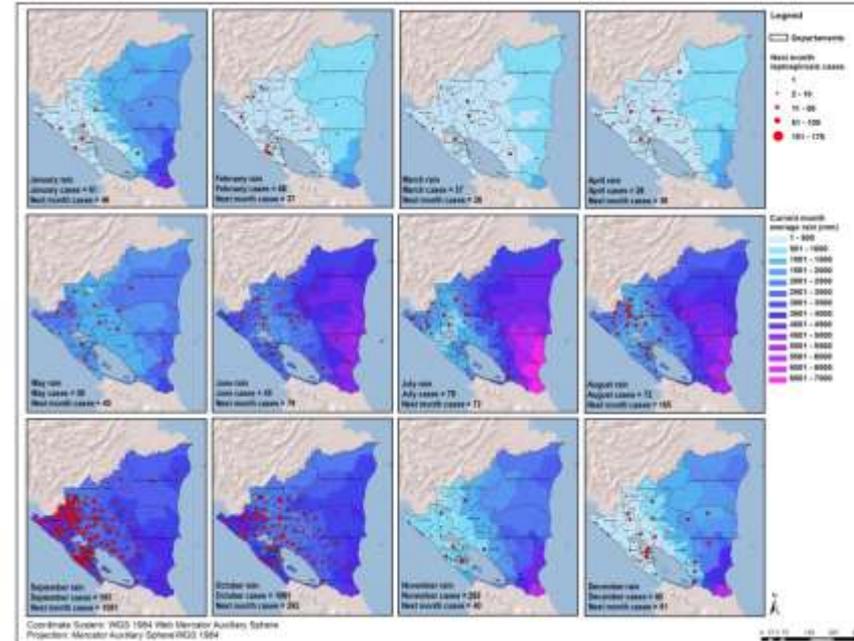
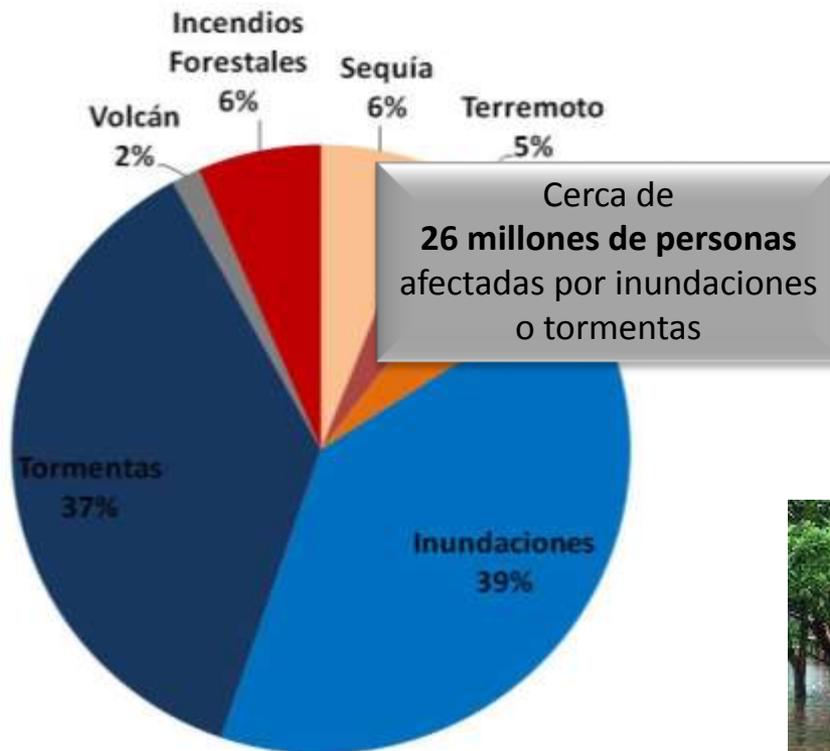
- Mas de la mitad (**429 alertas**) fueron en las Américas



Factores conductores

Ambientales – Lluvias fuertes e inundaciones

Desastres naturales América Latina y el Caribe, 2010-2012



Fuente: Estudio en Nicaragua. Schneider et al.

Fuente: EM-DAT, OFDA / CRED International Disaster; Análisis OPS/CHA/IR

Créditos: G. Moreno, Nicaragua

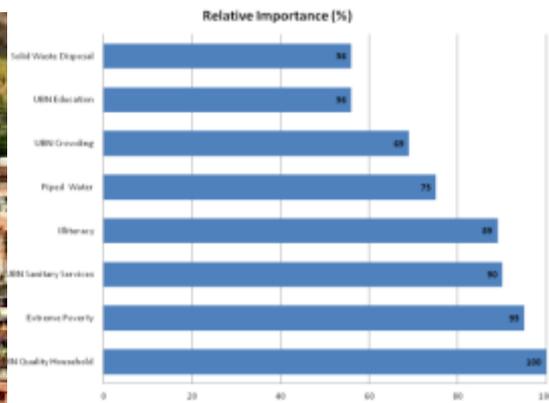
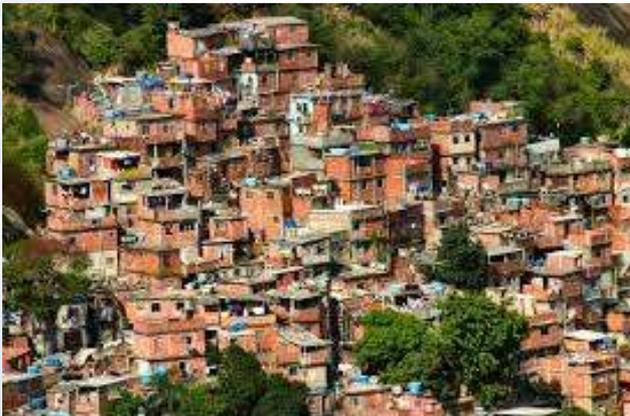
Factores conductores

Socioeconómicos - Pobreza

Áreas de bajos ingresos, acceso inadecuado a agua y saneamiento, construcción precaria de la vivienda, contacto cercano con basura y aguas residuales



Créditos: O. Chávez, Nicaragua



Fuente: Estudio en Nicaragua. Bacallo et al.



Factores conductores

Socioeconómicos – Procesos Productivos



Trabajadores de arrozales; de áreas de cultivo de tabaco; de mataderos; de alcantarillados y otros

Arrozales

Global = 740 millones de toneladas
Americas = 360 millones de toneladas
(48.6%)



Ganadería

Global = 63 millones de toneladas
Americas = 30 millones de toneladas (47.6%)

Indicadores Básicos - OPS

Base de datos de Indicadores Básicos en Salud de la OPS

- Un conjunto de 114 indicadores de salud
- Organizado por demografía, mortalidad, morbilidad, recursos/coberturas y socioeconómicos
- Los datos pueden ser explorados y filtrados por año y tema
- Los datos pueden ser también descargados para profundizar el análisis
- Incluye todos los 49 países o territorios de las Américas



English Español



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Country statistics

Presentations

Data and Statistics

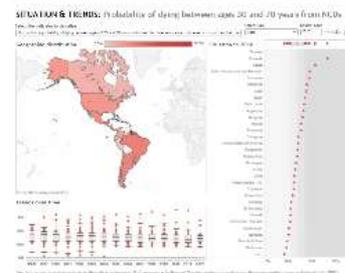
Health Situation in The Americas: Basic Health Indicators 2015

The PAHO/WHO "Basic Indicators 2015" presents the latest information available of core health indicators on demographic, socioeconomic characteristics as well as the health status and services at national and sub-regional level of the Americas.

The highlighted issue is avoidable mortality, a metrics that quantifies premature deaths – those occurring before age 75- that should not occur when timely and effective health care is available and when policies and programs are implemented for disease prevention. This PAHO publication should also serve as a model for countries' own health indicators publication that



Premature mortality due to Noncommunicable Diseases



Millennium Development Goals (MDGs)

MDG 4

Indicadores Básicos - OPS

Casos de leptospirosis, Americas, circa 2014

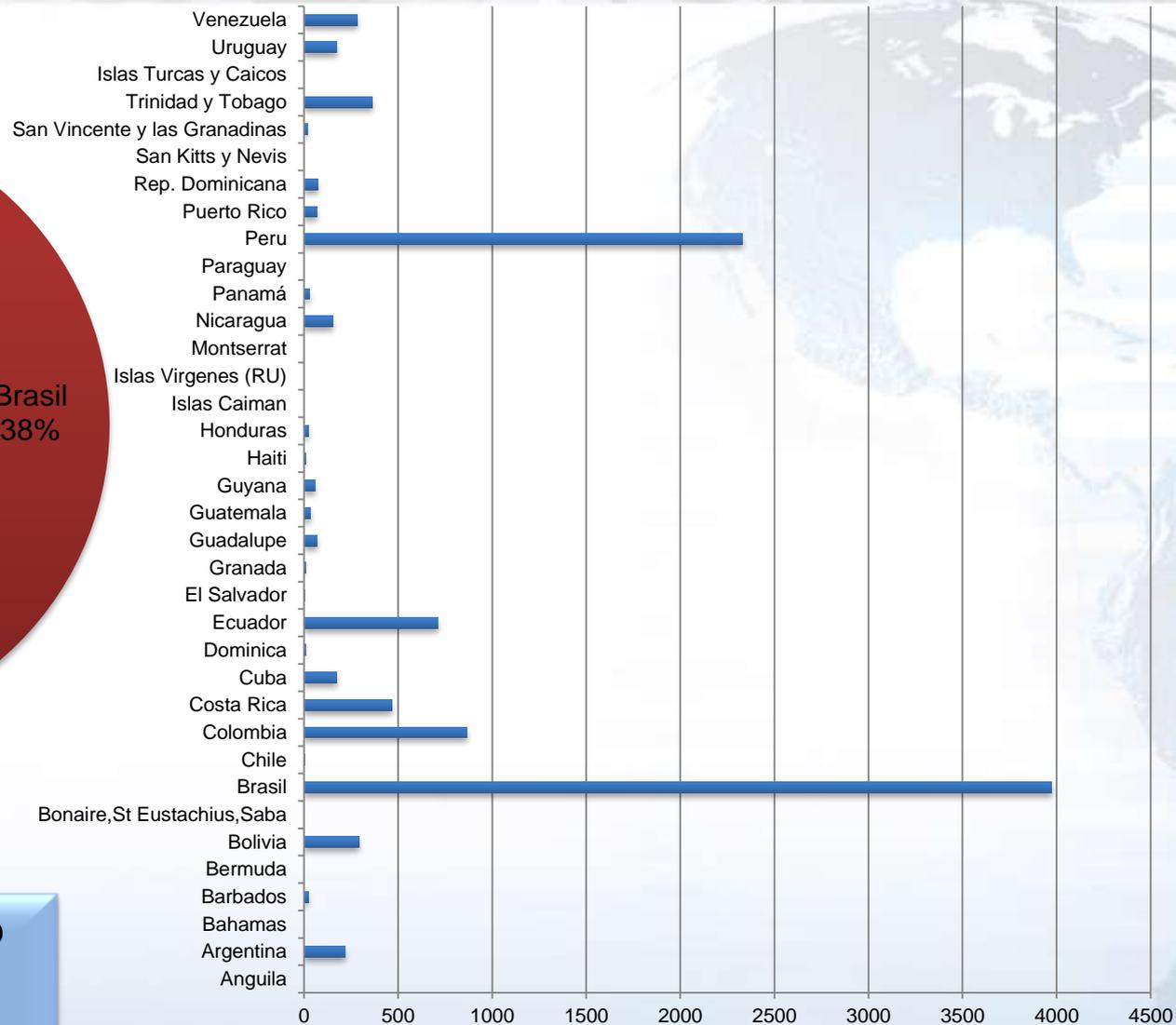
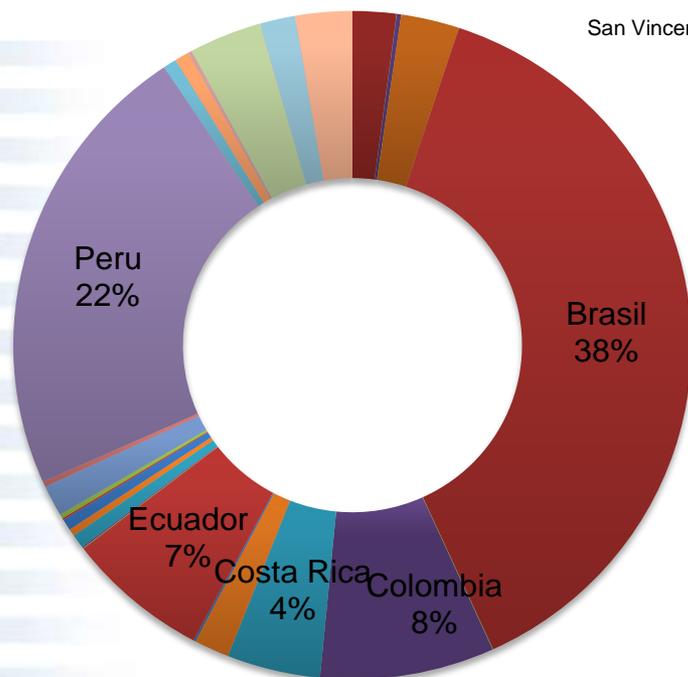
Por primera vez (2015) fue incluido casos de leptospirosis (por genero) en Datos Basicos-OPS

- ✓ 38 países/territorios informaron
- ✓ 28 reportaron casos humanos



Fuente: Indicadores Básicos de OPS, basado en la información oficial de los países, analisis OPS

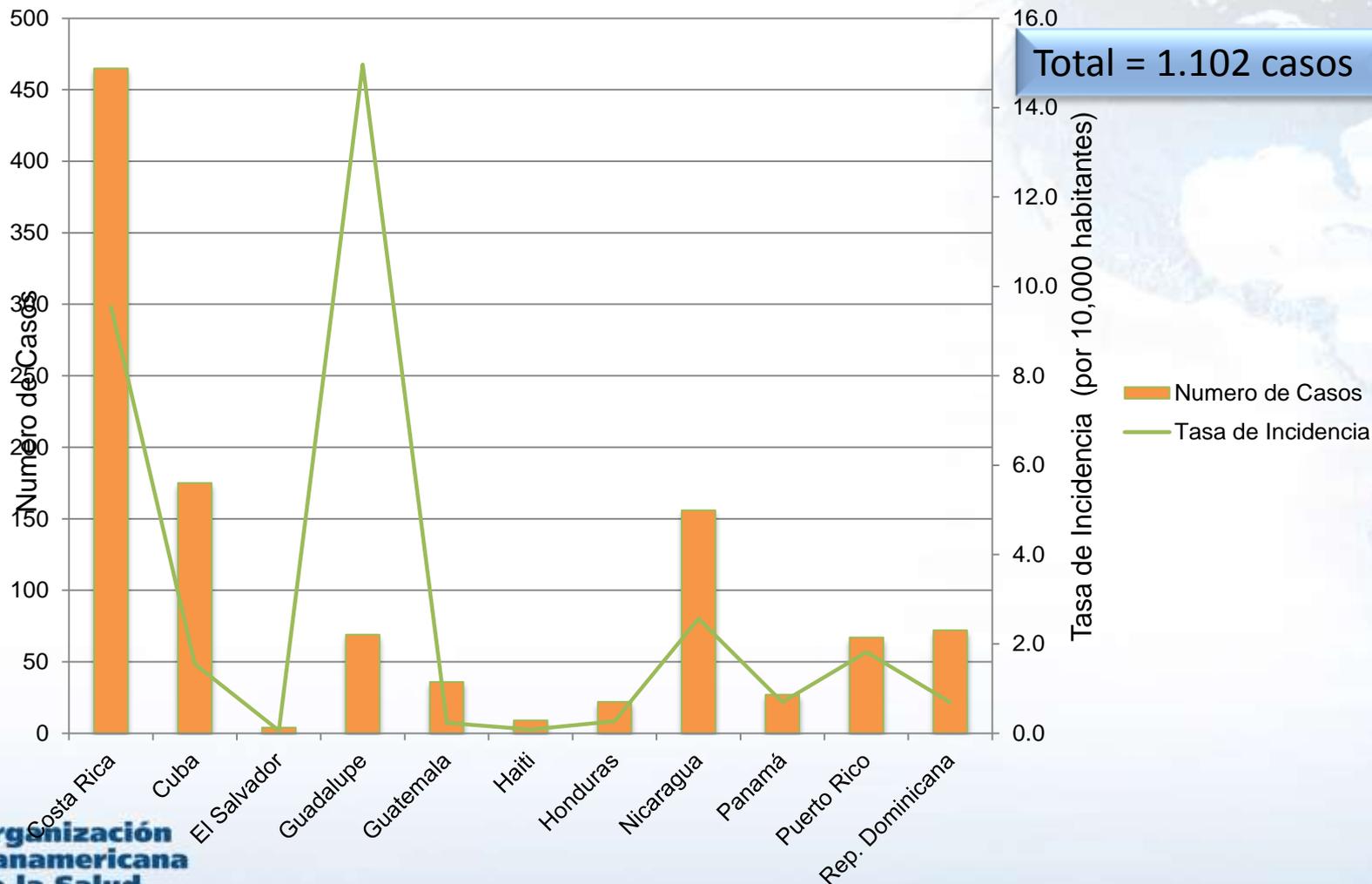
Casos de Leptospirosis en America Latina y el Caribe, circa 2014



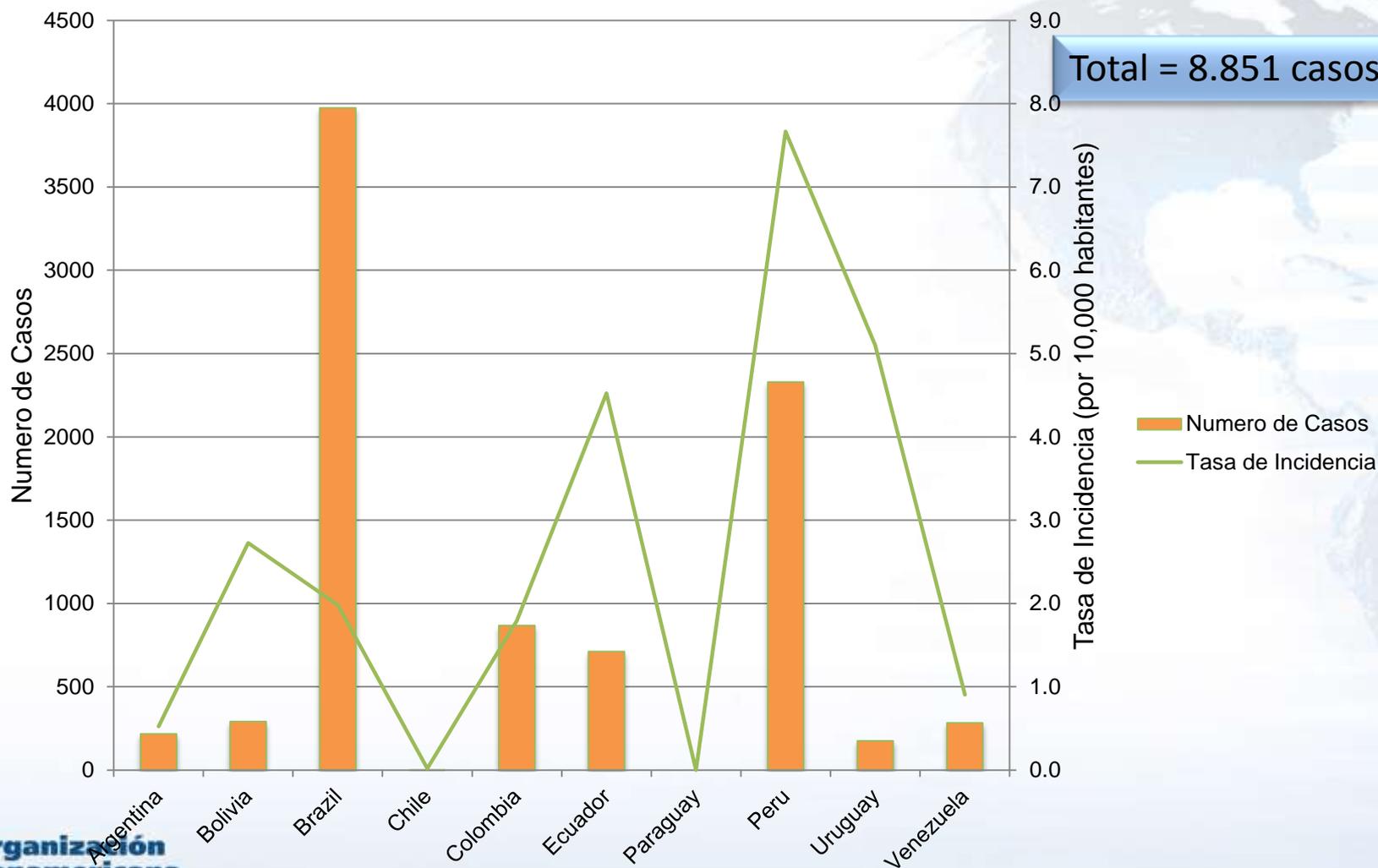
Total = 10.431 casos en el año en los sistemas de vigilancia nacionales

Fuente: Indicadores Básicos de OPS, basado en la información oficial de los países

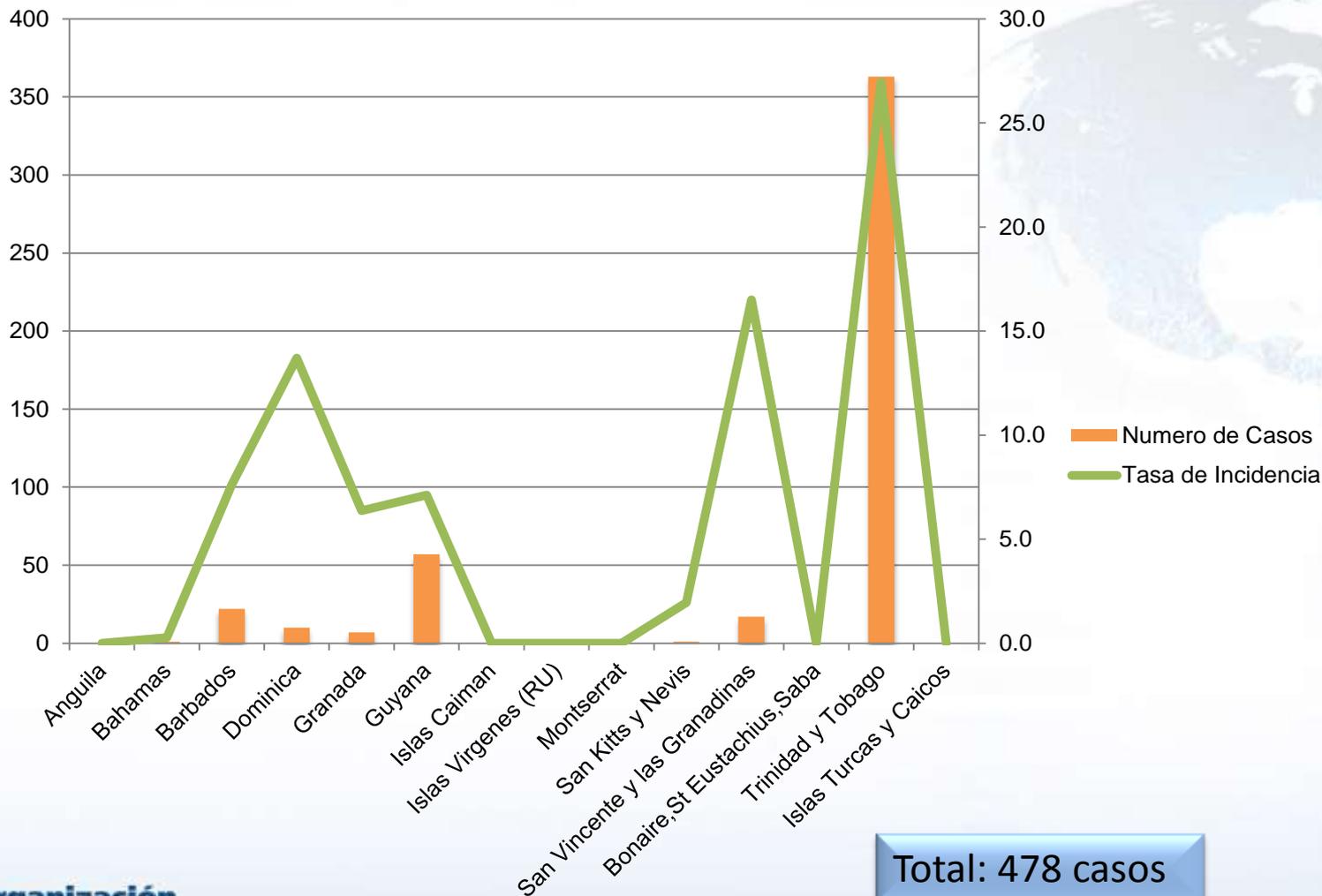
Casos de Leptospirosis en America Central y el Caribe Latino, circa 2014



Casos de Leptospirosis en Suramérica, circa 2014



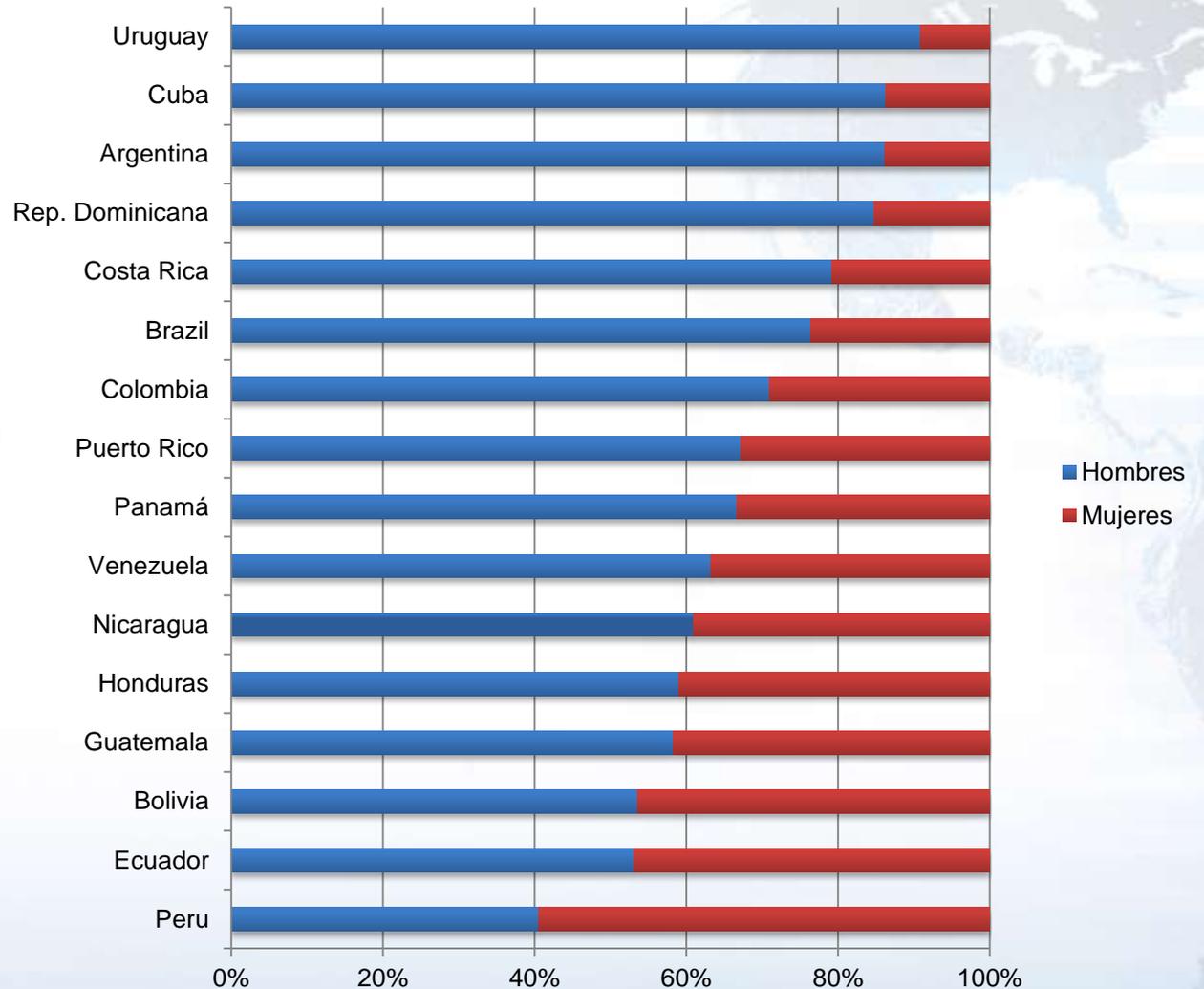
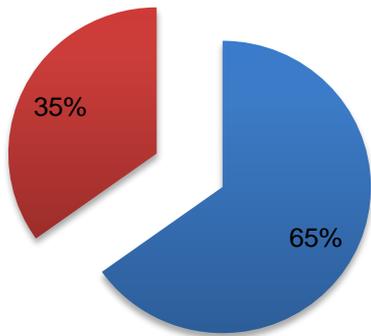
Casos de Leptospirosis en el Caribe No-Latino, circa 2014



Total: 478 casos

Casos de Leptospirosis por género y por país, America Latina, circa 2014

■ Hombres
■ Mujeres



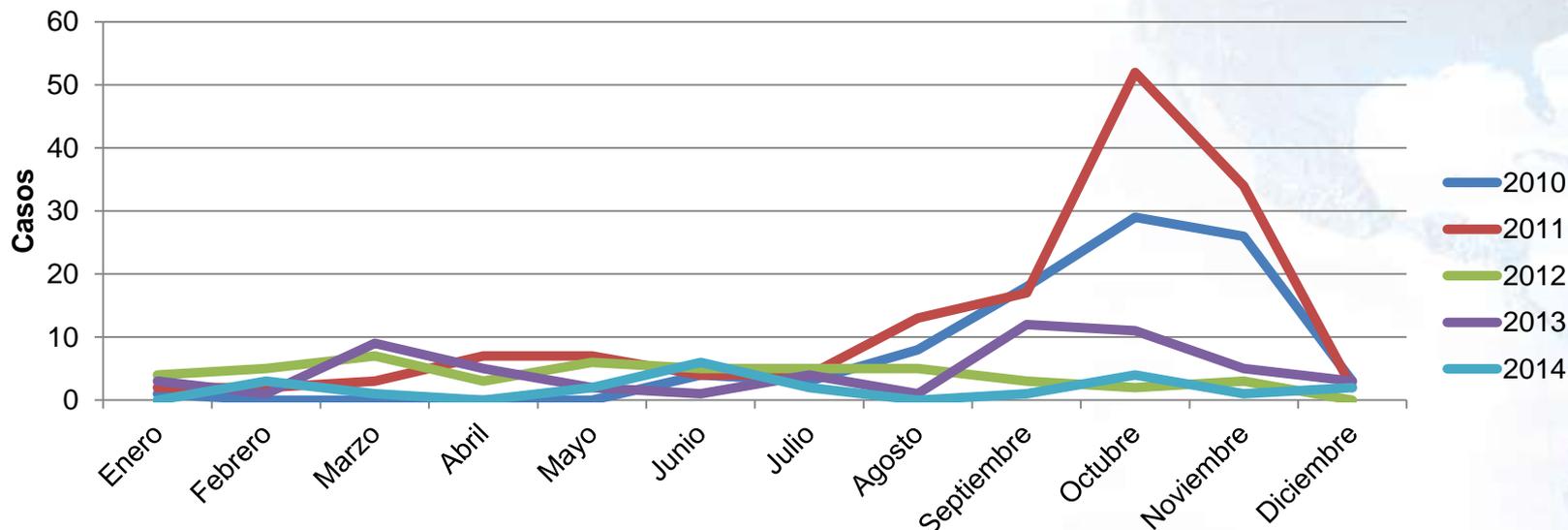
Porcentaje de casos de leptospirosis en hombres; ingreso per cápita; porcentaje de mujeres empleadas en la agricultura, por país, América Latina, circa 2014

Países	% male	GDP per capita (current US\$)	Employment in agriculture (% of female)
Peru	40.49	\$6,550.92	22.5
Ecuador	53.09	\$6,322.31	21.0
Bolivia	53.61	\$3,235.77	
Guatemala	58.33	\$3,666.96	14.6
Honduras	59.09	\$2,434.83	9.4
Nicaragua	60.90	\$1,963.05	
Panamá	66.67	\$11,948.85	7.1
Colombia	70.93	\$7,903.93	6.2
Brazil	76.45	\$11,384.62	11.0
Costa Rica	79.14	\$10,415.44	4.3
Rep. Dominicana	84.72	\$6,147.35	2.5
Argentina	86.18	\$12,568.57	0.3
Cuba	86.29	\$6,789.85	8.8

Perfil de País: Honduras



Casos de Leptospirrosis por Mes, Honduras, 2010-2014



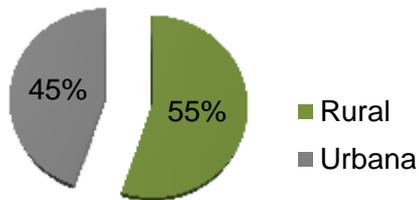
Mortalidad por Leptospirrosis (2010-2014)

Año	Casos	Defunciones	Tasa de Mortalidad
2010	92	7	8%
2011	147	2	1%
2012	48	1	2%
2013	57	1	2%
2014	22	0	0%

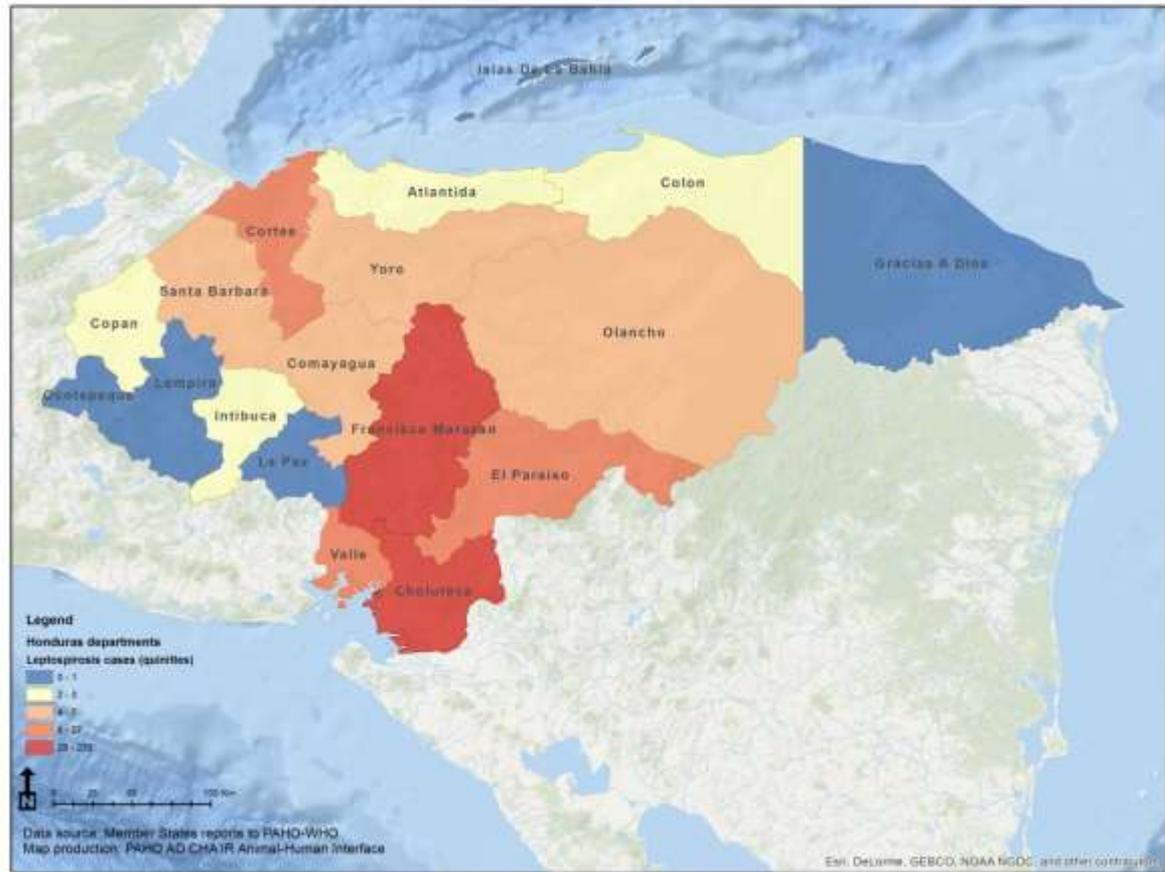
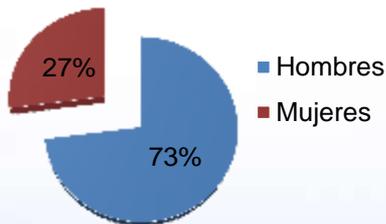
Perfil de País: Honduras



Casos de Leptospirosis por Zona, Honduras, 2010-2014



Casos de Leptospirosis por Genero, Honduras, 2010-2014



Actividades importantes – Reuniones nacionales y regionales y transferencia tecnologica

- ✓ **Foro Nacional de Leptospirosis**
- ✓ **Reunion Internacional de paises que enfrentan brotes de leptospirosis en las Americas**
Nicaragua, Agosto 2012



- ✓ **Ejercicio de simulacro de Salud y Agricultura**
Choluteca, Honduras, 2013

Actividades importantes – Reuniones GLEAN

- Apoyo a las iniciativas de la OMS y de GLEAN
- Participar en el pilar de Predicción



Reunion de GLEAN 2013
Brasilia, Brasil

During outbreaks * **Save lives**

- Deteccion temprana (RDT/IgM Elisa/MAT)
 - Tratamiento empirico de casos probables (antibiotico al nivel de clinical de salud comunitaria o nivel comunitario, incluyendo IV)
 - Proteccion individual (barreras; agua embotellada)
 - Vigilancia sindrómica EWARS
 - Prevencion Comunitaria (sin evidencia de quimioprofilaxis masiva de la poblacion entera; quimioprofilaxis pre-exposicion. Poblacion objetiva)
 - Vacunas. Sin evidencia actualmente
 - Comunicacion de riesgo
 - Control de roedores. Sin evidencia
- * Recomendaciones de GLEAN

Reunion de GLEAN 2014
Colombo, Sri Lanka



Actividades importantes – Diseminación

Health Topics
Publications
Data and Statistics
Projects and Programs
Links
PAHO in maps
PAHO in One Click
Press Room
Multimedia
Leptospirosis

Home
Detail Information
Fact Sheet
Current situation in selected countries
National Forum of Leptospirosis of Nicaragua
International Meeting of Countries that are Facing Leptospirosis Outbreaks in the Americas
Publications and Documents

Leptospirosis

Leptospirosis is a zoonotic disease with epidemic potential, especially after heavy rainfall. It occurs throughout the world and is emerging as an important public health problem in both tropical and subtropical countries, affecting mostly vulnerable populations (WHO 2010) WHO 2011). humans usually acquire leptospirosis through direct contact with the urine of infected animals or a urine-contaminated environment. [Read More](#)

Created by: D. Chávez, Nicaragua

Last Updated on Friday, 25 January 2013 20:51

Fact Sheet: Leptospirosis
[Click here to get more information](#)

Current situation in selected countries

- National Forum of Leptospirosis of Nicaragua
- International Meeting of Countries that are Facing Leptospirosis

[Read More...](#)

Publications and Documents

- WHO. Human Leptospirosis: Guidance for Diagnosis, Surveillance and Control, 2003
- PAHO. Zoonoses and Communicable Diseases Common to Man and

Related Sites

- WHO: Leptospirosis website
- WHO: Zoonoses and Veterinary Public Health - Leptospirosis
- PAHO: Member States websites

[Read More...](#)

Latest News

- La leptospirosis atenta contra la salud (Spanish only)

Del 14 al 16 de agosto de 2012, el Ministerio de Salud y la Organización Panamericana de la Salud realizaron el Foro Nacional y la Reunión Internacional sobre Leptospirosis.

International Meeting of Leptospirosis - Nicaragua (Spanish only)



WHO. Human Leptospirosis: Guidance for Diagnosis, Surveillance and Control, 2003



- Pagina de Leptospirosis en la pagina web de OPS (Creado en 2012; actualizado en 2014)

- Artículo especial de IJERPH en leptospirosis en el interface (2014) Y Editorial

• “La Leptospirosis preocupa la Region de las Américas” (*Revista do CFMV, Brasil , 2014*)

• “El concepto de “Una Salud” y su aplicación” (*Revista do CFMV, Brasil , 2014*)

WHO | AMERICAS | Publications | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 | 2004 | 2003 | 2002 | 2001 | 2000 | 1999 | 1998 | 1997 | 1996 | 1995 | 1994 | 1993 | 1992 | 1991 | 1990 | 1989 | 1988 | 1987 | 1986 | 1985 | 1984 | 1983 | 1982 | 1981 | 1980 | 1979 | 1978 | 1977 | 1976 | 1975 | 1974 | 1973 | 1972 | 1971 | 1970 | 1969 | 1968 | 1967 | 1966 | 1965 | 1964 | 1963 | 1962 | 1961 | 1960 | 1959 | 1958 | 1957 | 1956 | 1955 | 1954 | 1953 | 1952 | 1951 | 1950 | 1949 | 1948 | 1947 | 1946 | 1945 | 1944 | 1943 | 1942 | 1941 | 1940 | 1939 | 1938 | 1937 | 1936 | 1935 | 1934 | 1933 | 1932 | 1931 | 1930 | 1929 | 1928 | 1927 | 1926 | 1925 | 1924 | 1923 | 1922 | 1921 | 1920 | 1919 | 1918 | 1917 | 1916 | 1915 | 1914 | 1913 | 1912 | 1911 | 1910 | 1909 | 1908 | 1907 | 1906 | 1905 | 1904 | 1903 | 1902 | 1901 | 1900 | 1899 | 1898 | 1897 | 1896 | 1895 | 1894 | 1893 | 1892 | 1891 | 1890 | 1889 | 1888 | 1887 | 1886 | 1885 | 1884 | 1883 | 1882 | 1881 | 1880 | 1879 | 1878 | 1877 | 1876 | 1875 | 1874 | 1873 | 1872 | 1871 | 1870 | 1869 | 1868 | 1867 | 1866 | 1865 | 1864 | 1863 | 1862 | 1861 | 1860 | 1859 | 1858 | 1857 | 1856 | 1855 | 1854 | 1853 | 1852 | 1851 | 1850 | 1849 | 1848 | 1847 | 1846 | 1845 | 1844 | 1843 | 1842 | 1841 | 1840 | 1839 | 1838 | 1837 | 1836 | 1835 | 1834 | 1833 | 1832 | 1831 | 1830 | 1829 | 1828 | 1827 | 1826 | 1825 | 1824 | 1823 | 1822 | 1821 | 1820 | 1819 | 1818 | 1817 | 1816 | 1815 | 1814 | 1813 | 1812 | 1811 | 1810 | 1809 | 1808 | 1807 | 1806 | 1805 | 1804 | 1803 | 1802 | 1801 | 1800 | 1799 | 1798 | 1797 | 1796 | 1795 | 1794 | 1793 | 1792 | 1791 | 1790 | 1789 | 1788 | 1787 | 1786 | 1785 | 1784 | 1783 | 1782 | 1781 | 1780 | 1779 | 1778 | 1777 | 1776 | 1775 | 1774 | 1773 | 1772 | 1771 | 1770 | 1769 | 1768 | 1767 | 1766 | 1765 | 1764 | 1763 | 1762 | 1761 | 1760 | 1759 | 1758 | 1757 | 1756 | 1755 | 1754 | 1753 | 1752 | 1751 | 1750 | 1749 | 1748 | 1747 | 1746 | 1745 | 1744 | 1743 | 1742 | 1741 | 1740 | 1739 | 1738 | 1737 | 1736 | 1735 | 1734 | 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1447 | 1446 | 1445 | 1444 | 1443 | 1442 | 1441 | 1440 | 1439 | 1438 | 1437 | 1436 | 1435 | 1434 | 1433 | 1432 | 1431 | 1430 | 1429 | 1428 | 1427 | 1426 | 1425 | 1424 | 1423 | 1422 | 1421 | 1420 | 1419 | 1418 | 1417 | 1416 | 1415 | 1414 | 1413 | 1412 | 1411 | 1410 | 1409 | 1408 | 1407 | 1406 | 1405 | 1404 | 1403 | 1402 | 1401 | 1400 | 1399 | 1398 | 1397 | 1396 | 1395 | 1394 | 1393 | 1392 | 1391 | 1390 | 1389 | 1388 | 1387 | 1386 | 1385 | 1384 | 1383 | 1382 | 1381 | 1380 | 1379 | 1378 | 1377 | 1376 | 1375 | 1374 | 1373 | 1372 | 1371 | 1370 | 1369 | 1368 | 1367 | 1366 | 1365 | 1364 | 1363 | 1362 | 1361 | 1360 | 1359 | 1358 | 1357 | 1356 | 1355 | 1354 | 1353 | 1352 | 1351 | 1350 | 1349 | 1348 | 1347 | 1346 | 1345 | 1344 | 1343 | 1342 | 1341 | 1340 | 1339 | 1338 | 1337 | 1336 | 1335 | 1334 | 1333 | 1332 | 1331 | 1330 | 1329 | 1328 | 1327 | 1326 | 1325 | 1324 | 1323 | 1322 | 1321 | 1320 | 1319 | 1318 | 1317 | 1316 | 1315 | 1314 | 1313 | 1312 | 1311 | 1310 | 1309 | 1308 | 1307 | 1306 | 1305 | 1304 | 1303 | 1302 | 1301 | 1300 | 1299 | 1298 | 1297 | 1296 | 1295 | 1294 | 1293 | 1292 | 1291 | 1290 | 1289 | 1288 | 1287 | 1286 | 1285 | 1284 | 1283 | 1282 | 1281 | 1280 | 1279 | 1278 | 1277 | 1276 | 1275 | 1274 | 1273 | 1272 | 1271 | 1270 | 1269 | 1268 | 1267 | 1266 | 1265 | 1264 | 1263 | 1262 | 1261 | 1260 | 1259 | 1258 | 1257 | 1256 | 1255 | 1254 | 1253 | 1252 | 1251 | 1250 | 1249 | 1248 | 1247 | 1246 | 1245 | 1244 | 1243 | 1242 | 1241 | 1240 | 1239 | 1238 | 1237 | 1236 | 1235 | 1234 | 1233 | 1232 | 1231 | 1230 | 1229 | 1228 | 1227 | 1226 | 1225 | 1224 | 1223 | 1222 | 1221 | 1220 | 1219 | 1218 | 1217 | 1216 | 1215 | 1214 | 1213 | 1212 | 1211 | 1210 | 1209 | 1208 | 1207 | 1206 | 1205 | 1204 | 1203 | 1202 | 1201 | 1200 | 1199 | 1198 | 1197 | 1196 | 1195 | 1194 | 1193 | 1192 | 1191 | 1190 | 1189 | 1188 | 1187 | 1186 | 1185 | 1184 | 1183 | 1182 | 1181 | 1180 | 1179 | 1178 | 1177 | 1176 | 1175 | 1174 | 1173 | 1172 | 1171 | 1170 | 1169 | 1168 | 1167 | 1166 | 1165 | 1164 | 1163 | 1162 | 1161 | 1160 | 1159 | 1158 | 1157 | 1156 | 1155 | 1154 | 1153 | 1152 | 1151 | 1150 | 1149 | 1148 | 1147 | 1146 | 1145 | 1144 | 1143 | 1142 | 1141 | 1140 | 1139 | 1138 | 1137 | 1136 | 1135 | 1134 | 1133 | 1132 | 1131 | 1130 | 1129 | 1128 | 1127 | 1126 | 1125 | 1124 | 1123 | 1122 | 1121 | 1120 | 1119 | 1118 | 1117 | 1116 | 1115 | 1114 | 1113 | 1112 | 1111 | 1110 | 1109 | 1108 | 1107 | 1106 | 1105 | 1104 | 1103 | 1102 | 1101 | 1100 | 1099 | 1098 | 1097 | 1096 | 1095 | 1094 | 1093 | 1092 | 1091 | 1090 | 1089 | 1088 | 1087 | 1086 | 1085 | 1084 | 1083 | 1082 | 1081 | 1080 | 1079 | 1078 | 1077 | 1076 | 1075 | 1074 | 1073 | 1072 | 1071 | 1070 | 1069 | 1068 | 1067 | 1066 | 1065 | 1064 | 1063 | 1062 | 1061 | 1060 | 1059 | 1058 | 1057 | 1056 | 1055 | 1054 | 1053 | 1052 | 1051 | 1050 | 1049 | 1048 | 1047 | 1046 | 1045 | 1044 | 1043 | 1042 | 1041 | 1040 | 1039 | 1038 | 1037 | 1036 | 1035 | 1034 | 1033 | 1032 | 1031 | 1030 | 1029 | 1028 | 1027 | 1026 | 1025 | 1024 | 1023 | 1022 | 1021 | 1020 | 1019 | 1018 | 1017 | 1016 | 1015 | 1014 | 1013 | 1012 | 1011 | 1010 | 1009 | 1008 | 1007 | 1006 | 1005 | 1004 | 1003 | 1002 | 1001 | 1000 | 999 | 998 | 997 | 996 | 995 | 994 | 993 | 992 | 991 | 990 | 989 | 988 | 987 | 986 | 985 | 984 | 983 | 982 | 981 | 980 | 979 | 978 | 977 | 976 | 975 | 974 | 973 | 972 | 971 | 970 | 969 | 968 | 967 | 966 | 965 | 964 | 963 | 962 | 961 | 960 | 959 | 958 | 957 | 956 | 955 | 954 | 953 | 952 | 951 | 950 | 949 | 948 | 947 | 946 | 945 | 944 | 943 | 942 | 941 | 940 | 939 | 938 | 937 | 936 | 935 | 934 | 933 | 932 | 931 | 930 | 929 | 928 | 927 | 926 | 925 | 924 | 923 | 922 | 921 | 920 | 919 | 918 | 917 | 916 | 915 | 914 | 913 | 912 | 911 | 910 | 909 | 908 | 907 | 906 | 905 | 904 | 903 | 902 | 901 | 900 | 899 | 898 | 897 | 896 | 895 | 894 | 893 | 892 | 891 | 890 | 889 | 888 | 887 | 886 | 885 | 884 | 883 | 882 | 881 | 880 | 879 | 878 | 877 | 876 | 875 | 874 | 873 | 872 | 871 | 870 | 869 | 868 | 867 | 866 | 865 | 864 | 863 | 862 | 861 | 860 | 859 | 858 | 857 | 856 | 855 | 854 | 853 | 852 | 851 | 850 | 849 | 848 | 847 | 846 | 845 | 844 | 843 | 842 | 841 | 840 | 839 | 838 | 837 | 836 | 835 | 834 | 833 | 832 | 831 | 830 | 829 | 828 | 827 | 826 | 825 | 824 | 823 | 822 | 821 | 820 | 819 | 818 | 817 | 816 | 815 | 814 | 813 | 812 | 811 | 810 | 809 | 808 | 807 | 806 | 805 | 804 | 803 | 802 | 801 | 800 | 799 | 798 | 797 | 796 | 795 | 794 | 793 | 792 | 791 | 790 | 789 | 788 | 787 | 786 | 785 | 784 | 783 | 782 | 781 | 780 | 779 | 778 | 777 | 776 | 775 | 774 | 773 | 772 | 771 | 770 | 769 | 768 | 767 | 766 | 765 | 764 | 763 | 762 | 761 | 760 | 759 | 758 | 757 | 756 | 755 | 754 | 753 | 752 | 751 | 750 | 749 | 748 | 747 | 746 | 745 | 744 | 743 | 742 | 741 | 740 | 739 | 738 | 737 | 736 | 735 | 734 | 733 | 732 | 731 | 730 | 729 | 728 | 727 | 726 | 725 | 724 | 723 | 722 | 721 | 720 | 719 | 718 | 717 | 716 | 715 | 714 | 713 | 712 | 711 | 710 | 709 | 708 | 707 | 706 | 705 | 704 | 703 | 702 | 701 | 700 | 699 | 698 | 697 | 696 | 695 | 694 | 693 | 692 | 691 | 690 | 689 | 688 | 687 | 686 | 685 | 684 | 683 | 682 | 681 | 680 | 679 | 678 | 677 | 676 | 675 | 674 | 673 | 672 | 671 | 670 | 669 | 668 | 667 | 666 | 665 | 664 | 663 | 662 | 661 | 660 | 659 | 658 | 657 | 656 | 655 | 654 | 653 | 652 | 651 | 650 | 649 | 648 | 647 | 646 | 645 | 644 | 643 | 642 | 641 | 640 | 639 | 638 | 637 | 636 | 635 | 634 | 633 | 632 | 631 | 630 | 629 | 628 | 627 | 626 | 625 | 624 | 623 | 622 | 621 | 620 | 619 | 618 | 617 | 616 | 615 | 614 | 613 | 612 | 611 | 610 | 609 | 608 | 607 | 606 | 605 | 604 | 603 | 602 | 601 | 600 | 599 | 598 | 597 | 596 | 595 | 594 | 593 | 592 | 591 | 590 | 589 | 588 | 587 | 586 | 585 | 584 | 583 | 582 | 581 | 580 | 579 | 578 | 577 | 576 | 575 | 574 | 573 | 572 | 571 | 570 | 569 | 568 | 567 | 566 | 565 | 564 | 563 | 562 | 561 | 560 | 559 | 558 | 557 | 556 | 555 | 554 | 553 | 552 | 551 | 550 | 549 | 548 | 547 | 546 | 545 | 544 | 543 | 542 | 541 | 540 | 539 | 538 | 537 | 536 | 535 | 534 | 533 | 532 | 531 | 530 | 529 | 528 | 527 | 526 | 525 | 524 | 523 | 522 | 521 | 520 | 519 | 518 | 517 | 516 | 515 | 514 | 513 | 512 | 511 | 510 | 509 | 508 | 507 | 506 | 505 | 504 | 503 | 502 | 501 | 500 | 499 | 498 | 497 | 496 | 495 | 494 | 493 | 492 | 491 | 490 | 489 | 488 | 487 | 486 | 485 | 484 | 483 | 482 | 481 | 480 | 479 | 478 | 477 | 476 | 475 | 474 | 473 | 472 | 471 | 470 | 469 | 468 | 467 | 466 | 465 | 464 | 463 | 462 | 461 | 460 | 459 | 458 | 457 | 456 | 455 | 454 | 453 | 452 | 451 | 450 | 449 | 448 | 447 | 446 | 445 | 444 | 443 | 442 | 441 | 440 | 439 | 438 | 437 | 436 | 435 | 434 | 433 | 432 | 431 | 430 | 429 | 428 | 427 | 426 | 425 | 424 | 423 | 422 | 421 | 420 | 419 | 418 | 417 | 416 | 415 | 414 | 413 | 412 | 411 | 410 | 409 | 408 | 407 | 406 | 405 | 404 | 403 | 402 | 401 | 400 | 399 | 398 | 397 | 396 | 395 | 394 | 393 | 392 | 391 | 390 | 389 | 388 | 387 | 386 | 385 | 384 | 383 | 382 | 381 | 380 | 379 | 378 | 377 | 376 | 375 | 374 | 373 | 372 | 371 | 370 | 369 | 368 | 367 | 366 | 365 | 364 | 363 | 362 | 361 | 360 | 359 | 358 | 357 | 356 | 355 | 354 | 353 | 352 | 351 | 350 | 349 | 348 | 347 | 346 | 345 | 344 | 343 | 342 | 341 | 340 | 339 | 338 | 337 | 336 | 335 | 334 | 333 | 332 | 331 | 330 | 329 | 328 | 327 | 326 | 325 | 324 | 323 | 322 | 321 | 320 | 319 | 318 | 317 | 316 | 315 | 314 | 313 | 312 | 311 | 310 | 309 | 308 | 307 | 306 | 305 | 304 | 303 | 302 | 301 | 300 | 299 | 298 | 297 | 296 | 295 | 294 | 293 | 292 | 291 | 290 | 289 | 288 | 287 | 286 | 285 | 284 | 283 | 282 | 281 | 280 | 279 | 278 | 277 | 276 | 275 | 274 | 273 | 272 | 271 | 270 | 269 | 268 | 267 | 266 | 265 | 264 | 263 | 262 | 261 | 260 | 259 | 258 | 257 | 256 | 255 | 254 | 253 | 252 | 251 | 250 | 249 | 248 | 247 | 246 | 245 | 244 | 243 | 242 | 241 | 240 | 239 | 238 | 237 | 236 | 235 | 234 | 233 | 232 | 231 | 230 | 229 | 228 | 227 | 226 | 225 | 224 | 223 | 222 | 221 | 220 | 219 | 218 | 217 | 216 | 215 | 214 | 213 | 212 | 211 | 210 | 209 | 208 | 207 | 206 | 205 | 204 | 203 | 202 | 201 | 200 | 199 | 198 | 197 | 196 | 195 | 194 | 193 | 192 | 191 | 190 | 189 | 188 | 187 | 186 | 185 | 184 | 183 | 182 | 181 | 180 | 179 | 178 | 177 | 176 | 175 | 174 | 173 | 172 | 171 | 170 | 169 | 168 | 167 | 166 | 165 | 164 | 163 | 162 | 161 | 160 | 159 | 158 | 157 | 156 | 155 | 154 | 153 | 152 | 151 | 150 | 149 | 148 | 147 | 146 | 145 | 144 | 143 | 142 | 141 | 140 | 139 | 138 | 137 | 136 | 135 | 134 | 133 | 132 | 131 | 130 | 129 | 128 | 127 | 126 | 125 | 124 | 123 | 122 | 121 | 120 | 119 | 118 | 117 | 116 | 115 | 114 | 113 | 112 | 111 | 110 | 109 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | 95 | 94 | 93 | 92 | 91 | 90 | 89 | 88 | 87 | 86 | 85 | 84 | 83 | 82 | 81 | 80 | 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 65 | 64 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 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International Journal of Environmental Research and Public Health

Special Issue "Leptospirosis in the Animal-Human-Ecosystems Interface"

Guest Editor: Dr. María Cristina Schuster

Editorial Board: Dr. María Cristina Schuster, Dr. María Cristina Schuster, Dr. María Cristina Schuster, Dr. María Cristina Schuster, Dr. María Cristina Sch

Actividades actuales – 2015

Organización con Fiocruz

Simposio en Investigación de Leptospirosis en el Instituto Oswaldo Cruz, en Fiocruz Y la reunión de GLEAN en 2015

Como parte de las celebraciones de los 115 años del IOC y los 450 años de de Rio de Janeiro



Objetivo del simposio Fiocruz: Identificar brechas en la vigilancia y fortalecer colaboración en la investigación operacional sobre Una Salud

Grupo de trabajo sobre el modelo matemático de transmisión de leptospira y estrategias de intervenciones.

Participar en la actividad organizada por GLEAN (Pilar de predicción en NIMBioS)

Apoyar a rehacer la página web de GLEAN



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Página web de leptospirosis de la OPS: www.paho.org/leptospirosis



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