

AGREEMENT ON THE INTERNATIONAL DOLPHIN CONSERVATION PROGRAM

19TH MEETING OF THE PARTIES

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REPORT ON THE INTERNATIONAL DOLPHIN CONSERVATION PROGRAM

1.	Introduction	1
2.	The On-Board Observer Program.....	1
3.	Dolphin mortality.....	2
4.	International Review Panel.....	4
5.	Tuna tracking and verification.....	4
6.	Amendments affecting the operation of the IDCP.....	4
7.	Other functions performed by the Secretariat.....	5
8.	Research.....	5

1. INTRODUCTION

In the eastern Pacific Ocean (EPO), schools of yellowfin tuna frequently associate with marine mammals, especially spotted, spinner, and common dolphins. When the purse-seine fishery for tunas in the EPO began around 1960, the fishermen found that their catches of yellowfin in the EPO could be maximized by setting these nets around a herd of dolphins and the associated school of tunas. However, releasing the dolphins caught without losing the tuna proved more difficult, and in the early years of the fishery many dolphins became entangled in the nets and died during this process. As techniques and equipment to solve this problem were developed, this mortality fell, gradually at first and dramatically in the 1990s, thanks to the combined efforts of the fishing industry, governments, the IATTC, environmental organizations, and other interested parties.

The 1992 La Jolla Agreement provided a framework for the international efforts to reduce this mortality, and introduced such novel and effective measures as Dolphin Mortality Limits (DMLs) for individual vessels and the International Review Panel to monitor the performance and compliance of the fishing fleet. The [Agreement on the International Dolphin Conservation Program \(AIDCP\)](#), which built on and formalized the provisions of the La Jolla Agreement, was signed in May 1998 and entered into force in February 1999. The Parties to this agreement committed to “ensure the sustainability of tuna stocks in the eastern Pacific Ocean and to progressively reduce the incidental dolphin mortalities in the tuna fishery of the eastern Pacific Ocean to levels approaching zero; to avoid, reduce and minimize the incidental catch and the discard of juvenile tuna and the incidental catch of non-target species, taking into consideration the interrelationship among species in the ecosystem.”

As of 31 December, 2007, Costa Rica, Ecuador, El Salvador, the European Union, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, United States, Vanuatu, and Venezuela have ratified or acceded to the Agreement, and Bolivia and Colombia are applying the AIDCP provisionally. The IATTC provides the Secretariat for the IDCP and its various bodies and coordinates the On-Board Observer Program and the [Tuna Tracking and Verification System](#).

2. THE ON-BOARD OBSERVER PROGRAM

The IATTC's international observer program and the national observer programs of Colombia (Programa Nacional de Observadores de Colombia, PNOC), Ecuador (Programa Nacional de Observadores Pesqueros de Ecuador; PROBECUADOR), the European Union (Programa Nacional de Observadores de

Túnidos, Océano Pacífico; PNOT), Mexico (Programa Nacional de Aprovechamiento del Atún y Protección de Delfines; PNAAPD), Nicaragua (Programa Nacional de Observadores de Nicaragua; PRONAON, administered by the Programa Nacional de Observadores Panameños, PRONAOP); Panama (PRONAOP), and Venezuela (Programa Nacional de Observadores de Venezuela; PNOV) constitute the AIDCP On-Board Observer Program. In addition, observers from the international observer program of the Forum Fisheries Agency (FFA) are approved by the Parties to collect information for the On-Board Observer Program on vessels that fish in the Agreement Area without setting on dolphins if the Secretariat determines that the placement of an IDCP observer is not practical.

2.1. Observer coverage

The AIDCP mandates 100% coverage by observers of fishing trips by purse seiners of carrying capacity greater than 363 metric tons (t) in the Agreement Area. In 2007, the Ecuadorian program had a goal of sampling approximately one-third of the trips by its fleet, and the Colombian, European Union, Mexican, Nicaraguan, Panamanian, and Venezuelan programs each had a goal of sampling approximately half of the trips by their respective fleets. The IATTC program covered the remainder of the trips by these five fleets, plus all trips by vessels of other fleets.

During 2007, observers from the On-Board Observer Program departed on 742 fishing trips, which included 6 trips by two vessels of less than 363 t capacity that were required to carry an observer on all trips made while being investigated for a possible AIDCP infraction (Table 1). In addition, 49 vessels whose last trip of 2006 carried over into 2007 had observers aboard, bringing the total to 791 trips observed in 2007 by the Program. The Program covered vessels operating under the jurisdictions of Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Spain, the United States, Vanuatu, and Venezuela.

In 2007 the Program sampled 100% of trips by large purse-seine vessels, as required by the AIDCP, and the IATTC program sampled 61% of all trips.

2.2. Observer training

The following two observer training courses were held in 2007 .

Dates	Program	Location	Number of trainees
18 January– 2 February	IATTC	Panama	16
9 - 27 April	Colombia	Bogotá, Colombia	14

The IATTC training course included 6 trainees from the Panamanian national program.

3. DOLPHIN MORTALITY

3.1. Dolphin Mortality Limits (DMLs)

3.1.1. 2007 DMLs

The overall dolphin mortality limit (DML) for the international fleet in 2007 was 5,000 animals, and the unreserved portion of 4,900 was allocated to 104 qualified vessels that requested DMLs. The average individual-vessel DML (ADML), based on 104 DML requests, was 47.12. A total of 96 vessels utilized their full-year DMLs. Thirteen vessels did not utilize their DMLs prior to 1 April, but seven were allowed to keep them for the remainder of the year under the *force majeure* exemption allowed by the AIDCP, and one vessel renounced its DML. An exemption was requested for one of five vessels that had lost their DMLs. A late request by a Party for a *force majeure* exemption for one of its vessels was reviewed by the 17th Meeting of the Parties in June 2007, and a redistribution of national DMLs was allowed; a DML of 15 was subsequently allocated to this vessel. Also, one vessel renounced its DML after utilizing it. Two vessels were allocated DMLs of 20 and 15, respectively, from the Reserve DML Allocation (RDA); both were utilized. One second-semester DMLs was allocated, but was not used.

At the end of the first quarter of 2007, the Secretariat sent a letter to one Party, advising that one of its vessels risked exceeding its assigned DML if its mortality level continued to accumulate at its then-current rate. No vessel exceeded its DML in 2007. The distribution of the mortality caused in 2007 by vessels with DMLs is shown in Figure 1.

3.1.2. 2008 DMLs

One hundred eligible vessels requested and received DMLs for 2008 from the unreserved portion (4,900) of the overall fleet mortality limit. The ADML is 49. One vessel forfeited its DML by not utilizing it prior to April 1, and four vessels renounced their DMLs. There were no second-semester DMLs requested, and as of 30 May, there have been no requests and assignments for DMLs from the Reserve DML Allocation.

3.2. Preliminary estimates of the mortality of dolphins in 2007 due to fishing

The preliminary estimate of the incidental mortality of dolphins in the fishery in 2007 is 838 animals (Table 2), a 5.4% decrease over the 886 mortalities recorded in 2006. The mortalities for 1979-2007, by species and stock, are shown in Table 3, and the standard errors of these estimates are shown in Table 4. The mortalities of the principal dolphin species affected by the fishery show declines since the early 1990s (Figure 2) similar to that for the mortalities of all dolphins combined (Figure 3). Estimates of the abundances of the various stocks of dolphins and the relative mortalities (mortality/abundance) are also shown in Table 2. The stock with the highest level of relative mortality (0.03%) was the eastern spinner dolphin.

The number of sets on dolphin-associated schools of tuna made by vessels over 363 t decreased by 0.5%, from 8,923 in 2006 to 8,879 in 2007, and this type of set accounted for 38% of the total number of sets made in 2007, compared to 36% in 2006. The average mortality per set remained quite stable (0.10 dolphins in 2006 compared to 0.09 dolphins in 2007). The trends in the numbers of sets on dolphin-associated fish, mortality per set, and total mortality in recent years are shown in Figure 3.

The catches of dolphin-associated yellowfin increased by 4% in 2007, as compared to 2006. The percentage of the catch of yellowfin taken in sets on dolphins decreased from 59% of the total catch in 2006 to 56% of the catch in 2007, and the average catch of yellowfin per set on dolphins increased from 11.2 to 11.7 metric tons. The mortality of dolphins per metric ton of yellowfin caught decreased from 0.0089 in 2006 to 0.0081 in 2007.

The above figures are based on data from trips covered by observers from all components of the On-Board Observer Program. The comparisons in the next paragraph are based on the IATTC data bases for 1986-2007 only.

The decrease in the mortality per set is the result of actions by the fishermen to better manage the factors that bring about incidental mortalities of dolphins. Indicative of this effort is the number of sets in which no mortalities occurred, which has risen from 38% in 1986 to 94% in 2007, and the average number of animals left in the net after backdown, which has decreased from 6.0 in 1986 to less than 0.1 in 2007 (Table 5). The factors under the control of the fishermen which are likely to affect the mortality of dolphins per set include the occurrence of malfunctions, especially those which lead to net canopies and net collapses, and the time it takes to complete the backdown maneuver (Table 5). The percentage of sets with major mechanical malfunctions has decreased from an average of approximately 11% during the late 1980s to less than 6% during 1998-2007; in the same period the percentage of sets with net collapses decreased from about 30% to less than 5% on average, and that of net canopies from about 20% to less than 5% on average. Although the chance of dolphin mortality increases with the duration of the backdown maneuver, the average backdown time has changed little since 1986. Also, the mortality of dolphins per set increases with the number of animals in the encircled herd, in part because the backdown maneuver takes longer to complete when larger herds are encircled. The fishermen can reduce the mortalities per set by encircling schools of fish associated with fewer dolphins.

3.3. Reports of dolphin mortality by observers at sea

The AIDCP requires the Parties to establish a system, based on real-time observer reporting, to ensure effective implementation and compliance with per-stock, per-year dolphin mortality caps. Observers prepare weekly reports of dolphin mortality, by stock, which are then transmitted to the Secretariat via e-mail, fax, or radio. In June 2003 the Meeting of the Parties adopted [Resolution A-03-02 on at-sea reporting](#), which makes the vessel personnel responsible for transmitting these reports. During 2007, the reporting rate averaged 90% (Table 6).

Since January 1, 2001, the Secretariat has been reporting weekly to the Parties the cumulative mortality for the seven stocks of dolphins most frequently associated with the fishery. The most recent reported mortalities for 2008 are shown in Table 7.

4. INTERNATIONAL REVIEW PANEL

The International Review Panel (IRP) follows a general procedure for reporting the compliance by vessels with measures established by the AIDCP for minimizing the mortalities of dolphins during fishing operations to the governments concerned. During each fishing trip, the observer prepares a summary of information pertinent to dolphin mortalities, and this is sent to the government with jurisdiction over the vessel by the Secretariat. Certain possible infractions are automatically reported to the government with jurisdiction over the vessel in question; the IRP reviews the observer data for other cases at its meetings, and any cases identified as possible infractions are likewise reported to the relevant government. The governments report back to the IRP on actions taken regarding these possible infractions.

During 2007, the IRP consisted of 20 members: the 14 participating member governments, and six representatives of non-governmental organizations (NGOs), three from environmental organizations and three from the tuna industry.

The IRP held the following meetings during 2007:

Meeting	Venue	Dates
43	Cancun, Mexico	June 19
44	La Jolla, California, USA	October 26

The minutes of these meetings are available on the [IATTC's website](#). Tables 8-9 and Appendix A of this report summarize possible infractions identified by the Panel at these meetings and subsequent action taken by the governments.

5. TUNA TRACKING AND VERIFICATION

The [System for Tracking and Verifying Tuna](#), established in accordance with Article V.1.f of the AIDCP, enables “dolphin-safe” tuna, defined as tuna caught in sets without mortality or serious injury of dolphins, to be identified and tracked from the time it is caught through unloading, processing, and sale. The Tuna Tracking Form (TTF), completed at sea by observers, identifies the tuna caught as dolphin safe (Form ‘A’) or non-dolphin safe (Form ‘B’); with this document, the dolphin safe status of any tuna caught by a vessel covered by the AIDCP can be determined. Within this framework, administered by the Secretariat, each Party establishes its own tracking and verification program, implemented and operated by a designated national authority, which includes periodic audits and spot checks for caught, landed, and processed tuna products, mechanisms for communication and cooperation between and among national authorities, and timely access to relevant data. Each Party is required to provide the Secretariat with a report detailing its tracking and verification program.

All trips by vessels that departed in 2007 with an IDCP observer aboard were issued TTFs.

6. AMENDMENTS AND RESOLUTIONS AFFECTING THE OPERATION OF THE IDCP

During 2007, the Parties agreed to delete Annex IV.I.9 of the AIDCP, which set minimum catch

requirements of yellowfin tuna associated with dolphins by vessels with DMLs in order for the vessel to be eligible for a DML the following year.

7. OTHER FUNCTIONS PERFORMED BY THE SECRETARIAT

7.1. Dolphin safety panel alignments

During 2007, the IATTC staff conducted alignments of dolphin-safety panels (DSPs) and inspections of dolphin rescue gear aboard 10 vessels, all registered in Mexico. A trial set, during which an IATTC technician observes the performance of the net from an inflatable raft during backdown, is made to check the alignment of the DSP. The technician provides his observations, comments, and suggestions to the captain of the vessel, and attempts are made to resolve any problems that may arise. Afterward a report is prepared for the vessel owner or manager. This report contains a summary of the technician's observations and, if necessary, suggestions for improving the vessel's dolphin-safety gear and/or procedures.

7.2. Training and certification of fishing captains

The IATTC has conducted dolphin mortality reduction seminars for tuna fishermen since 1980. Article V of the AIDCP calls for the establishment, within the framework of the IATTC, of a system of technical training and certification of fishing captains. Under the system, the IATTC staff is responsible for maintaining a list of all captains qualified to fish for tunas associated with dolphins in the EPO. The names of the captains who meet the requirements are to be supplied to the IRP for approval and circulation to the Parties to the AIDCP.

The requirements for new captains are (1) attending a training seminar organized by the IATTC staff or by the pertinent national program in coordination with the IATTC staff, and (2) having practical experience relevant to making sets on tunas associated with dolphins, including a letter of reference from a captain currently on the List, the owner or manager of a vessel with a DML, or a pertinent industry association. These seminars are intended not only for captains, who are directly in charge of fishing operations, but also for other crew members and for administrative personnel responsible for vessel equipment and maintenance. The fishermen and others who attend the seminars are presented with certificates of attendance.

During 2007, the following three training seminars were held, which were attended by 48 fishermen.

Date	Program	Location	Attendees
3 January	Venezuela	Panama City, Panama	29
7 June	USA	Long Beach, California, USA	2
4 September	IATTC	Panama City, Panama	17

7.3. Statements of Participation

Statements of Participation are issued by the Secretariat on request to vessels that carry observers from the On-Board Observer Program. There are two types: the first, issued to vessels of Parties to the AIDCP only, certifies that the vessel has been participating in the IDCP, and that all its trips have been covered by observers; the second, issued to vessels of non-Parties, certifies only that all the vessel's trips have been covered by observers. During 2007, statements of the first type were issued for 154 fishing trips by vessels of Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Panama, the United States, Vanuatu, and Venezuela. None were issued of the second type.

8. RESEARCH

Figures 4-6 compare the spatial distributions of the fishing effort by vessels carrying IATTC observers, in numbers of sets, by type, in 2006 and 2007. Both floating-object sets and unassociated sets expanded well to the west in 2007 compared to previous years, while the pattern of dolphin sets was largely similar in 2006 and in 2007.

In collaboration with scientists from several research institutions and national observer programs, the IATTC staff continues to work on developing statistical techniques to be used to screen for data quality. These techniques can be applied to past years' data as one of several tools used by the IATTC staff to ensure data quality.

In collaboration with scientists from NMFS and the University of Hawaii, the IATTC staff has been testing hypotheses about the association of tuna and dolphins. Combining the results of a simultaneous tracking study of yellowfin tuna and spotted dolphins, of food habits studies of tunas and dolphins, and of a spatial study of relating the occurrence of the tuna-dolphin association with oceanographic features, allowed these researchers to test whether the association was based on feeding advantages or on reducing the risk of predation. They found that the feeding-benefits hypothesis was not a likely explanation for the association, and that the predation-risk hypothesis was the most parsimonious explanation.

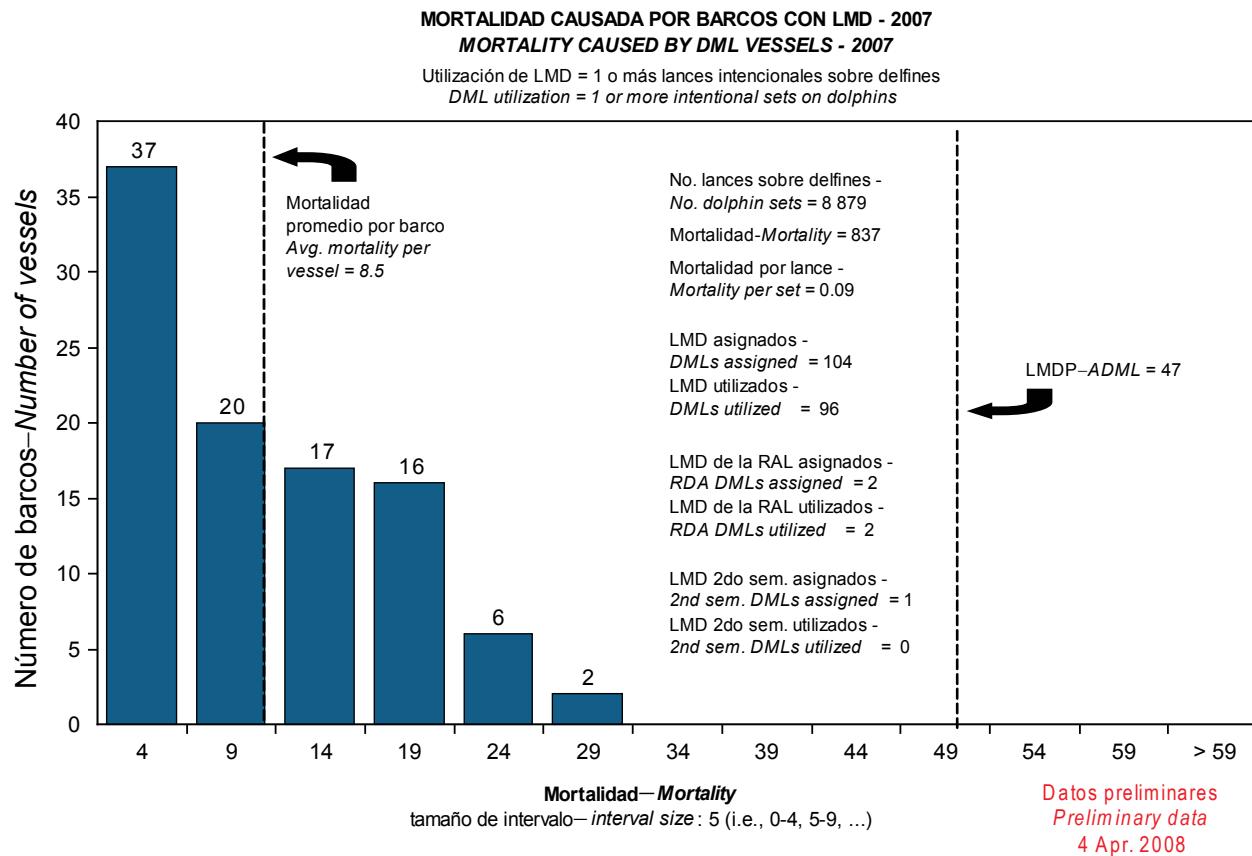


FIGURE 1. Distribution of dolphin mortality caused by vessels with DMLs during 2007.

FIGURA 1. Distribución de la mortalidad de delfines causada por buques con LMD durante 2007.

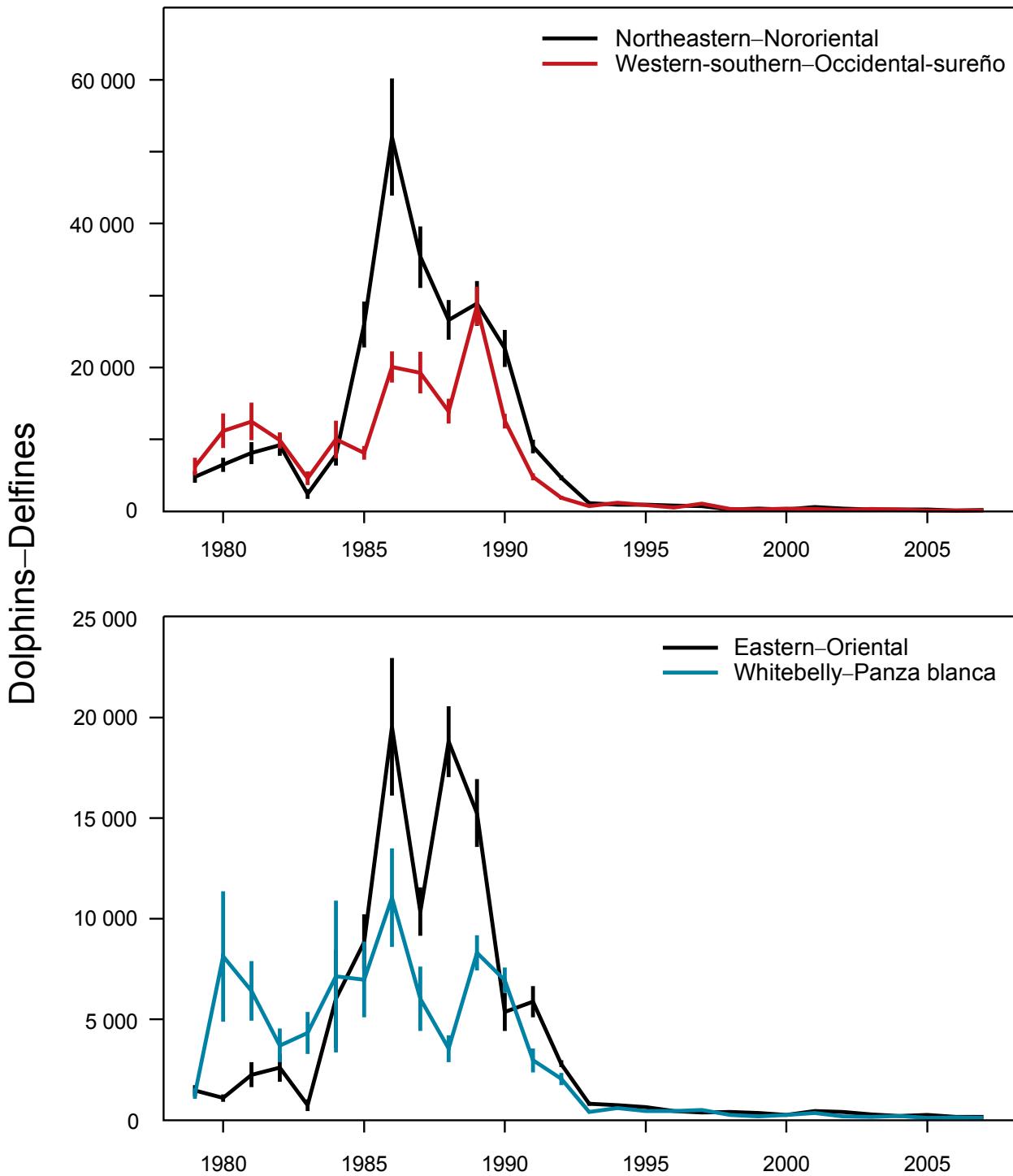


FIGURE 2. Estimated mortalities for the stocks of spotted (upper panel) and spinner (lower panel) dolphins in the eastern Pacific Ocean, 1979-2007. Each vertical line represents one positive and one negative standard error.

FIGURA 2. Mortalidad estimada de las poblaciones de delfines manchados (panel superior) y tornillo (panel inferior) en el Océano Pacífico oriental, 1979-2007. Cada línea vertical representa un error estándar positivo y un error estándar negativo.

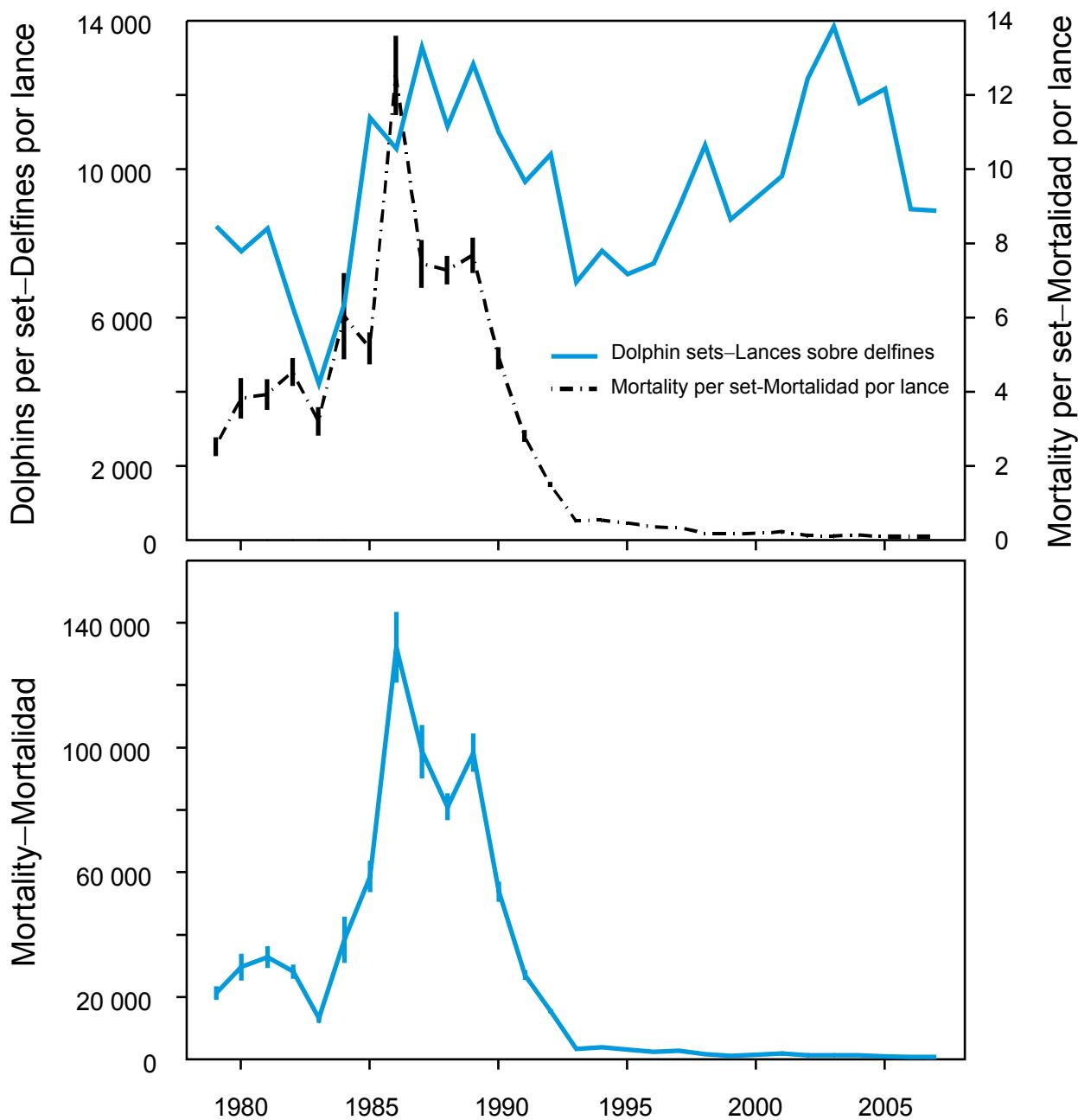


FIGURE 3. Total number of dolphin sets and average mortality per set (upper panel) and estimated total mortality (lower panel) for all dolphins in the EPO, 1979–2007. Each vertical line represents one positive and one negative standard error.

FIGURA 3. Número total de lances sobre delfines y mortalidad media por lance (panel superior) y mortalidad total estimada (panel inferior) para todas especies de delfines en el OPO, 1979–2007. Cada línea vertical representa un error estándar positivo y un error estándar negativo.

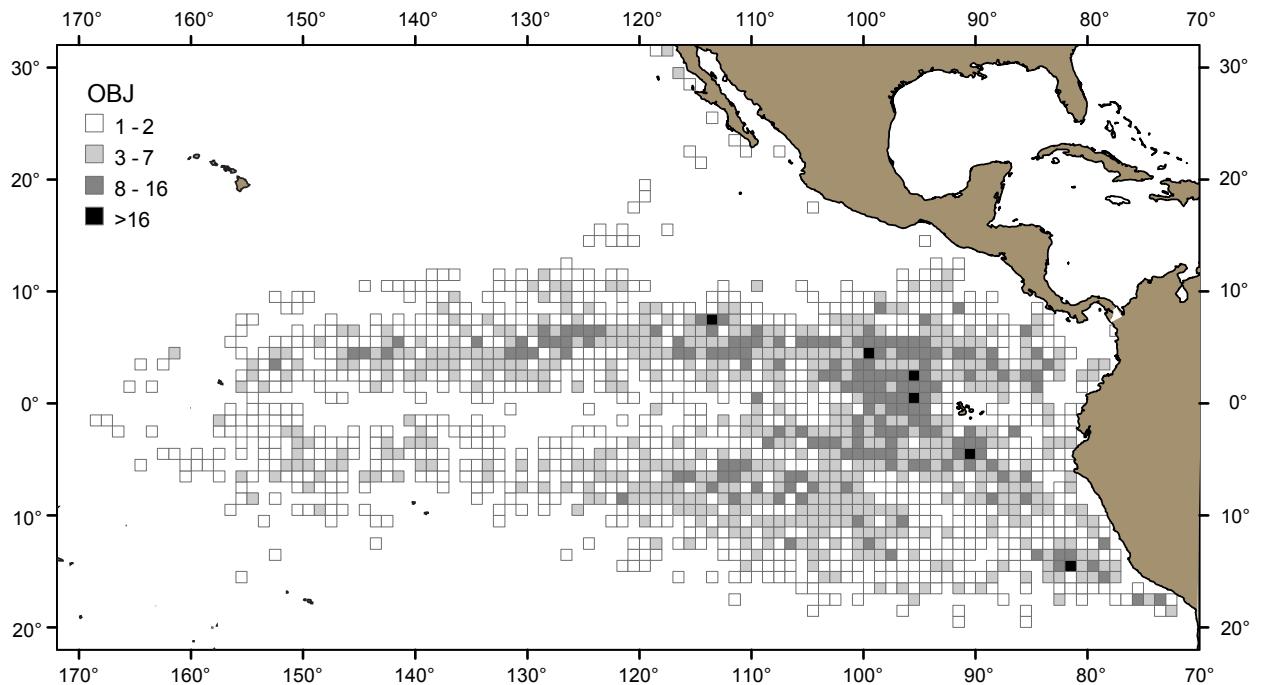


FIGURE 4a. Spatial distribution of sets on tuna associated with floating objects, 2006.

FIGURA 4a. Distribución espacial de los lances sobre atunes asociados con objetos flotantes, 2006.

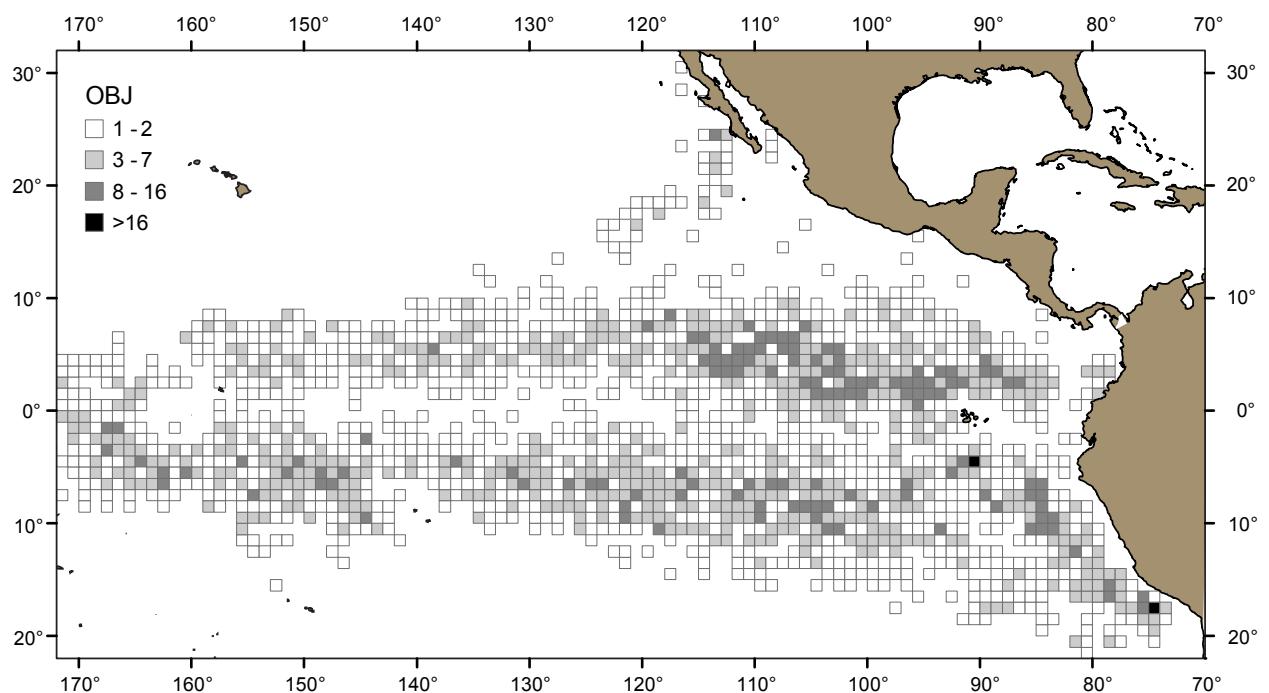


FIGURE 4b. Spatial distribution of sets on tuna associated with floating objects, 2007.

FIGURA 4b. Distribución espacial de los lances sobre atunes asociados con objetos flotantes, 2007.

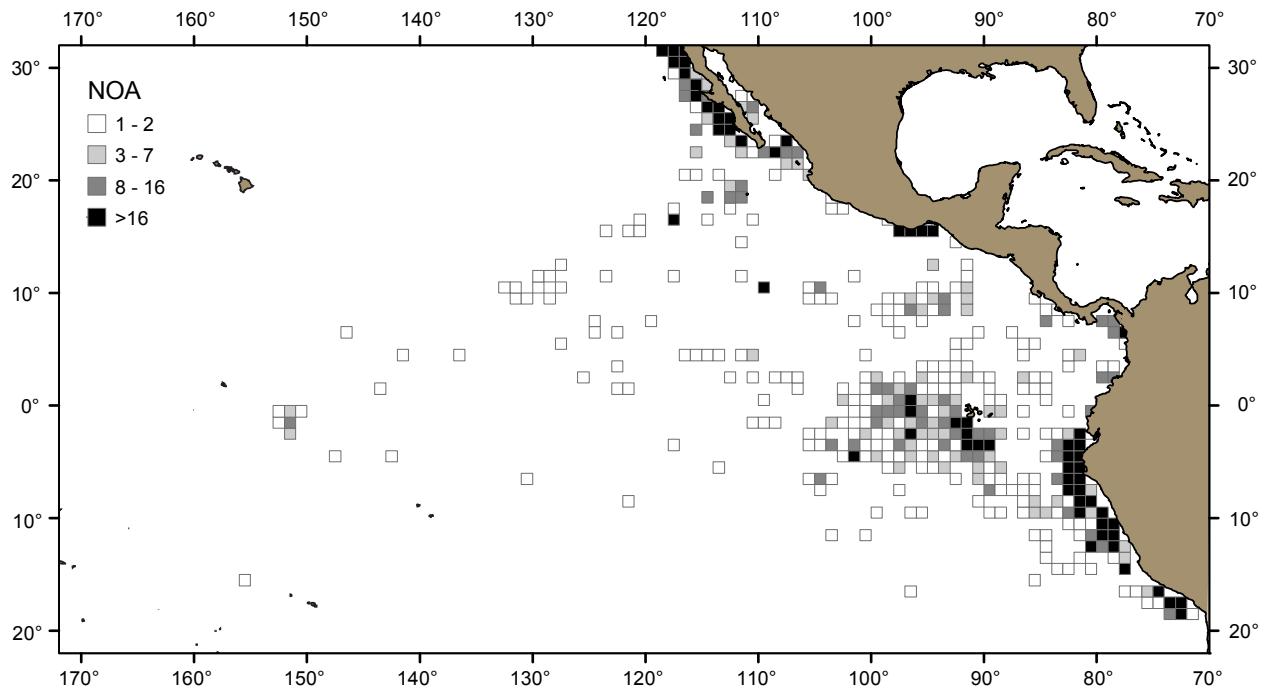


FIGURE 5a. Spatial distribution of sets on unassociated schools of tunas, 2006.

FIGURA 5a. Distribución espacial de lances sobre cardúmenes de atunes no asociados, 2006.

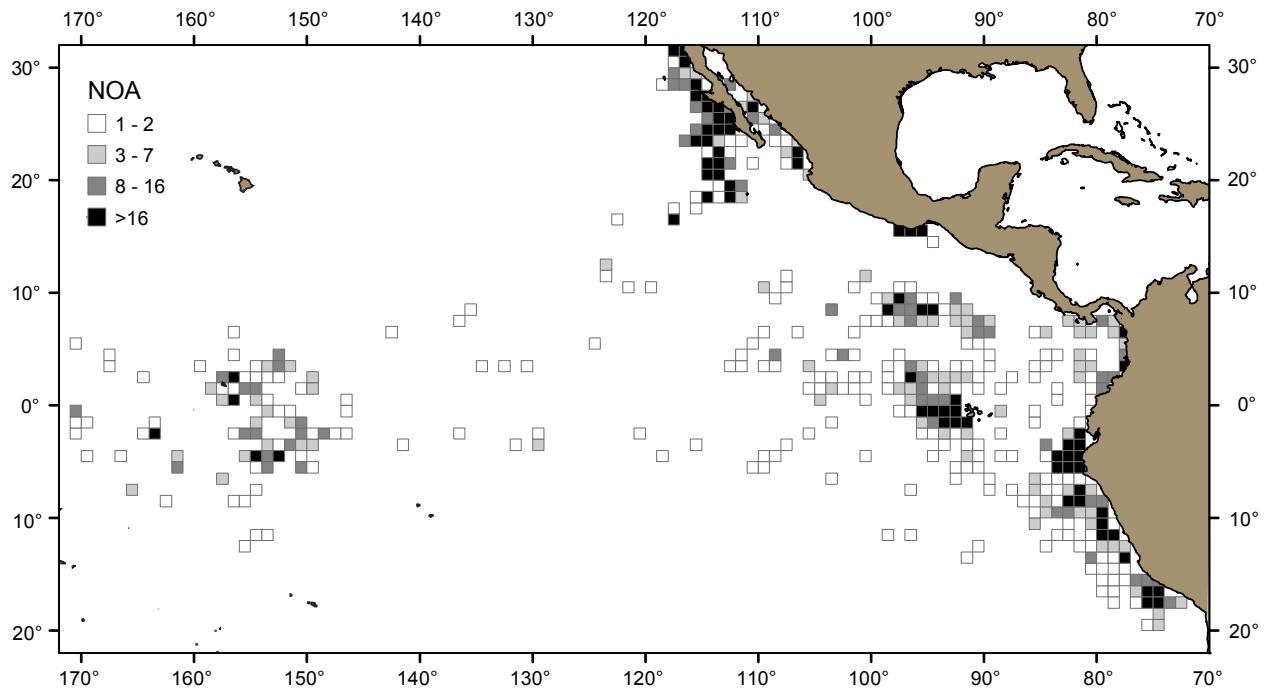


FIGURE 5b. Spatial distribution of sets on unassociated schools of tunas, 2007.

FIGURA 5b. Distribución espacial de lances sobre cardúmenes de atunes no asociados, 2007.

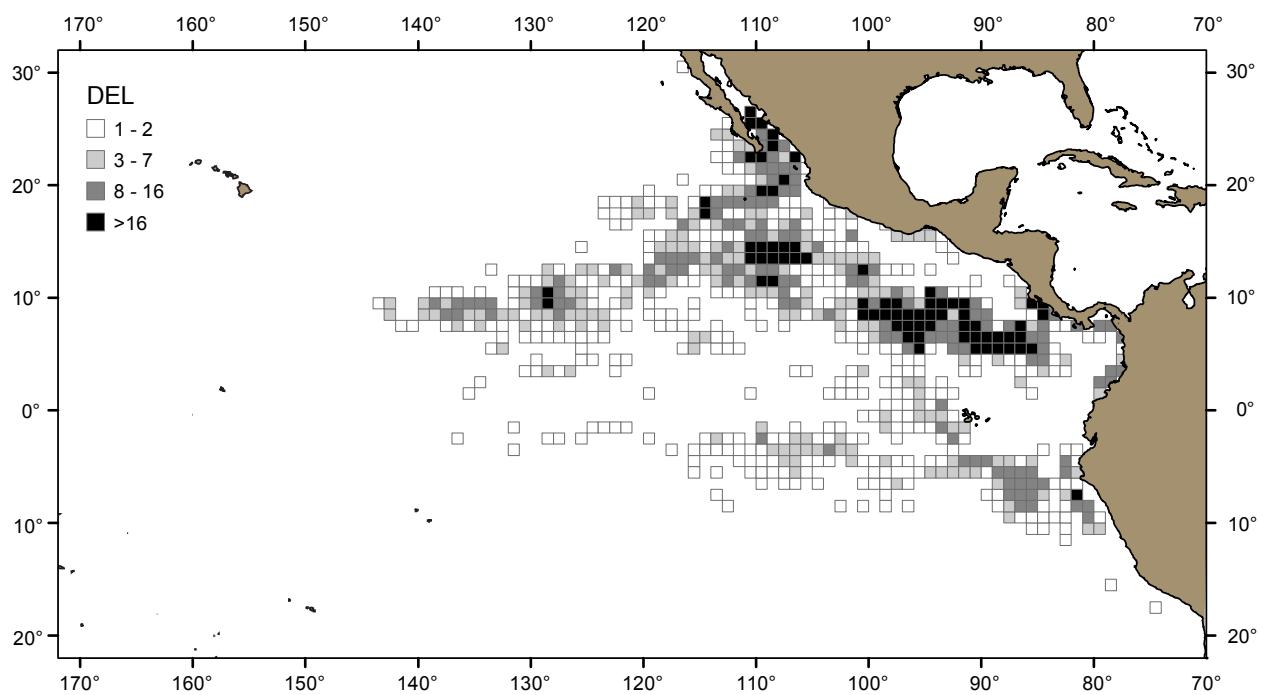
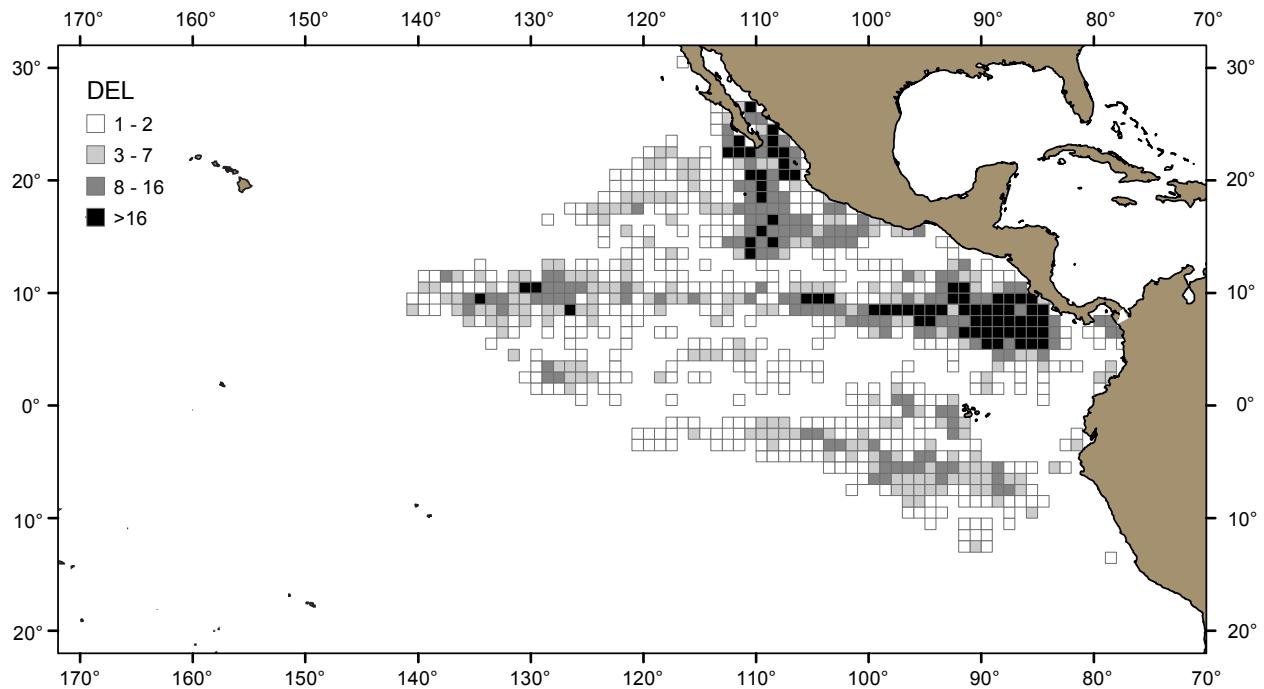


TABLE 1. Sampling coverage by the On-Board Observer Program during 2007.**TABLA 1.** Cobertura por el Programa de Observadores a Bordo durante 2007.

Flota nacional	Viajes	Observado por programa:			% observado
		CIAT	Nacional	Total	
National fleet	Trips	Observed by program:			% observed
Buques de capacidad de acarreo ≥ 363 t – Vessels of ≥363 t carrying capacity					
Colombia	COL	47	23	24	47
Ecuador	ECU	248	169	79	248
España—Spain	ESP	20	11	9	20
Guatemala	GTM	4	4	-	4
Honduras	HND	15	15	-	15
México	MEX	202	102	100	202
Nicaragua	NIC	21	11	10	21
Panamá	PAN	105	55	50	105
Peru	PER	1	1	0	1
El Salvador	SLV	28	28	-	28
USA—EE.UU.	USA	5	5	-	5
Vanuatu	VUT	11	11	-	11
Venezuela	VEN	78	40	38	78
Subtotal¹		785	475	310	100
Otros buques – Other vessels²					
		11	4	2	6
Total		796	479	312	791

¹ Includes 49 trips that began in late 2006 and ended in 2007 - Incluye 49 viajes iniciados a fines de 2006 y terminados en 2007.

² Two vessels of less than 363 t capacity were required to carry an AIDCP observer on all trips made while being investigated for a possible AIDCP infraction – Se exigió de dos buques de menos de 363 t de capacidad llevar observador del APICD en todos sus viajes mientras estaban bajo investigación por una posible infracción del APICD.

TABLE 2. Estimates of mortalities of dolphins in 2007, population abundance, and relative mortality, by stock. Data for 2007 are preliminary.

TABLA 2. Estimaciones de la mortalidad incidental de delfines en 2007, la abundancia de poblaciones, y la mortalidad relativa, por población. Los datos de 2007 son preliminares.

Species and stock Especie y población	Incidental mortality Mortalidad incidental	Population abundance Abundancia de la población	Relative mortality (%) Mortalidad relativa (%)
Offshore spotted dolphin—Delfín manchado de altamar ¹			
Northeastern—Nororiental	190	782,900	0.02
Western/southern—Occidental y sureño	112	892,600	0.01
Spinner dolphin—Delfín tornillo ¹			
Eastern—Oriental	174	592,200	0.03
Whitebelly—Panza blanca	113	617,100	0.02
Common dolphin—Delfín común ²			
Northern—Norteño	57	449,462	0.01
Central	69	577,048	0.01
Southern—Sureño	93	1,525,207	<0.01
Other dolphins—Otros delfines ^{3,4}	30	2,802,300	<0.01
Total	838		

¹ logistic model for 1986-2003 (IATTC Special Report 14: Appendix 7);

¹ modelo logístico para 1986-2003 (Informe Especial de la CIAT 14: Anexo 7)

² weighted averages for 1998-2003 (IATTC Special Report 14: Appendix 5)

² promedios ponderados para 1998-2003 (Informe Especial de la CIAT 14: Anexo 5)

³ pooled for 1986-1990 (Report of the International Whaling Commission, 43: 477-493)

³ agrupados para 1986-1990 (Informe de la Comisión Ballenera Internacional, 43: 477-493)

⁴ “Other dolphins” includes the following species and stocks, whose observed mortalities were as follows: striped dolphins (*Stenella coeruleoalba*), 6; coastal spotted dolphin (*Stenella attenuata*), 2; Central American spinner dolphin (*Stenella longirostris centroamericana*) 14; bottlenose dolphin (*Tursiops truncatus*) 1; Pacific whitesided dolphin (*Lagenorhynchus obliquidens*), 1; and unidentified dolphins, 6.

⁴ “Otros delfines” incluye las siguientes especies y poblaciones, con las mortalidades observadas correspondientes: delfín listado (*Stenella coeruleoalba*), 6; delfín manchado costero (*Stenella attenuata*), 2; delfín tornillo centroamericano (*Stenella longirostris centroamericana*) 14; tonina (*Tursiops truncatus*) 1; delfín lagenorringo (*Lagenorhynchus obliquidens*), 1; y delfines no identificados, 6.

TABLE 3. Annual estimates of dolphin mortality, by species and stock, 1979-2007. The data for 2007 are preliminary. The estimates for 1979-1992 are based on a mortality-per-set ratio. The estimates for 1993-1994 are based on the sums of the IATTC species and stock tallies and the total dolphin mortalities recorded by the Mexican program, prorated to species and stock. The mortalities for 1995-2007 represent the sums of the observed species and stock tallies recorded by the IATTC and national programs. Mortalities for 2001-2003 have been adjusted for unobserved trips of Class-6 vessels. The sums of the estimated mortalities for the northeastern and western-southern stocks of offshore spotted dolphins do not necessarily equal those for the previous stocks of northern and southern offshore spotted dolphins because the estimates for the two stock groups are based on different areal strata, and the mortalities per set and the total numbers of sets vary spatially.

TABLA 3. Estimaciones anuales de la mortalidad de delfines, por especie y población, 1979-2007. Los datos de 2007 son preliminares. Las estimaciones de 1979-1992 se basan en una razón de mortalidad por lance. Las estimaciones de 1993-1994 se basan en las sumas de las mortalidades por especie y población registradas por la CIAT y las mortalidades totales registradas por el programa mexicano, prorrateadas a especies y poblaciones. Las mortalidades de 1995-2007 son las sumas de las mortalidades por especie y población registradas por los programas de la CIAT y nacionales. La mortalidad de 2001-2003 fue ajustada para viajes no observados de buques de Clase 6. Las sumas de las mortalidades estimadas para las poblaciones nororiental y occidental y sureño del delfín manchado de altamar no equivalen necesariamente a las sumas de aquéllas para las antiguas poblaciones de delfín manchado de altamar norteño y sureño porque las estimaciones para los dos grupos de poblaciones se basan en estratos espaciales diferentes, y las mortalidades por lance y el número total de lances varían espacialmente.

	Offshore spotted ¹		Spinner		Common			Others	Total
	North-eastern	Western-southern	Eastern	White belly	Northern	Central	Southern		
Manchado de altamar ¹			Tornillo		Común			Otros	Total
	Nor-oriental	Occidental y sureño	Oriental	Panza blanca	Norteño	Central	Sureño		
1979	4,828	6,254	1,460	1,312	4,161	2,342	94	880	21,331
1980	6,468	11,200	1,108	8,132	1,060	963	188	633	29,752
1981	8,096	12,512	2,261	6,412	2,629	372	348	367	32,997
1982	9,254	9,869	2,606	3,716	989	487	28	1,347	28,296
1983	2,430	4,587	745	4,337	845	191	0	353	13,488
1984	7,836	10,018	6,033	7,132	0	7,403	6	156	38,584
1985	25,975	8,089	8,853	6,979	0	6,839	304	1,777	58,816
1986	52,035	20,074	19,526	11,042	13,289	10,884	134	5,185	132,169
1987	35,366	19,298	10,358	6,026	8,216	9,659	6,759	3,200	98,882
1988	26,625	13,916	18,793	3,545	4,829	7,128	4,219	2,074	81,129
1989	28,898	28,530	15,245	8,302	1,066	12,711	576	3,123	98,451
1990	22,616	12,578	5,378	6,952	704	4,053	272	1,321	53,874
1991	9,005	4,821	5,879	2,974	161	3,182	115	990	27,127
1992	4,657	1,874	2,794	2,044	1,773	1,815	64	518	15,539
1993	1,139	757	821	412	81	230	0	161	3,601
1994	935	1,226	743	619	101	151	0	321	4,096
1995	952	859	654	445	9	192	0	163	3,274
1996	818	545	450	447	77	51	30	129	2,547
1997	721	1,044	391	498	9	114	58	170	3,005
1998	298	341	422	249	261	172	33	101	1,877
1999	358	253	363	192	85	34	1	62	1,348
2000	295	435	275	262	54	223	10	82	1,636
2001	592	311	469	372	94	203	46	44	2,131
2002	442	204	405	186	69	155	4	50	1,515
2003	290	341	289	171	133	140	99	39	1,502
2004	260	256	224	214	156	100	222	37	1,469
2005	273	100	275	108	114	57	154	70	1,151
2006	147	135	160	144	129	86	40	45	886
2007	192	112	174	113	57	69	93	28	838

¹Estimates for offshore spotted dolphins include mortalities of coastal spotted dolphins.

¹Las estimaciones de delfines manchados de altamar incluyen mortalidades de delfines manchados costeros.

TABLE 4. Standard errors of annual estimates of dolphin species and stock mortality for 1979-1994, and 2001-2003. There are no standard errors for 1995-2000, and 2004-2007, because the coverage was at or nearly at 100% during those years.

TABLA 4. Errores estándar de las estimaciones anuales de la mortalidad de delfines por especie y población para 1979-1994, y 2001-2003. No hay errores estándar para 1995-2000, y 2004-2007, porque la cobertura fue de 100%, o casi, en esos años.

	Offshore spotted		Spinner		Common			Other
	North-eastern	Western-southern	Eastern	Whitebelly	Northern	Central	Southern	
	Manchado de altamar		Tornillo		Común			
	Nor-oriental	Occidental y sureño	Oriental	Panza blanca	Norteño	Central	Sureño	Otros
	1979	817	1,229	276	255	1,432	560	115
1980	962	2,430	187	3,239	438	567	140	217
1981	1,508	2,629	616	1,477	645	167	230	76
1982	1,529	1,146	692	831	495	168	16	512
1983	659	928	284	1,043	349	87	-	171
1984	1,493	2,614	2,421	3,773	-	5,093	3	72
1985	3,210	951	1,362	1,882	-	2,776	247	570
1986	8,134	2,187	3,404	2,454	5,107	3,062	111	1,722
1987	4,272	2,899	1,199	1,589	4,954	2,507	3,323	1,140
1988	2,744	1,741	1,749	668	1,020	1,224	1,354	399
1989	3,108	2,675	1,674	883	325	4,168	295	430
1990	2,575	1,015	949	640	192	1,223	95	405
1991	956	454	771	598	57	442	30	182
1992	321	288	168	297	329	157	8	95
1993	89	52	98	33	27	-	-	29
1994	69	55	84	41	35	8	-	20
2001	3	28	1	6	7	7	-	1
2002	1	2	1	1	1	1	1	1
2003	1	1	1	1	-	1	1	-

TABLE 5. Percentages of sets with no dolphin mortalities, with major gear malfunctions, with net collapses, with net canopies, average times of backdown (in minutes), and average number of live dolphins left in the net at the end of backdown.

TABLA 5. Porcentajes de lances sin mortalidad de delfines, con averías mayores, con colapso de la red, con abultamiento de la red, duración media del retroceso (en minutos), y número medio de delfines en la red después del retroceso.

	Sets with zero mortality (%)	Sets with major malfunctions (%)	Sets with net collapse (%)	Sets with net canopy (%)	Average duration of backdown (minutes)	Average number of live dolphins left in net after backdown
	Lances sin mortalidad (%)	Lances con averías mayores (%)	Lances con colapso de la red (%)	Lances con abultamiento de la red (%)	Duración media del retroceso (minutos)	Número medio de delfines en la red después del retroceso
1986	38.1	9.5	29.0	22.2	15.3	6.0
1987	46.1	10.9	32.9	18.9	14.6	4.4
1988	45.1	11.6	31.6	22.7	14.3	5.5
1989	44.9	10.3	29.7	18.3	15.1	5.0
1990	54.2	9.8	30.1	16.7	14.3	2.4
1991	61.9	10.6	25.2	13.2	14.2	1.6
1992	73.4	8.9	22.0	7.3	13.0	1.3
1993	84.3	9.4	12.9	5.7	13.2	0.7
1994	83.4	8.2	10.9	6.5	15.1	0.3
1995	85.0	7.7	10.3	6.0	14.0	0.4
1996	87.6	7.1	7.3	4.9	13.6	0.2
1997	87.7	6.6	6.1	4.6	14.3	0.2
1998	90.3	6.3	4.9	3.7	13.2	0.2
1999	91.0	6.6	5.9	4.6	14.0	0.1
2000	90.8	5.6	4.3	5.0	14.9	0.2
2001	91.6	6.5	3.9	4.6	15.6	0.1
2002	93.6	6.0	3.1	3.3	15.0	0.1
2003	93.9	5.2	3.5	3.7	14.5	<0.1
2004	93.8	5.4	3.4	3.4	15.2	<0.1
2005	94.9	5.0	2.6	2.7	14.5	<0.1
2006	93.9	5.7	3.3	3.5	15.8	<0.1
2007	94.2	5.1	1.6	3.4	15.2	<0.1

TABLE 6. Weekly reports of dolphin mortality received, 2007.**TABLA 6.** Informes semanales de mortalidad de delfines recibidos, 2007.

Fleet	Program	Weeks	Reports	%
Flota	Programa	Semanas	Informes	%
COL	IATTC--CIAT	236	204	86
	National--Nacional	216	167	77
ECU	IATTC--CIAT	1,101	1,035	94
	National--Nacional	510	464	91
EUR	IATTC--CIAT	63	63	100
	National--Nacional	72	72	100
GTM	IATTC--CIAT	36	34	94
HND	IATTC--CIAT	76	76	100
MEX	IATTC--CIAT	716	629	88
	National--Nacional	690	498	72
NIC	IATTC--CIAT	84	70	83
	National--Nacional	69	61	88
PAN	IATTC--CIAT	456	448	98
	National--Nacional	429	378	88
PER	IATTC	7	7	100
SLV	IATTC--CIAT	182	182	100
USA	IATTC--CIAT	56	56	100
VEN	IATTC--CIAT	336	319	95
	National--Nacional	316	308	97
VUT	IATTC--CIAT	90	90	100
Total		5,741	5,161	90

TABLE 7. Preliminary reports of the mortalities of dolphins in 2008, to May 11.**TABLA 7.** Informes preliminares de las mortalidades de delfines en 2008, hasta el 11 de mayo.

Species and stock Especie y población	Total mortality Mortalidad total	Limit	Used (%)
		Límite	Usado (%)
Offshore spotted dolphin – Delfín manchado de altamar			
Northeastern--Nororiental	109	648	16.8
Western-southern--Occidental-sureño	30	1,145	2.6
Spinner dolphin – Delfín tornillo			
Eastern--Oriental	68	518	13.1
Whitebelly--Panza blanca	34	871	3.9
Common dolphin – Delfín común			
Northern--Norteño	19	562	3.4
Central	1	207	0.5
Southern--Sureño	34	1,845	1.8
Others and unidentified--Otros y no identificados	39		
Total	334	5,000	6.7

TABLE 8. Summary of possible infractions identified by the International Review Panel at its 43rd and 44th meetings.

TABLA 8. Resumen de posibles infracciones identificadas por el Panel Internacional de Revisión en sus reuniones 43^a y 44^a.

INFRACCIONES MAYORES / MAJOR INFRACTIONS:	
Viaje sin observador Trips without an observer	6
Viajes con lances en delfines sin LMD asignado Trips with dolphin sets but no DML assigned	0
Viajes con capitanes no incluidos en la lista del APICD Trips with captains not on the AIDCP list	3
Viajes sin paño de protección de delfines Trips without a dolphin safety panel	2
Lances intencionales después de alcanzar el LMD Intentional sets made after reaching the DML	0
Lances o cazas con uso de explosivos (ocurrieron en 2 viajes) Sets or chases with use of explosives (occurred in 2 trips)	2
Lances sobre stocks o tipos de manadas prohibidas Sets on banned stocks or school types	0
Lances sin retroceso Sets without a required backdown	3
Lances con embolsamiento o salabardeo de delfines Sets with dolphin sack-up or brail	0
Lances sin evitar herir o matar delfines Sets with unavoidable dolphin injury or mortality	0
Total	16
OTRAS INFRACCIONES / OTHER INFRACTIONS:	
Viajes sin balsa Trips without a required raft	17
Viajes con < 3 lanchas rápidas y/o sinbridas de remolque Trips with < 3 speedboats and/or missing towing bridles	3
Viajes sin reflector de alta intensidad Trips without a required high-intensity floodlight	14
Viajes sin máscaras de buceo Trips without required facemasks	1
Lances nocturnos (ocurrieron en 5 viajes) Night sets (occurred in 5 trips)	8
Lances sin rescate adicional Sets without required deployment of rescuer	0
Lances sin rescate después del retroceso Sets without continued rescue effort after backdown	0
Viajes con lances sobre delfines antes de la notificación del LMD Trips with dolphin sets before the DML notification	0
Total	43
Casos de interferencia al observador Cases of observer interference	5
Viajes revisados en estas reuniones Trips reviewed in these meetings	772
Lances sobre delfines revisados en estas reuniones Dolphin sets reviewed in these meetings	8,818
Lances accidentales revisados en estas reuniones Accidental sets reviewed in these meetings	4

TABLE 9. Responses for six types of possible infractions identified by the International Review Panel at its 43rd and 44th meetings.

TABLA 9. Respuestas para seis tipos de posibles infracciones identificadas por el Panel Internacional de Revisión en sus reuniones 43^a y 44^a.

No. de casos	Sin respuesta	Respuestas					Total
		Bajo investigación ¹	No hubo infracción	Infracción: sin sanción	Infracción: aviso	Infracción: sanción ²	
No. of cases	No response	Under investigation ¹	No infraction	Infraction: no sanction	Infraction: warning	Infraction: sanction ²	Total
HOSTIGAMIENTO AL OBSERVADOR – OBSERVER HARASSMENT							
COL	1	0	-	0	1	0	1 (100%)
ECU	1	1 (100%)	0	0	0	0	0 -
GTM	1	0	-	0	1	0	1 (100%)
PAN	1	0	-	1	0	0	1 (100%)
VEN	1	0	-	0	1	0	1 (100%)
Total^{3:}	5	1 (20%)	1	3	0	0	4 (80%)
USO DE EXPLOSIVOS – USE OF EXPLOSIVES							
VEN	2	0	-	2	0	0	2 (100%)
Total:	2	0	-	2	0	0	2 (100%)
LANCES NOCTURNOS – NIGHT SETS							
VEN	8	0	-	5	0	0	3 8 (100%)
Total	8	0	-	5	0	0	3 8 (100%)
PESCAR SIN OBSERVADOR – FISHING WITHOUT AN OBSERVER							
ECU	6	0	-	0	6	0	0 6 (100%)
Total	6	0	-	0	6	0	0 6 (100%)
PESCAR SOBRE DELFINES SIN LMD – FISHING ON DOLPHINS WITHOUT A DML							
<i>Ningún caso identificado durante el periodo de este informe</i>							
<i>No identified cases during this report period</i>							
LANCES SOBRE DELFINES DESPUES DE ALCANZAR EL LMD--SETS ON DOLPHINS AFTER REACHING THE DML							
<i>Ningún caso identificado durante el periodo de este informe</i>							
<i>No identified cases during this report period</i>							

¹ Incluye casos sujetos a litigio administrativo – Includes cases subject to administrative litigation

² Una sanción fue o será aplicada – Sanction was or will be applied

³ Se redondean los porcentajes, y no suman necesariamente 100 - Percentages are rounded and may not sum to 100

Appendix A

POSSIBLE INFRACTIONS IDENTIFIED BY THE IRP

Brief descriptions of government actions taken, as reported to the Secretariat by May 29, 2008, are included. If no action is listed for a possible infraction, the Secretariat has not received a response from the government.

The "Others" category includes all fleets with three vessels or less (Guatemala, Honduras, Spain, United States, Vanuatu).

Abbreviations: DSP = Dolphin Safety Panel

COLOMBIA			
Vessel	IRP recno	Review date	Identified infractions
COL 1	2006-529	2007/06	1) 1 Trip without a required raft Action taken: 1) After investigating, the government decided that no infraction occurred.
	2007-120	2007/06	1) 1 Trip without a required raft Action taken: 1) After investigating, the government decided that no infraction occurred.
COL 2	2006-729	2007/06	1) 1 Case of observer interference Action taken: 1) After investigating, the government decided that no infraction occurred.
COL 3	2006-736	2007/06	1) 1 Trip without a required raft Action taken: 1) After investigating, the government decided that no infraction occurred.
	2007-281	2007/10	1) 1 Trip without a required raft Action taken: 1) The government is investigating the possible infractions.
COL 4	2007-115	2007/10	1) 1 Trip without a required raft Action taken: 1) The government is investigating the possible infractions.
ECUADOR			
Vessel	IRP recno	Review date	Identified infractions
ECU 1	2007-005	2007/06	1) 1 Trip without a required high intensity floodlight
ECU 2	2007-284	2007/10	1) 1 Case of observer interference
ECU 3	2006-748	2007/10	1) 1 Trip without an observer Action taken: 1) After investigating, the government decided that no infraction occurred.
	2007-499	2007/10	1) 1 Trip without an observer Action taken: 1) After investigating, the government decided that no infraction occurred.
2007-501	2007/10	2007/10	1) 1 Trip without an observer Action taken: 1) After investigating, the government decided that no infraction occurred.
2007-502	2007/10	2007/10	1) 1 Trip without an observer Action taken: 1) After investigating, the government decided that no infraction occurred.
2007-503	2007/10	2007/10	1) 1 Trip without an observer Action taken: 1) After investigating, the government decided that no infraction occurred.
2007-504	2007/10	2007/10	1) 1 Trip without an observer Action taken: 1) After investigating, the government decided that no infraction occurred.
MEXICO			
Vessel	IRP recno	Review date	Identified infractions
MEX 1	2007-409	2007/10	1) 1 Trip without a required raft Action taken: 1) After investigating, the government decided that no infraction occurred, but issued a warning to the vessel owner to obtain the required equipment.

MEX 2	2007-334	2007/10	1) 1 Trip without a required high intensity floodlight Action taken: 1) After investigating, the government decided that no infraction occurred, but issued a warning to the vessel owner to obtain the required equipment.
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NICARAGUA

Vessel	IRP recno	Review date	Identified infractions
NIC 1	2007-043	2007/06	1) 1 Trip without a dolphin safety panel
		2007/06	2) 1 Trip with < 3 speedboats and/or missing towing bridles
		2007/06	3) 1 Trip without a required high intensity floodlight
NIC 2	2006-567	2007/06	1) 1 Trip without a required high intensity floodlight
		2007-096	1) 1 Trip without a required high intensity floodlight

PANAMA

Vessel	IRP recno	Review date	Identified infractions
PAN 1	2007-425	2007/10	1) 1 Trip without a required high intensity floodlight
		2007-494	Action taken: 1) The government is investigating the possible infractions. 1) 1 Trip without a required high intensity floodlight Action taken: 1) The government is investigating the possible infractions.
PAN 2	2007-489	2007/10	1) 1 Trip without a required high intensity floodlight Action taken: 1) The government is investigating the possible infractions.
PAN 3	2006-560	2007/06	1) 1 Trip with captain not on the AIDCP list Action taken: 1) After investigating, the government decided that no infraction occurred.
PAN 4	2007-189	2007/06	1) 1 Trip without a dolphin safety panel
		2007/06	2) 1 Trip without a required raft
		2007/06	3) 1 Trip with < 3 speedboats and/or missing towing bridles
		2007/06	4) 1 Trip without a required high intensity floodlight
		2007/06	5) 1 Trip without required facemasks
PAN 5	2006-603	2007/06	1) 1 Case of observer interference Action taken: 1) The government is investigating the possible infractions.
PAN 6	2007-033	2007/06	1) 1 Trip without a required high intensity floodlight Action taken: 1) The government is investigating the possible infractions.

EL SALVADOR

Vessel	IRP recno	Review date	Identified infractions
SLV 1	2007-219	2007/06	1) 1 Trip without a required raft
SLV 2	2007-424	2007/10	1) 1 Trip with < 3 speedboats and/or missing towing bridles
SLV 3	2006-583	2007/06	1) 1 Trip without a required high intensity floodlight
	2006-692	2007/06	1) 1 Trip without a required high intensity floodlight

VENEZUELA

Vessel	IRP recno	Review date	Identified infractions
VEN 1	2007-052	2007/06	1) 1 Trip without a required raft Action taken: 1) A fine was applied.
VEN 2	2007-216	2007/10	1) 1 Night set
		2007/10	2) 1 Set or chase with use of explosives Action taken: 1), 2) The government is investigating the possible infractions.
VEN 3	2007-255	2007/10	1) 2 Night sets Action taken: 1) The government is investigating the possible infractions.
VEN 4	2006-589	2007/06	1) 1 Trip without a required raft Action taken: 1) A fine was applied.
		2007-304	1) 1 Trip without a required raft Action taken: 1) The government is investigating the possible infractions.
VEN 5	2006-544	2007/10	1) 1 Night set 2) 1 Trip without a required raft Action taken: 1), 2) The government is investigating the possible infractions.

	2006-661	2007/06	1) 3 Night sets
		2007/06	2) 1 Trip without a required raft
			Action taken: 1), 2) A fine was applied.
	2007-361	2007/10	1) 1 Night set
		2007/10	2) 1 Set or chase with use of explosives
			Action taken: 1), 2) The government is investigating the possible infractions.
	2007-518	2007/10	1) 3 Sets without a required backdown
			Action taken: 1) The government is investigating the possible infractions.
VEN 6	2007-324	2007/10	1) 1 Trip without a required raft
			Action taken: 1) The government is investigating the possible infractions.
	2007-400	2007/10	1) 1 Trip without a required raft
			Action taken: 1) The government is investigating the possible infractions.
VEN 7	2006-500	2007/06	1) 1 Case of observer interference
			Action taken: 1) After investigating, the government decided that no infraction occurred.
VEN 8	2006-516	2007/06	1) 1 Trip with captain not on the AIDCP list
		2007/06	2) 1 Trip without a required raft
		2007/06	3) 1 Trip without a required high intensity floodlight
			Action taken: 1), 2), 3) After investigating, the government decided that no infraction occurred.
	2006-575	2007/06	1) 1 Trip with captain not on the AIDCP list
		2007/06	2) 1 Trip without a required raft
		2007/06	3) 1 Trip without a required high intensity floodlight
			Action taken: 1), 2), 3) After investigating, the government decided that no infraction occurred.

OTHERS

<i>Vessel</i>	<i>IRP recno</i>	<i>Review date</i>	<i>Identified infractions</i>
OTH 1	2006-662	2007/06	1) 1 Case of observer interference Action taken: 1) The government decided that no infraction occurred, but issued a warning to the vessel owner.