INTERNATIONAL
MARITIME
ORGANIZATION

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MARINE ENVIRONMENT PROTECTION
COMMITTEE
62nd session
Agenda item 3

MEPC 64/INF.2
24 April 2012
ENGLISH ONLY

RECYCLING OF SHIPS

**Calculation of recycling capacity
for meeting the entry into force conditions of the Hong Kong Convention**

Note by the Secretariat

SUMMARY

Executive summary:	To assist the Committee and other stakeholders to reach a better understanding of the conditions for the Convention's entry into force, the Secretariat in 2011, in accordance with resolution MEPC.178(59), collected published data on ship recycling volumes and on the tonnages flying the flags of different States for the 10 years up to and including 2010 and submitted it to the Committee as document MEPC 62/INF.13.
	In early 2012, having obtained the ship recycling and fleet data for 2011, the Secretariat has produced a revised analysis on the conditions for entry into force of the Hong Kong Convention, as shown in the annex to this document.
	This document shows that the conditions for entry into force of the Hong Kong Convention in the period April 2012 to April 2013 necessitate accession or ratification by at least 15 States, whose combined merchant fleets constitute not less than 417,232,604 gross tons, and whose combined maximum annual ship recycling volumes constitute not less than 12,516,978 gross tons.
Strategic direction:	7.1
High-level action:	7.1.2
Planned output:	7.1.2.1
Action to be taken:	Paragraph 14
Related documents:	SR/CONF/41; resolution MEPC.178(59) and MEPC 62/INF.13

Background

1   Article 17 of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (Hong Kong Convention) provides that the Convention shall enter into force 24 months after the date on which the following conditions are met:

.1　not less than 15 States have either signed it without reservation as to ratification, acceptance or approval, or have deposited the requisite instrument of ratification, acceptance, approval or accession in accordance with article 16;

.2　the combined merchant fleets of the States mentioned in paragraph 1.1 constitute not less than 40 per cent of the gross tonnage of the world's merchant shipping; and

.3　the combined maximum annual ship recycling volume of the States mentioned in paragraph 1.1 during the preceding 10 years constitutes not less than 3 per cent of the gross tonnage of the combined merchant shipping of the same States.

2　The Hong Kong Convention had requested the MEPC to develop the procedure for calculating the combined maximum annual ship recycling volume (ship recycling capacity), taking into account the proposal in document SR/CONF/41 (Japan). In response to this request, MEPC 59 adopted, on 17 July 2009, resolution MEPC.178(59) on the Calculation of recycling capacity for meeting the entry-into-force conditions of the Hong Kong Convention.

3　Resolution MEPC.178(59) invites the Secretary-General, when calculating the combined maximum annual ship recycling volume of contracting States as required by article 17 of the Convention, to refer to annually published statistical data on recycled gross tonnage of shipping, on the following basis:

.1　for each contracting State, extract the "annual ship recycling volume" for each of the preceding 10 years, by reference to the data on total gross tonnage provided in the table on disposals by country of breaking in that year's Lloyd's Register-Fairplay annual publication *World Casualty Statistics*; and

.2　determine "the maximum annual ship recycling volume" by selecting the highest value occurring in the 10-year period for each contracting State.

4　The statistical data, referred to above, have appeared for a number of years as the publication *World Casualty Statistics* which provides in April/May of each year data on all ships lost (as a result of casualty) and disposed of (recycled) during the previous calendar year. From 2009 the publisher is IHS Fairplay, which took over from Lloyd's Register-Fairplay. Incidentally, fleet gross tonnage data for entry into force of this and other IMO conventions have been obtained from the IHS Fairplay publication *World Fleet Statistics*, which publishes in April of each year fleet data as of the 31 December of the previous year. From the current year 2012, IHS Fairplay ceased the printed format of the above-mentioned two publications (*World Casualty Statistics* and *World Fleet Statistics*) and instead makes these available as a web-based product.

The determination of ship recycling capacity

5　To assist the Committee and other stakeholders reach a better understanding of the conditions for the Convention's entry into force, the Secretariat, in accordance with resolution MEPC.178(59), has collected the published ship recycling volume data for the preceding 10 years, as shown in the tables in the annex to this document.

6   Table 1 shows, for each country that is recorded by IHS Fairplay as having recycled any ships in the last decade, the total gross tonnage recycled in each of the preceding 10 years (2002 to 2011). Also, the last column of Table 1 shows the maximum annual ship recycling volume of each State, this being the largest entry of recycled gross tonnage in the decade. It should be noted that the maximum annual ship recycling volume of each State may be regarded as the present recycling capacity of that State.

7   Table 2 presents data on the total gross tonnage of the world fleet for each of the preceding 10 years. For establishing the criteria for the entry into force of the Convention, only the most recent year's total gross tonnage of the world fleet is relevant (i.e. the data for 2011). However, data for the previous nine years are included in Table 2 in order to demonstrate the growth of the world fleet and consequently the effect that growth has on the entry into force criteria.

8   The second row in Table 2 shows the 40 per cent of the world fleet's gross tonnage figure (this being the minimum tonnage of merchant shipping flying the flags of contracting States that is necessary to satisfy the tonnage condition for entry into force of the Convention – see paragraph 1.2 above). Finally, the third row of Table 2 shows the 3 per cent of the 40 per cent of the world fleet's tonnage figure (this being the minimum tonnage of combined maximum annual ship recycling volume of contracting States that is necessary to satisfy the recycling capacity criterion for entry into force of the Convention – see paragraph 1.3 above).

9   The published data for 2011 therefore show that the conditions for entry into force of the Hong Kong Convention necessitate accession or ratification by at least 15 States, whose combined merchant fleets constitute not less than 417,232,604 gross tons, and whose combined maximum annual ship recycling volumes constitute not less than 12,516,978 gross tons. Evidently, as the gross tonnage of the world fleet changes from year to year, so will the required minimum tonnages of the combined fleet and of the combined maximum annual ship recycling volume, as also shown in Table 2.

10   Table 3 presents an extract from Table 1 showing, for the top five ship recycling States (listed in this paragraph in the order of capacity: India, China, Bangladesh, Pakistan and Turkey), their total gross tonnage recycled annually and their maximum annual ship recycling volume (recycling capacity). Importantly, Table 3 also shows that, each year in the decade, the top five recycling States have recycled an average of 97 per cent of all tonnage recycled in the world.

11   Each of the top three recycling States, India, China, and Bangladesh, has a large share of the world's recycling capacity (i.e. between 24% and 31%), while Pakistan and Turkey have smaller but increasing shares of the world's capacity (around 11% and 4%). Turkey, which is the smallest of the top five recycling States, nevertheless recycles more tonnage than the rest of the world (excluding the top five recycling States) put together.

12   On the basis of the data on maximum annual ship recycling volumes presented in Table 3, it can be seen that accession by any two of the top three recycling States is currently more than sufficient to satisfy the third condition for the Convention's entry into force (paragraph 1.3 above). Furthermore, assuming an average annual increase of the world fleet by 5 per cent, accession by any two of the top three recycling States should continue to satisfy the third condition for the Convention's entry into force until 2015, even without an increase of their maximum annual ship recycling volumes (recycling capacities).

13   Finally, it should be noted that if a Member State wishes to verify the data for its annual ship recycling volumes, IHS Fairplay would welcome the opportunity to crosscheck its records by receiving a list of the recycled ships for the year in question.

Action requested of the Committee

14   The Committee is invited to take into account the information in this document and the associated data in its consideration of ship recycling issues.

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ANNEX

DETERMINATION OF THE SHIP RECYCLING CAPACITY CONDITION
FOR ENTRY INTO FORCE OF THE HONG KONG CONVENTION

RECYCLING STATE	TABLE 1: DETERMINATION OF ANNUAL SHIP RECYCLING VOLUME (Data by IHS - Fairplay)										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Max 2002-2011
ALBANIA	-	-	-	-	-	-	-	-	889	-	**889**
ARGENTINA	-	-	-	22,403	-	-	-	28,697	433	3,852	**28,697**
AUSTRALIA	-	466	-	-	4,807	-	103	-	-	-	**4,807**
AZERBAIJAN	-	-	1,467	-	208	-	-	-	-	-	**1,467**
BANGLADESH	4,893,973	2,889,908	3,356,537	2,113,765	2,882,503	1,837,988	4,176,026	6,608,531	3,927,297	5,837,137	**6,608,531**
BELGIUM	283	-	10,220	1,374	2,064	878	11,554	5,267	6,389	16,005	**16,005**
BRAZIL	15,372	6,985	16,490	-	-	-	447	467	369	8,749	**16,490**
BULGARIA	1,972	1,827	-	-	-	-	-	2,406	-	-	**2,406**
CANADA	54,629	17,895	561	-	21,328	8,233	1,495	161	622	21,205	**54,629**
CAPE VERDE	-	-	-	-	-	-	-	1,290	-	-	**1,290**
CHILE	-	8,276	917	-	-	1,110	-	-	2,406	1,908	**8,276**
CHINA	3,138,838	5,582,476	1,538,067	151,089	254,146	340,738	927,762	7,737,730	4,723,151	5,968,520	**7,737,730**
COLOMBIA	-	-	-	-	-	6,788	-	-	-	7,519	**7,519**
COOK ISLANDS	-	-	-	-	-	912	465	-	-	-	**912**
CROATIA	659	1,898	831	889	403	-	242	-	492	738	**1,898**
CUBA	1,843	-	-	-	-	-	-	-	-	-	**1,843**
DEMOCRATIC PEOPLE'S REP. OF KOREA	-	-	-	23,281	-	-	-	-	-	1,888	**23,281**
DENMARK	9,941	15,120	10,674	19,704	15,688	11,538	12,011	15,829	23,418	28,672	**28,672**
ECUADOR	705	-	131	3,927	-	-	-	-	-	17,218	**17,218**
EGYPT	-	8,860	18,299	-	-	-	-	2,143	-	-	**18,299**
ESTONIA	-	-	1,163	-	-	239	2,342	-	2,426	3,593	**3,593**
FRANCE	-	-	-	-	-	-	373	3,395	182	331	**3,395**
FRENCH POLYNESIA	-	-	-	888	-	-	-	-	626	-	**888**
REUNION	964	-	-	-	-	-	-	-	-	-	**964**
GERMANY	-	-	-	1,147	-	-	-	-	-	-	**1,147**
GHANA	6,629	-	-	-	1,005	898	-	-	-	8,714	**8,714**
GREECE	-	7,648	457	-	2,307	10,815	-	487	-	-	**10,815**
GUYANA	-	-	-	-	-	-	2,230	-	-	-	**2,230**
HONDURAS	-	2,556	-	-	-	-	-	-	-	-	**2,556**
ICELAND	-	-	-	-	144	721	-	-	-	-	**721**
INDIA	6,751,349	5,886,259	1,619,505	1,123,487	852,990	1,332,492	2,458,113	7,561,258	6,533,954	8,504,517	**8,504,517**
INDONESIA	-	-	1,285	209	-	-	2,813	6,695	-	-	**6,695**
IRELAND	-	-	-	-	836	136	-	-	147	173	**836**
ISRAEL	-	2,876	-	-	-	-	-	-	-	-	**2,876**
ITALY	2,420	6,774	581	-	125	597	-	-	1,433	-	**6,774**
JAPAN	25,003	45,710	5,767	-	712	-	495	990	45,706	-	**45,710**
KAZAKHSTAN	-	-	-	-	-	-	-	-	-	-	**-**
KENYA	-	988	-	-	-	-	-	-	-	-	**988**
KUWAIT	-	153	-	-	-	-	-	-	-	-	**153**
LATVIA	1,386	5,450	1,400	6,976	2,434	11,384	118	-	695	1,857	**11,384**
LEBANON	-	999	1,213	-	-	-	-	-	-	-	**1,213**

RECYCLING STATE	TABLE 1 (continued): DETERMINATION OF ANNUAL SHIP RECYCLING VOLUME (Data by IHS - Fairplay)										Max.ann'l recl.vol.
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Max 2002-2011
LITHUANIA	193	1,919	4,297	118	4,584	685	2,699	721	1,400	2,303	**4,584**
MALTA	-	-	-	-	745	-	-	-	-	947	**947**
MEXICO	-	1,652	12,753	-	1,396	-	8,671	-	-	9,304	**12,753**
MONTENEGRO	-	-	-	-	-	120	-	-	-	-	**120**
MYANMAR	-	12,418	-	-	-	-	-	-	-	-	**12,418**
NETHERLANDS	4,044	1,919	28,879	4,611	3,403	1,485	6,602	4,185	538	6,647	**28,879**
NETHERLANDS ANTILLES	-	2,927	-	-	1,422	-	-	-	-	-	**2,927**
NEW ZEALAND	-	-	366	-	-	1,390	3,007	-	-	1,044	**3,007**
NIGERIA	-	-	-	-	-	-	-	4,015	-	-	**4,015**
NORWAY	799	2,614	5,278	1,206	-	489	6,261	-	818	3,610	**6,261**
OMAN	-	-	-	-	-	-	574	-	-	-	**574**
PAKISTAN	997,236	816,961	209,055	47,530	186,987	379,601	273,937	2,100,637	2,443,304	3,013,926	**3,013,926**
PANAMA	-	2,371	-	-	-	-	-	-	2,125	789	**2,371**
PAPUA NEW GUINEA	-	-	-	-	-	-	-	-	614	-	**614**
PERU	-	18,168	-	-	-	-	-	6,892	-	-	**18,168**
PHILIPPINES	-	-	3,138	-	-	-	-	-	7,977	-	**7,977**
POLAND	-	-	-	1,028	-	-	-	-	-	-	**1,028**
PORTUGAL	-	10,836	-	-	-	1,409	249	3,466	2,933	-	**10,836**
REPUBLIC OF KOREA	-	2,303	5,800	467	-	-	-	673	-	-	**5,800**
ROMANIA	-	-	2,613	-	-	-	109	-	-	-	**2,613**
RUSSIAN FEDERATION	6,791	16,805	7,377	3,335	19,404	9,848	12,348	5,318	-	3,924	**19,404**
SINGAPORE	-	-	-	697	-	-	-	-	-	-	**697**
SOUTH AFRICA	-	801	-	-	-	802	-	585	453	292	**802**
SPAIN	27,285	32,614	12,633	6,121	6,871	1,041	6,165	14,206	11,709	8,285	**32,614**
SWEDEN	-	-	1,065	-	-	-	-	-	-	-	**1,065**
SYRIAN ARAB REPUBLIC	-	-	-	-	-	-	-	-	-	-	**-**
THAILAND	-	-	-	-	-	-	677	-	-	-	**677**
TRINIDAD AND TOBAGO	-	-	-	-	-	-	-	400	-	1,747	**1,747**
TURKEY	385,437	280,367	200,183	137,693	148,448	117,817	141,351	557,251	658,473	1,067,425	**1,067,425**
UKRAINE	1,472	-	-	-	10,165	-	-	717	-	825	**10,165**
UNITED ARAB EMIRATES	-	-	-	-	-	-	950	-	-	-	**950**
UNITED KINGDOM	512	2,791	1,491	2,340	2,771	2,535	-	2,411	707	2,269	**2,791**
BERMUDA	-	-	-	-	-	-	134	-	-	-	**134**
FALKLAND ISLANDS (Malvinas) *	-	-	-	507	-	-	-	-	-	-	**507**
GIBRALTAR	-	-	-	-	-	-	-	-	-	2,099	**2,099**
UNITED REP. OF TANZANIA	-	-	-	-	-	-	520	-	-	-	**520**
UNITED STATES OF AMERICA	6,624	26,219	79,139	24,629	79,362	47,490	196,410	10,868	133,428	204,348	**204,348**
URUGUAY	-	-	-	-	-	-	-	-	203	-	**203**
VIETNAM	3,912	15,398	8,076	1,898	5,813	3,834	-	-	-	-	**15,398**
UNKNOWN	36,390	185,985	27,784	70,891	78,574	18,834	22,534	270,829	138,715	253,993	**270,829**
TOTALS	**16,376,661**	**15,928,192**	**7,195,492**	**3,772,210**	**4,591,645**	**4,152,847**	**8,279,787**	**24,958,520**	**18,674,032**	**25,016,373**	

* A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

TABLE 2: WORLD FLEET IN GT TERMS (Data by IHS-Fairplay)											
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	
WORLD FLEET	585,583,396	605,218,368	633,321,120	675,115,956	721,855,399	774,936,508	830,704,412	882,634,804	957,982,304	1,043,081,509	
40% of WORLD FLEET	234,233,358	242,087,347	253,328,448	270,046,382	288,742,160	309,974,603	332,281,765	353,053,922	383,192,922	417,232,604	
3% of 40%	7,027,001	7,262,620	7,599,853	8,101,391	8,662,265	9,299,238	9,968,453	10,591,618	11,495,788	12,516,978	

TABLE 3: ANNUAL SHIP RECYCLING VOLUME OF THE LARGEST SHIP RECYCLING COUNTRIES (Data by IHS-Fairplay)											Max.ann'l recl.vol.
RECYCLING STATE	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Max 2001-2010
BANGLADESH	4,893,973	2,889,908	3,356,537	2,113,765	2,882,503	1,837,988	4,176,026	6,608,531	3,927,297	5,837,137	**6,608,531**
CHINA	3,138,838	5,582,476	1,538,067	151,089	254,146	340,738	927,762	7,737,730	4,723,151	5,968,520	**7,737,730**
INDIA	6,751,349	5,886,259	1,619,505	1,123,487	852,990	1,332,492	2,458,113	7,561,258	6,533,954	8,504,517	**8,504,517**
PAKISTAN	997,236	816,961	209,055	47,530	186,987	379,601	273,937	2,100,637	2,443,304	3,013,926	**3,013,926**
TURKEY	385,437	280,367	200,183	137,693	148,448	117,817	141,351	557,251	658,473	1,067,425	**1,067,425**
Sum of top five recycling States	16,166,833	15,455,971	6,923,347	3,573,564	4,325,074	4,008,636	7,977,189	24,565,407	18,286,179	24,391,525	
Rest of the world	209,828	472,221	272,145	198,646	266,571	144,211	302,598	393,113	387,853	624,848	**624,848**
WORLD TOTAL	16,376,661	15,928,192	7,195,492	3,772,210	4,591,645	4,152,847	8,279,787	24,958,520	18,674,032	25,016,373	**27,556,977**
											10 year average:
% of top five to world totals	99%	97%	96%	95%	94%	97%	96%	98%	98%	98%	**97%**

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