# Leatherback Turtle (*Dermochelys coriacea*)

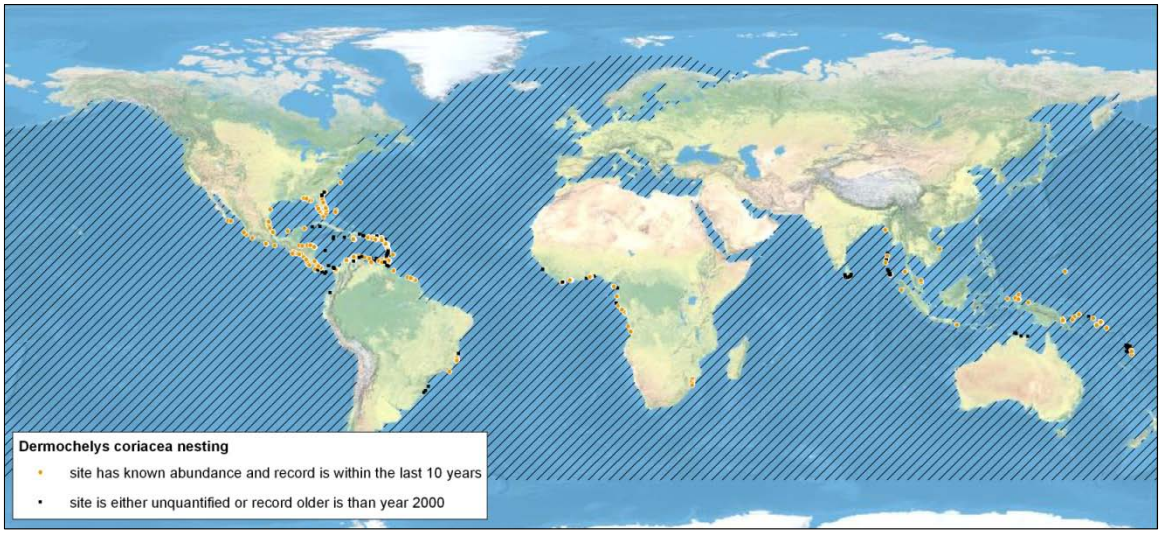


**Figure 1.** Global distribution and nesting sites for the Leatherback Turtle.

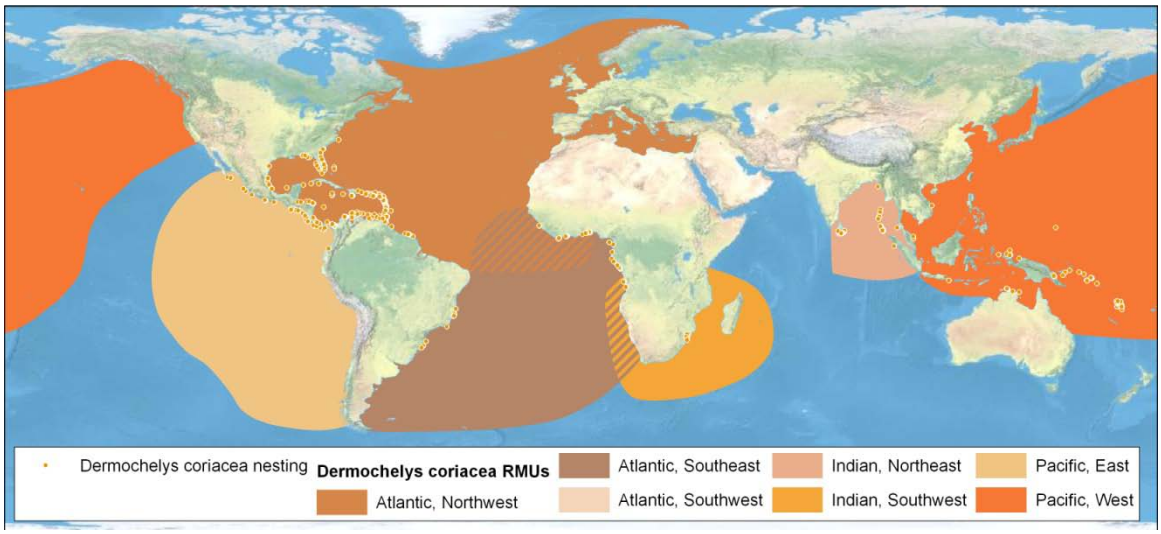


**Figure 2.** Global map of the seven subpopulations (RMUs) of Leatherbacks and their nesting sites.

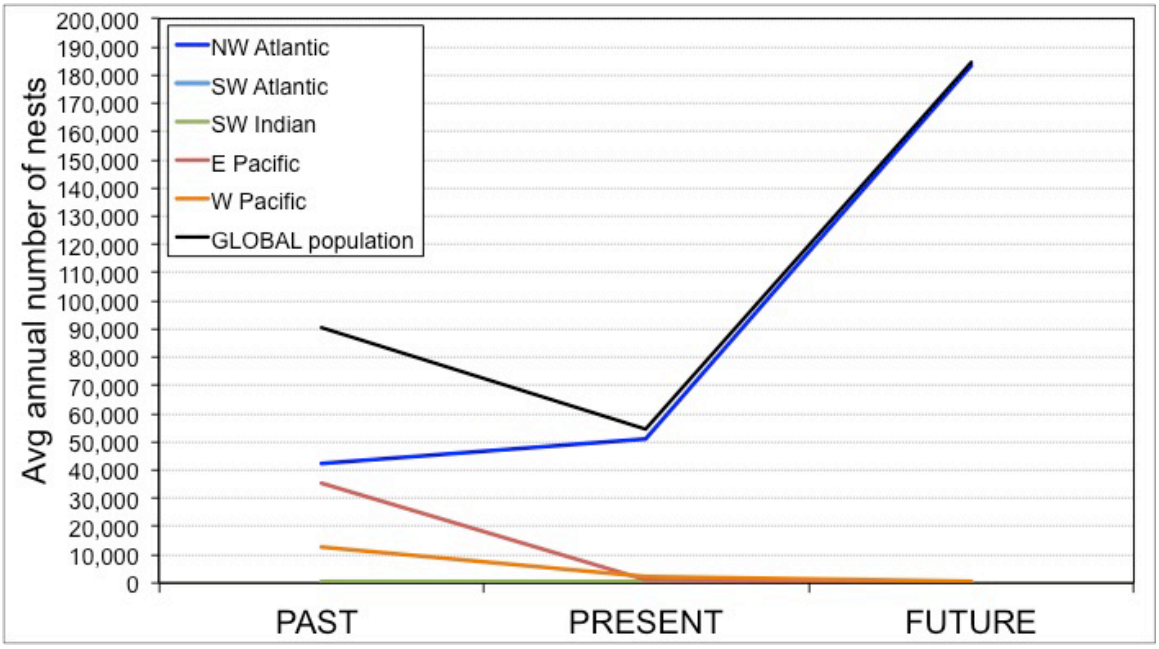


**Figure 3**. Past (3 generations ago), present (year 2010), and future (year 2040) abundance of each Leatherback subpopulation and the global population. See Tables 2 and 3 for actual values.

**Table 1.** Summary results of subpopulation assessments and global assessment for all IUCN Red List Criteria, and the final listings for each subpopulation and global population. Cells shaded red indicate "Threatened" category status according to IUCN Red List Criteria.

| **SUBPOPULATION** | **Criterion A2** (popn reduction) | **Criterion A4** (popn reduction, moving window) | **Criterion B** (geographic range) | **Criterion C** (small popn size and decline) | **Criterion D** (very small or restricted popn) | **Criterion E** (quantitative analysis) | **UCN RED LIST CATEGORY AND CRITERIA** |
|---|---|---|---|---|---|---|---|
| **Northwest Atlantic Ocean** | Least Concern | Least Concern | Least Concern | Least Concern | Least Concern | Not Assessed | Least Concern |
| **Southeast Atlantic Ocean** | Data Deficient | Data Deficient | Data Deficient | Data Deficient | Data Deficient | Not Assessed | Data Deficient |
| **Southwest Atlantic Ocean** | Least Concern | Least Concern | Near Threatened | Near Threatened | Critically Endangered D | Not Assessed | *Critically Endangered* Criterion D |
| **Southwest Indian Ocean** | Least Concern | Least Concern | Vulnerable B2ab(v) | Critically Endangered C2a(ii) | Endangered C2a(i,ii); D | Not Assessed | *Critically Endangered* C2a(ii) |
| **Northeast Indian Ocean** | Data Deficient | Data Deficient | Data Deficient | Data Deficient | Data Deficient | Not Assessed | Data Deficient |
| **East Pacific Ocean** | Critically Endangered A2bd | Critically Endangered A4bd | Least Concern | Endangered C1 | Vulnerable D | Not Assessed | *Critically Endangered* A2bd+4bd |
| **West Pacific Ocean** | Critically Endangered A2bd | Critically Endangered A4bd | Least Concern | Endangered C1 | Least Concern | Not Assessed | *Critically Endangered* A2bd+4bd |
| **GLOBAL** | Vulnerable | Near Threatened | Least Concern | Least Concern | Least Concern | Not Assessed | *Vulnerable* A2bd |

**Table 2.** Summary of published information on past and present nesting abundances (average number of nests per year) and trends at rookeries within each subpopulation. Global population size (past and present, in average annual nesting abundance) is the sum of subpopulation totals, and the global trend is calculated as an average of subpopulation trends, weighted by the subpopulation size relative to global population size three generations ago (IUCN 2011). All values are based on a single-year count, unless the years shown are a range, then the value is an annual mean. Past estimates of abundance were assumed to reflect abundance three generations prior, and thus used in calculation of annual and 3-generation declines**.**

| | | Past Estimate 1 | | Past Estimate 2 | | Recent Estimate | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Subpopulation** | **Site** | **Years** | **Value** | **Years** | **Value** | **Years** | **Value** | **Estimate to 2010** | **Annual Change** | **3-generation Change** | **Citations (Past)** | **Citation (Present)** |
| ***Northwest Atlantic Ocean*** | Suriname (Galibi, Matapica) | 1967-1971 | 227 | 1976-1985 | 4,487 | 2005-2010 | 4,263 | 4,263 | 0.069 | 17.78 | TEWG (2007) and references therein | TEWG (2007) and references therein; Hilterman and Goverse (2007); WWF-Suriname, unpublished data |
| | French Guiana | 1967-1971 | 21,323 | 1976-1985 | 20,957 | 2001-2005 | 22,501 | 22639 | 0.001 | 0.06 | TEWG (2007) and references therein | TEWG (2007) and references therein; Girondot *et al*. (2007); M. Entraygues pers comm. |
| | Guyana | 1965 | 4 | 1990-1999 | 114 | 2006-2010 | 836 | 836 | 0.129 | 208.00 | TEWG (2007) and references therein | TEWG (2007) and references therein; DeFreitas and Pritchard (2006, 2007, 2008, 2009, 2010) |
| | Trinidad (Matura) | 1999-2003 | 17,886 | | | 2004-2007 | 18,289 | 18,289 | 0.002 | 0.03 | TEWG (2007) and references therein; Eckert pers. comm. | TEWG (2007) and references therein, Eckert, pers comm. |
| | Trinidad (Grand Riviere, Fishing Pond) | | | | | 2007-2008 | 40,499 | | | | Eckert pers. comm | Eckert pers. comm. |
| | Costa Rica (Tortuguero) | 1995-1999 | 1,000 | | | 2006-2010 | 284 | 284 | -0.076 | -0.72 | TEWG (2007) and references therein; Sea Turtle Conservancy pers. comm. (2011) | TEWG (2007) and references therein; Sea Turtle Conservancy pers. comm. (2011) |
| | Costa Rica (Gandoca) | 1990-1994 | 306 | 2001-2005 | 589 | 2010 | 232 | 232 | -0.013 | -0.24 | TEWG (2007) and references therein; Chacon-Chaverri and Eckert (2007) | Chacón (2010) |
| | Costa Rica (Pacuare) | 1995-1999 | 845 | 2001-2005 | 719 | 2010 | 899 | 899 | 0.004 | 0.06 | TEWG (2007) and references therein | Hart (2010) |
| | Costa Rica (others) | | | | | 2008-2010 | ~300 | | | | | Economides and Chacón (2009); Arroyo Arce and Jones (2010) |

| Subpopulation | Site | Past Estimate 1 | | Past Estimate 2 | | Recent Estimate | | Estimate to 2010 | Annual Change | 3-generation Change | Citations (Past) | Citation (Present) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Years | Value | Years | Value | Years | Value | | | | | |
| | Panama (Chiriqui) | | | | | 2004-2010 | 4,542 | | | | | Ordoñez Espinosa *et al*. (2007); Sea Turtle Conservancy pers. comm. (2010) |
| | Panama (Armila), Colombia | | | | | 2006-2007 | 3,831 (Panama); 2,299 (Colombia) | | | | | Patiño-Martínez *et al*. (2008) |
| | St. Croix, US Virgin Islands | 1977-1981 | 60 | | | 2006-2010 | 695 | 695 | 0.075 | 10.58 | TEWG (2007) and references therein; Dutton *et al*. (2005); Garner and Garner pers. comm. | Garner and Garner pers. comm. |
| | Culebra, Puerto Rico | 1984-1988 | 138 | | | 2006-2010 | 132 | 132 | -0.002 | -0.04 | TEWG (2007) and references therein; Diez *et al*. (2012); Diez pers. comm. | TEWG (2007) and references therein; Diez *et al*. (2012); Diez pers. comm. |
| | Fajardo, Puerto Rico | 1986-1990 | 6 | | | 2006-2010 | 341 | 341 | 0.175 | 55.83 | TEWG (2007) and references therein; Diez *et al*. (2012); Diez pers. comm. | TEWG (2007) and references therein; Diez *et al*. (2012); Diez pers. comm. |
| | Vieques, Puerto Rico | 1991-1995 | 36 | | | 2006-2010 | 104 | 104 | 0.054 | 1.89 | TEWG (2007) and references therein; Diez *et al*. (2012); Diez pers. comm. | TEWG (2007) and references therein; Diez *et al*. (2012); Diez pers. comm. |
| | British Virgin Islands | 1987-1991 | 3 | | | 2000-2004 | 50 | 128 | 0.232 | 41.57 | TEWG (2007) and references therein | TEWG (2007) and references therein |
| | Dominican Republic (Jaragua National Park) | | | | | 2006-2010 | 126 | | | | | Revuelta *et al*. (2012) |
| | Florida (68 beaches) | 1979-1989 | 59 | 1990-1999 | 263 | 2009-2010 | 1,158 | 1,158 | 0.097 | 18.63 | TEWG (2007) and references therein; Stewart *et al*. (2011) | TEWG (2007) and references therein; Stewart *et al*. (2011); Florida Wildlife Commission Fish and Wildlife Research Institute, Statewide Nesting Beach Survey Program Database as of 26 April 2011 |
| | Grenada | 2000-2005 | 265 | | | 2006-2010 | 706 | 706 | 0.093 | 1.66 | TEWG (2007) and references therein; Lloyd pers. comm | TEWG (2007) and references therein; Lloyd pers. comm |

| Subpopulation | Site | Past Estimate 1 Years | Past Estimate 1 Value | Past Estimate 2 Years | Past Estimate 2 Value | Recent Estimate Years | Recent Estimate Value | Estimate to 2010 | Annual Change | 3-generation Change | Citations (Past) | Citation (Present) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Northwest Atlantic Ocean subpopulation Total** | | | **42,158** | | | | | **50,842** | **0.001** | **0.2060** | | |
| | | | | | | | | | | | | |
| ***Southeast Atlantic Ocean*** | Gabon | | | | | 2000-2006 | 77,693 | ND | | | | Witt *et al*. (2009) |
| | Congo | 2000 | 206 | | | 2006-2010 | 257 | 257 | 0.020 | 0.25 | Godgenger *et al.* (2009) | Godgenger *et al.* (2009) |
| | Bioko Island, Equatorial Guinea | 1996-1997 | 1015 | | | 2000-2010 | 2767 | 2767 | 0.041 | 1.73 | Rader *et al.* (2006); Tomas *et al.* (2010) | Rader *et al.* (2006); Tomas *et al.* (2010); S. Honarvar and Bioko Biodiversity Protection Program, Unpublished data |
| **Southeast Atlantic Ocean subpopulation Total** | | | | | | | | **ND** | **ND** | **ND** | | **DD because the majority of abundance in this subpopulation occurs in Gabon, for which trend data are unavailable** |
| | | | | | | | | | | | | |
| ***Southwest Atlantic Ocean*** | Brazil | 1982-1989 | 16 | 1990-1999 | 24 | 2000-2009 | 51 | 53 | 0.042 | 2.32 | Thome *et al*. (2007) | Thome *et al*. (2007); Almeida *et al.* pers. comm. |
| **Southwest Atlantic Ocean subpopulation Total** | | | **16** | | | | | **53** | **0.042** | **2.32** | | |
| | | | | | | | | | | | | |
| ***Northeast Indian Ocean*** | Andaman and Nicobar Islands, India | 1991-1995 | 158-252 | 2000-2001 | 425-524 | 2007-2010 | 7-59 | NOTE: No trends estimated because nesting abundance values are mostly counts based on inconsistent survey effort (i.e. monitoring not performed for entire nesting seasons), so do not represent complete annual abundance estimates. | | | Andrews *et al*. (2006); Hamann *et al.* (2006) | Andrews *et al*. (2006); Hamann *et al*. (2006); Namboothri *et al*. (2010); Nel (2012) |
| **Northeast Indian Subpopulation Total** | | | | | | | | **ND** | **ND** | **ND** | | **DD because monitoring was insufficient to derive reliable abundance and trend data** |

| Subpopulation | Site | Past Estimate 1 | | Past Estimate 2 | | Recent Estimate | | Estimate to 2010 | Annual Change | 3-generation Change | Citations (Past) | Citation (Present) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Years | Value | Years | Value | Years | Value | | | | | |
| ***Southwest Indian Ocean subpopulation*** | KwaZulu-Natal, South Africa | 1965-1984 | 256 | 1986-1999 | 324 | 2000-2009 | 244 | 244 | -0.001 | -0.048 | Nel (2008, 2012); Nel *et al*. (2013) | Nel (2008, 2012); Nel *et al*. (2013) |
| | Mozambique | 1994-1999 | 18 | | | 2000-2009 | 15 | 15 | -0.007 | -0.17 | Lombard and Kyle (2010) | Lombard and Kyle (2010) |
| **Southwest Indian Ocean subpopulation Total** | | | **274** | | | | | **259** | **-0.001** | **-0.056** | | |
| | | | | | | | | | | | | |
| ***East Pacific Ocean subpopulation*** | Parque Nacional Marino Las Baulas, Costa Rica | 1988-1992 | 8002 | | | 2006-2010 | 409 | 409 | -0.121 | -0.95 | Spotila *et al.* (2000); Santidrián Tomillo *et al.* (2007) | Santidrián Tomillo *et al.* pers. comm. |
| | Mexiquillo, Mexico | 1982-1986 | 6693 | | | 2006-2010 | 130 | 130 | -0.127 | -0.98 | Sarti Martínez *et al*. (2007) | A.L. Sarti Martínez pers. comm. |
| | Tierra Colorada, Mexico | 1982 | 5000 | | | 2006-2010 | 103 | 103 | -0.125 | -0.98 | Sarti Martínez *et al*. (2007)) | A.L. Sarti Martínez pers. comm. |
| | Cahuitán, Mexico | 1997-2001 | 415 | | | 2006-2010 | 130 | 130 | -0.039 | -0.98 | Sarti Martínez *et al*. (2007) | A.L. Sarti Martínez pers. comm. |
| | Chacaua, Mexico | 1982-1986 | 2661 | | | 2010 | 24 | 24 | -0.150 | -0.99 | Sarti Martínez *et al*. (2007) | A.L. Sarti Martínez pers. comm. |
| | Barra de la Cruz, Mexico | 1992-1996 | 738 | | | 2006-2010 | 130 | 130 | -0.126 | -0.98 | Sarti Martínez *et al*. (2007) | Sarti Martínez pers. comm. |
| | Veracruz, Nicaragua | | | | | 2002-2010 | 34 | | | | Urteaga *et al.* (2012); J. Urteaga pers. comm. | Urteaga *et al.* (2012); J. Urteaga pers. comm. |
| | Salamina, Nicaragua | | | | | 2008-2010 | 24 | | | | Urteaga *et al.* (2012); J. Urteaga pers. comm. | Urteaga *et al.* (2012); J. Urteaga pers. comm. |
| | Juan Venado, Nicaragua | | | | | 2004-2010 | 28 | | | | Urteaga *et al.* (2012); J. Urteaga pers. comm. | Urteaga *et al.* (2012); J. Urteaga pers. comm. |
| **East Pacific Ocean subpopulation Total** | | | **35,356** | | | | | **926** | **-0.111** | **-0.974** | | |
| | | | | | | | | | | | | |
| ***West Pacific Ocean subpopulation*** | Terengganu, Malaysia | 1967-1976 | 3,822 | 1991-2000 | 96 | 2001-2010 | 6 | 6 | -0.136 | -1.00 | Chan and Liew (1996); Malaysian Fisheries Dept, unpublished data | Chan and Liew (1996); Malaysian Fisheries Dept, unpublished data |
| | Jamursba-Medi, Indonesia | 1981-1985 | 8892 | 1993-1999 | 4806 | 2006-2010 | 2127 | 2127 | -0.047 | -0.76 | Hitipeuw *et al*. (2007); Tapilatu *et al*. (2013) | Hitipeuw *et al*. (2007); Tapilatu *et al*. (2013) |
| | Warmon, Indonesia | | | | | 2006-2010 | 1308 | | | | Hitipeuw *et al*. (2007); Tapilatu *et al*. (2013) | Hitipeuw *et al*. (2007); Tapilatu *et al*. (2013) |

| Subpopulation | Site | Past Estimate 1 | | Past Estimate 2 | | Recent Estimate | | Estimate to 2010 | Annual Change | 3-generation Change | Citations (Past) | Citation (Present) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Years | Value | Years | Value | Years | Value | | | | | |
| | Solomon Islands | | | | | 2007 | 850 | | | | | Dutton *et al*. (2007) |
| | Kamiali, Papua New Guinea | 2000-2004 | 81 | | | 2006-2010 | 49 | 49 | -0.017 | -0.40 | Marine Research Foundation (2007) | Marine Research Foundation (2007); N.J. Pilcher pers. comm |
| | 6 other sites, Papua New Guinea | | | | | 2006-2010 | 222 | | | | Marine Research Foundation (2007) | Marine Research Foundation (2007); N.J.Pilcher pers. comm |
| **West Pacific Ocean subpopulation Total** | | | **12,795** | | | | | **2,182** | **-0.073** | **-0.8295** | | |
| | | | | | | | | | | | | |
| GLOBAL TOTAL (all subpopulations) | | | **90,559** | | | | | **54,262** | **-0.053** | **-0.401** | **Vulnerable based on Criterion A2 subcriteria (b) and (d)** | |

**Table 3.** Estimates of past and present nesting abundances (average number of nests per year) and trends at rookeries within each subpopulation, based on published and available data contained in Table 2. Global population sizes (in average annual nesting abundance) are the sum of subpopulation totals, and the global trend was calculated as an average of subpopulation trends, weighted by the subpopulation size relative to global population size three generations ago (IUCN 2011). All values are based on a single-year counts, unless the years shown are a range, then the value is an annual mean (see Table 2). Past estimates of abundance were assumed to reflect abundance three generations prior, and thus used in calculation of annual and 3-generation declines.

| Subpopulation | Site | Abundance Estimate three generations ago (No. nests $yr^{-1}$) | Abundance Estimate to 2010 (No. nests $yr^{-1}$) | Estimate to 2020 | Annual Change (through 2020) | 3-generation Change (through 2020) | Estimate to 2030 | Annual Change (through 2030) | 3-generation Change (through 2030) | Estimate to 2040 | Annual Change (through 2040) (No. nests $yr^{-1}$) | 3-generation Change (through 2040) (No. nests $yr^{-1}$) | Citations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Northwest Atlantic Ocean* | Suriname (Galibi, Matapica) | 227 | 4,263 | 8,302 | 0.069 | 35.57 | 16,168 | 0.069 | 70.23 | 31,488 | 0.069 | 137.71 | TEWG (2007) and references therein; Hilterman and Goverse (2007); WWF-Suriname, unpublished data |
| | French Guiana | 21,323 | 22,639 | 22,917 | 0.001 | 0.07 | 23,199 | 0.001 | 0.09 | 23,484 | 0.001 | 0.10 | TEWG (2007) and references therein; Girondot *et al*. (2007); M. Entraygues pers. comm |
| | Guyana | 4 | 836 | 2,670 | 0.123 | 666.61 | 8,530 | 0.123 | 2131.58 | 27,249 | 0.123 | 6811.17 | TEWG (2007) and references therein; DeFreitas and Pritchard (2006, 2007, 2008, 2009, 2010) |
| | Trinidad (Matura) | 17,886 | 18,425 | 18,632 | 0.002 | 0.04 | 18,981 | 0.002 | 0.06 | 19,337 | 0.002 | 0.08 | TEWG (2007) and references therein, Eckert pers. comm |
| | Tortuguero, Costa Rica | 1000 | 284 | 129 | -0.076 | -0.87 | 59 | -0.076 | -0.94 | 27 | -0.076 | -0.97 | Sea Turtle Conservancy pers. comm. (2011) |
| | Gandoca, Costa Rica | 306 | 232 | 203 | -0.013 | -0.34 | 178 | -0.013 | -0.42 | 156 | -0.013 | -0.49 | TEWG (2007) and references therein; Chacon-Chaverri and Eckert (2007); Chacon (2010) |
| | Pacuare, Costa Rica | 845 | 899 | 934 | 0.004 | 0.11 | 971 | 0.004 | 0.15 | 1,010 | 0.004 | 0.19 | TEWG (2007) and references therein; Hart (2010) |

| Subpopulation | Site | Abundance Estimate three generations ago (No. nests $yr^{-1}$) | Abundance Estimate to 2010 (No. nests $yr^{-1}$) | Estimate to 2020 | Annual Change (through 2020) | 3-generation Change (through 2020) | Estimate to 2030 | Annual Change (through 2030) | 3-generation Change (through 2030) | Estimate to 2040 | Annual Change (through 2040) (No. nests $yr^{-1}$) | 3-generation Change (through 2040) (No. nests $yr^{-1}$) | Citations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sandy Point, St. Croix, US Virgin Islands | 60 | 695 | 1,428 | 0.075 | 22.81 | 2,936 | 0.075 | 47.93 | 6,035 | 0.075 | 99.58 | TEWG (2007) and references therein; Dutton *et al*. (2005); Garner and Garner pers. comm. |
| | Culebra, Puerto Rico | 138 | 132 | 130 | -0.002 | -0.06 | 128 | -0.002 | -0.07 | 126 | -0.001 | -0.09 | Diez *et al*. (2012) |
| | Fajardo, Puerto Rico | 6 | 341 | 1,716 | 0.175 | 285.05 | 8,638 | 0.175 | 1438.75 | 43,479 | 0.076 | 7245.48 | Diez *et al*. (2012) |
| | Vieques, Puerto Rico | 36 | 104 | 177 | 0.054 | 3.91 | 300 | 0.054 | 7.35 | 511 | 0.021 | 13.18 | Diez *et al*. (2012) |
| | British Virgin Islands | 3 | 128 | 161 | 0.124 | 52.82 | 521 | 0.124 | 172.80 | 1,684 | 0.081 | 560.25 | TEWG (2007) and references therein |
| | Florida (68 beaches) | 59 | 1,158 | 2,936 | 0.097 | 48.76 | 7,443 | 0.097 | 125.15 | 18,870 | 0.049 | 318.82 | TEWG (2007) and references therein; Stewart *et al.* (2011); Florida Wildlife Commission Fish and Wildlife Research Institute, Statewide Nesting Beach Survey Program Database as of 26 April 2011 |
| | Grenada | 265 | 706 | 1,721 | 0.093 | 5.49 | 4,193 | 0.093 | 14.82 | 10,219 | 0.024 | 37.56 | TEWG (2007) and references therein; Lloyd pers. comm |
| **Northwest Atlantic Ocean subpopulation Total** | | **42,158** | **50,842** | **62,058** | **0.001** | **0.206** | **92,247** | **0.007** | **1.188** | **183,673** | **0.000** | **3.357** | |
| | | | | | | | | | | | | | |
| *Southeast Atlantic Ocean* | Congo | 206 | 257 | 314 | 0.020 | 0.53 | 384 | 0.020 | 0.87 | 470 | 0.005 | 1.28 | Godgenger *et al*. (2009) |
| | Bioko Island, Equatorial Guinea | 1015 | 2767 | 5,400 | 0.069 | 4.32 | 10,537 | 0.069 | 9.38 | 20,563 | 0.018 | 8.08 | Rader *et al.* (2006); Tomas *et al*. (2010); S. Honarvar and Bioko Biodiversity Protection Program, Unpublished data |

| Subpopulation | Site | Abundance Estimate three generations ago (No. nests $yr^{-1}$) | Abundance Estimate to 2010 (No. nests $yr^{-1}$) | Estimate to 2020 | Annual Change (through 2020) | 3-generation Change (through 2020) | Estimate to 2030 | Annual Change (through 2030) | 3-generation Change (through 2030) | Estimate to 2040 | Annual Change (through 2040) (No. nests $yr^{-1}$) | 3-generation Change (through 2040) (No. nests $yr^{-1}$) | Citations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Southeast Atlantic Ocean subpopulation Total** | | **DD** | **DD** | | | | | | | | | **DD** | **DD because the majority of abundance in this subpopulation occurs in Gabon, for which trend data are unavailable** |
| | | | | | | | | | | | | | |
| *Southwest Atlantic Ocean* | Brazil | 16 | 53 | 76 | 0.041 | 3.75 | 113 | 0.041 | 6.09 | 169 | 0.041 | 9.57 | Thome *et al.* (2007); Almeida *et al*. pers. comm. |
| **Southwest Atlantic Ocean subpopulation Total** | | **16** | **53** | **76** | **0.041** | **3.75** | **113** | **0.041** | **6.09** | **169** | **0.041** | **9.57** | |
| | | | | | | | | | | | | | |
| *Northeast Indian Ocean* | Andaman and Nicobar Islands, India | 280 | 35 | | | | | | | | -0.069 | -0.88 | Andrews *et al.* (2006); Hamann *et al.* (2006); Namboothri *et al*. (2010); Nel (2012) |
| **Northeast Indian Ocean subpopulation Total** | | **DD** | **DD** | | | | | | | | | **DD** | **DD because monitoring was insufficient to derive reliable abundance and trend data** |
| | | | | | | | | | | | | | |
| *Southwest Indian Ocean* | KwaZulu-Natal, South Africa | 256 | 244 | 241 | -0.001 | -0.06 | 239 | -0.001 | -0.07 | 236 | -0.001 | -0.076 | Nel (2008, 2012); Nel *et al*. (2013) |
| | Mozambique | 18 | 15 | 13 | -0.011 | -0.25 | 12 | -0.011 | -0.33 | 11 | -0.004 | -0.17 | Lombard and Kyle (20010) |
| **Southwest Indian Ocean subpopulation Total** | | **274** | **259** | **255** | **-0.002** | **-0.070** | **251** | **-0.001** | **-0.084** | **247** | **-0.001** | **-0.083** | |
| | | | | | | | | | | | | | |

| Subpopulation | Site | Abundance Estimate three generations ago (No. nests $yr^{-1}$) | Abundance Estimate to 2010 (No. nests $yr^{-1}$) | Estimate to 2020 | Annual Change (through 2020) | 3-generation Change (through 2020) | Estimate to 2030 | Annual Change (through 2030) | 3-generation Change (through 2030) | Estimate to 2040 | Annual Change (through 2040) (No. nests $yr^{-1}$) | 3-generation Change (through 2040) (No. nests $yr^{-1}$) | Citations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *East Pacific Ocean* | Parque Nacional Marino Las Baulas, Costa Rica | 8002 | 409 | 112 | -0.121 | -0.95 | 31 | -0.121 | -0.99 | 8 | -0.121 | -0.999 | Spotila *et al*. (2000); Santidrian Tomillo *et al.* (2007); M.P. Santidrian Tomillo *et al*. pers. comm. |
| | Mexiquillo, Mexico | 6693 | 130 | 33 | -0.127 | -1.00 | 9 | -0.127 | -1.00 | 2 | -0.127 | -1.000 | Sarti Martínez *et al*. (2007); A.L. Sarti Martínez pers. comm. |
| | Tierra Colorada, Mexico | 5000 | 103 | 27 | -0.125 | -0.99 | 7 | -0.125 | -1.00 | 2 | -0.125 | -1.000 | Sarti Martínez *et al*. (2007); A.L. Sarti Martínez pers. comm. |
| | Cahuitán, Mexico | 6500 | 130 | 80 | -0.121 | -0.99 | 49 | -0.105 | -0.99 | 30 | -0.115 | -0.995 | Sarti Martínez *et al*. (2007); A.L. Sarti Martínez pers. comm. |
| | Chacaua, Mexico | 2661 | 24 | 5 | -0.150 | -1.00 | 1 | -0.150 | -1.00 | 0 | -0.150 | -1.000 | Sarti Martínez *et al*. (2007); A.L. Sarti Martínez pers. comm. |
| | Barra de la Cruz, Mexico | 6500 | 130 | 52 | -0.153 | -0.99 | 21 | -0.137 | -1.00 | 8 | -0.127 | -0.999 | Sarti Martínez *et al*. (2007); A.L. Sarti Martínez pers. comm. |
| **East Pacific Ocean subpopulation Total** | | **35,356** | **926** | **310** | **-0.131** | **-0.991** | **118** | **-0.125** | **-0.997** | **52** | **-0.125** | **-0.999** | |

| Subpopulation | Site | Abundance Estimate three generations ago (No. nests $yr^{-1}$) | Abundance Estimate to 2010 (No. nests $yr^{-1}$) | Estimate to 2020 | Annual Change (through 2020) | 3-generation Change (through 2020) | Estimate to 2030 | Annual Change (through 2030) | 3-generation Change (through 2030) | Estimate to 2040 | Annual Change (through 2040) (No. nests $yr^{-1}$) | 3-generation Change (through 2040) (No. nests $yr^{-1}$) | Citations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *West Pacific Ocean* | Terengganu, Malaysia | 3,822 | 6 | 1 | -0.136 | -1.00 | 0 | -0.136 | -1.00 | 8 | -0.199 | -1.00 | Chan and Liew (1996); Malaysian Fisheries Dept, unpublished data |
| | Jamursba-Medi, Indonesia | 8,892 | 2,127 | 1,320 | -0.047 | -0.85 | 820 | -0.047 | -0.91 | 509 | -0.047 | -0.943 | Hitipeuw *et al*. (2007); Tapilatu *et al*. (2013) |
| | Kamiali, Papua New Guinea | 1,562 | 246 | 156 | -0.104 | -0.90 | 99 | -0.085 | -0.94 | 63 | -0.075 | -0.96 | Marine Research Foundation (2007); N.J. Pilcher pers. comm |
| **West Pacific Ocean subpopulation Totals** | | **14,276** | **2,379** | **1,478** | **-0.077** | **-0.896** | **919** | **-0.075** | **-0.936** | **572** | **-0.09** | **-0.960** | |
| | | | | | | | | | | | | | |
| **GLOBAL TOTAL** | | **90,559** | **54,261** | **64,051** | **-0.061** | **-0.294** | **93,569** | **-0.056** | **0.032** | **184,662** | **-0.062** | **1.038** | **Not Threatened based on Criterion A4** |

## References:


Andrews, H.V., Krishnan, S. and Biswas, P. 2006. Distribution and status of marine turtles in the Andaman and Nicobar Islands. In: K. Shanker and B.C. Choudhury (eds), *Marine Turtles of India*, pp. 33-57. Hyderabad, India: Universities Press, Hyderabad, India.

Arroyo Arce, S. and Jones, D.A. 2010. Playa Norte Marine Turtle Conservation & Monitoring Programme: Leatherback season report 2009. Report to Costa Rican Ministry of the Environment, Energy, and Telecommunications.

Chacón, D. 2010. Anidación de tortugas marinas en la Playa de Gandoca, Caribe sur, Costa Rica.

Chacón-Chaverri, D. and Eckert, K.L. 2007. Leatherback sea turtle nesting at Gandoca Beach in Caribbean Costa Rica: management recommendations from fifteen years of conservation. *Chelonian Conservation and Biology* 6: 101-110.

Chan, E.H. and Liew, H.C. 1996. Decline of the leatherback population in Terengganu, Malaysia, 1956-1995. *Chelonian Conservation and Biology* 2: 196-203.

DeFreitas, R. and Pritchard, P.C.H. 2006. Aspects of Marine Turtle Nesting in Guyana, 2006. Guianas Forests and Environmental Conservation Project (GFECP) World Wildlife Fund.

DeFreitas, R. and Pritchard, P.C.H. 2007. Aspects of Marine Turtle Nesting in Guyana, 2007. Guianas Forests and Environmental Conservation Project (GFECP) World Wildlife Fund.

DeFreitas, R. and Pritchard, P.C.H. 2008. Aspects of Marine Turtle Nesting in Guyana, 2008. Guianas Forests and Environmental Conservation Project (GFECP) World Wildlife Fund.

DeFreitas, R. and Pritchard, P.C.H. 2009. Aspects of Marine Turtle Nesting in Guyana, 2009. Guianas Forests and Environmental Conservation Project (GFECP) World Wildlife Fund.

DeFreitas, R. and Pritchard, P.C.H. 2010. Aspects of Marine Turtle Nesting in Guyana, 2010. Guianas Forests and Environmental Conservation Project (GFECP) World Wildlife Fund.

Diez, C.E., Castro-Prieto, J. and van Dam, R.P. 2012. Status of marine turtles at Puerto Rico. In: T.T. Jones and B.P. Wallace (eds), 31st Annual Symposium on Sea Turtle Biology and Conservation NMFS-SEFSC-631: 348. San Diego, CA.

Dutton, D.L., Dutton, P.H., Chaloupka, M. and Boulon, R.H. 2005. Increase of a Caribbean leatherback turtle *Dermochelys coriacea* nesting population linked to long-term nest protection. *Biological Conservation* 126: 186-204.

Dutton, P.H., Hitipeuw, C., Zein, M., Benson, S.R., Petro, G., Pita, J., Rei ,V., Ambio, L. and Bakarbessy, J. 2007. Status and genetic structure of nesting populations of leatherback turtles (*Dermochelys coriacea*) in the western Pacific. *Chelonian Conservation and Biology* 6: 47-53.

Economides, P. and Chacón, D. 2009. Nesting activity report of the leatherback turtle (*Dermochelys coriacea*) in Cahuita National Park, southern Caribbean, Talamanca, Costa Rica.

Girondot, M., Godfrey, M.H., Ponge, L. and Rivalan, P. 2007. Modeling approaches to quantify leatherback nesting trends in French Guiana and Suriname. *Chelonian Conservation and Biology* 6: 37-46.

Godgenger, M.-C., Bréheret, N., Bal, G., N'Damité, K., Girard, A. and Girondot, M. 2009. Nesting estimation and analysis of threats for Critically Endangered leatherback

*Dermochelys coriacea* and Endangered olive ridley *Lepidochelys olivacea* marine turtles nesting in Congo. *Oryx* 43(4): 556-563. doi: http://dx.doi.org/10.1017/S0030605309990329.

Hamann, M., Limpus, C., Hughes, G., Mortimer, J. and Pilcher, N. 2006. Assessment of the conservation status of the leatherback turtle in the Indian Ocean and South-East Asia, including consideration of the impacts of the December 8 2004 tsunami on turtles and turtle habitats. IOSEA Marine Turtle MoU Secretariat, Bangkok, Thailand.

Hart, K. 2010. Report of the activities of monitoring project of the nesting of leatherback, green and hawksbill sea turtles in the Pacuare Reserve, Costa Rica.

Hilterman, M.L. and Goverse, E. 2007. Nesting and nest success of the leatherback turtle (*Dermochelys coriacea*) in Suriname, 1999-2005. *Chelonian Conservation and Biology* 6: 87-100.

Hitipeuw, C., Dutton, P.H., Benson, S., Thebu, J. and Bakarbessy, J. 2007. Population status and internesting movement of leatherback turtles, *Dermochelys coriacea*, nesting on the northwest coast of Papua, Indonesia. *Chelonian Conservation and Biology* 6: 28-36.

IUCN Standards and Petitions Subcommittee. 2011. Guidelines for Using the IUCN Red List Categories and Criteria, Version 9.0 (September 2011). Available at:http://www.iucnredlist.org/documents/RedListGuidelines.pdf.

Lombard, P. and Kyle, S. 2010. Marine turtle monitoring and conservation in southern Mozambique. Project report. Ezemvelo KZN Wildlife, KwaNgwanase, KwaZulu-Natal, South Africa.

Marine Research Foundation. 2007. The Huon coast leatherback turtle conservation project. Final report submitted to the Western Pacific Regional Fisheries Management Council.

Namboothri, N., Chandi, M., Subramaniam, D. and Shanker, K. 2010. Leatherback turtles at South Bay, Little Andamans (2007-2010). Compiled report submitted to the Andaman and Nicobar Forest Department.

Nel, R. 2010. Sea turtles of KwaZulu-Natal: data report for 2007/8 season. Report prepared for Ezemvelo KwaZulu-Natal Wildlife.

Nel, R. (compiler). 2012. Assessment of the conservation status of the leatherback turtle in the Indian Ocean and South-East Asia. Secretariat of the Indian Ocean – South-East Asian Marine Turtle Memorandum of Understanding. Bangkok, Thailand.

Nel, R., Punt, A.E. and Hughes, G.R. 2013. Are coastal protected areas always effective in achieving population recovery for nesting sea turtles? *PLoS ONE* 8(5): e63525. doi:10.1371/journal.pone.0063525.

Ordoñez, C., Troëng, S., Meylan, A., Meylan, P. and Ruiz, A. 2007. Chiriqui Beach, Panama, the most important leatherback nesting beach in Central America. *Chelonian Conservation and Biology* 6: 122-126.

Patiño-Martínez, J., Marco, A., Quiñones, L. and Godley, B. 2008. Globally significant nesting of the leatherback turtle (*Dermochelys coriacea*) on the Caribbean coast of Colombia and Panama. *Biological Conservation* 141: 1982-1988.

Rader, H., Mba, M.A.E., Morra, W. and Hearn, G. 2006. Marine turtles on the southern coast of Bioko Island (Gulf of Guinea, Africa), 2001-2005. *Marine Turtle Newsletter* 111: 8-10.

Revuelta, O., León, Y.M., Feliz, P., Godley, B.J., Raga, J.A. and Tomás, J. 2012. Protected areas host important remnants of turtle nesting stocks in the Dominican Republic. *Oryx* 46: 348-358.

Santidrián Tomillo, M.P., Veléz, E., Reina, R.D., Piedra, R., Paladino, F.V. and Spotila, J.R. 2007. Reassessment of the leatherback turtle (*Dermochelys coriacea*) nesting population at Parque Nacional Marino Las Baulas, Costa Rica: Effects of conservation efforts. *Chelonian Conservation and Biology* 6: 54-62.

Sarti Martínez, L., Barragán, A.R., Muñoz, D.G., García, N., Huerta, P. and Vargas F. 2007. Conservation and biology of the leatherback turtle in the Mexican Pacific. *Chelonian Conservation and Biology* 6: 70-78.

Spotila J.R., Reina R.D., Steyermark A.C., Plotkin P.T. and Paladino F.V. 2000. Pacific leatherback turtles face extinction. *Nature* 405: 529-530.

Stewart, K., Sims, M., Meylan, A., Witherington, B., Brost, B. and Crowder, L.B. 2011. Leatherback nests increasing significantly in Florida, USA; trends assessed over 30 years using multilevel modeling. *Ecological Applications* 21: 263-273.

Tapilatu, R.F., Dutton, P.H., Tiwari, M., Wibbels, T., Ferdinandus, H.V., Iwanggin, W.G. and Nugroho, B.H. 2013. Long-term decline of the western pacific leatherback, *Dermochelys coriace*a: a globally important sea turtle population. *Ecosphere* 4: 1-15. doi:10.1890/ES12-00348.1.

Thomé, J.C.A., Baptistotte, C., de P. Moreira, L.M., Scalfoni, J.T., Almeida ,A.P., Rieth, D.B. and Barata, P.C.R. 2007. Nesting biology and conservation of the leatherback sea turtle (*Dermochelys coriacea*) in the State of Espírito Santo, Brazil, 1988-1989 to 2003-2004. *Chelonian Conservation and Biology* 6: 15-27.

Tomás, J., Godley, B.J., Castroviejo, J. and Raga, J.A. 2010. Bioko: critically important nesting habitat for sea turtles of West Africa. *Biodiversity Conservation* 19: 2699-2714. doi: 10.1007/s10531-010-9868-z.

Turtle Expert Working Group (TEWG). 2007. An assessment of the leatherback turtle population in the Atlantic Ocean. NOAA Technical Memorandum NMFS-SEFSC-555.

Urteaga J., Torres P., Gaitan O., Rodríguez G. and Dávila P. 2012. Leatherback, *Dermochelys coriacea*, nesting beach conservation in the Pacific coast of Nicaragua (2002-2010). In: T.T. Jones and B.P. Wallace (eds), Proceedings of the 31st Annual Symposium on Sea Turtle Biology and Conservation. NOAA Technical Memorandum NMFS-SEFSC-631: 1-348. San Diego, California.

Witt, M.J., Baert, B., Broderick, A.C., Formia, A., Fretey, J., Gibudi, A., Mounguengui, G.A.M., Moussounda, C., Ngouessono, S., Parnell, R.J., Roumet ,D., Sounguet, G.-P., Verhage, B., Zogo, A. and Godley, B.J. 2009. Aerial surveying of the world's largest leatherback turtle rookery: a more effective methodology for large-scale monitoring. *Biological Conservation* 142: 1719–1727.