Table S1 – Details of extant and extirpated Indus dolphin subpopulations

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Subpopulation** | **Date a Isolated** | **Extant (1) Extirpated (0)** | **Last Sighting Dateb** | **Time to c Extirpation** | **Length (km)d** | **River Sizee** | **Conff** | **Median g Discharge** | **Dist**  **(km)h** | **Slope**  **m/km** |
| **13** | Balloki-Sidhnai | 1886 | 0 | 1962 | 76 | 175 | 7 | 0 | 0 | 175 | 0.29 |
| **11** | Marala-Khanki | 1892 | 0 | 1879 | N/K | 35 | 26 | 0 | 4391 | 0 | 0.54 |
| **8** | Upstream Rasul | 1901 | 0 | 1975 | 74 | 50 | 23 | 0 | 27000 | 71 | 0.72 |
| **15** | Hussainiwala-Suleimanki | 1926 | 0 | 1988 | 62 | 110 | 14 | 0 | 0k | 287 | 0.18 |
| **14** | Suleimanki-Islam | 1927 | 0 | 1972 | 45 | 145 | 14 | 0 | 0 | 438 | 0.26 |
| **17** | Ropar,ShahNehar-Harike | 1927i | 1 | N/A | N/A | 220 | 14 | 1 | 15414k | 148 | 0.38 |
| **10** | Islam,Sidhnai,Trimmu-Panjnad | 1933 | 0 | 1981 | 48 | 435 | 26 | 2 | 2259 | 610 | 0.11 |
| **9** | Rasul,Qadirabad-Trimmu | 1939 | 0 | 1975 | 36 | 490 | 26 | 1 | 7990 | 327 | 0.13 |
| **1** | Upstream Jinnah | 1946 | 0 | 1955 | 9 | 35 | 93 | 0 | 38000 | 35 | 0.89 |
| **16** | Harike-Hussainiwala | 1955 | N/K | N/K | N/K | 30 | 14 | 0 | 0k | 184 | 0.33 |
| **6** | Sukkur-Kotri | 1955 | 1 | N/A | N/A | 318 | 93 | 0 | 7224 | 520 | 0.09 |
| **7** | Downstream Kotri | 1955 | 0 | N/K | N/K | 222 | 93 | 0 | 0 | 205 | 0.09 |
| **3** | Chashma-Taunsa | 1959 | 1 | N/A | N/A | 230 | 93 | 0 | 43000 | 351 | 0.23 |
| **4** | Taunsa-Guddu | 1962 | 1 | N/A | N/A | 277 | 93 | 1 | 38093 | 636 | 0.21 |
| **5** | Guddu-Sukkur | 1962 | 1 | N/A | N/A | 126 | 93 | 0 | 34214 | 645 | 0.17 |
| **12** | Khanki-Qadirabad | 1967 | 0 | 1879 | N/K | 45 | 26 | 0 | 578 | 0 | 0.44 |
| **2** | Jinnah-Chashma | 1971 | 1 | N/A | N/A | 60 | 93 | 0 | 47039 | 122 | 0.45 |

# Dolphin subpopulation number, shown in Fig 1, a Date that dolphins were confined between two barrages, taken as the completion date of the downstream barrage, b Most recent dolphin sighting, where sighting dates were imprecise they were rounded, for example to 1972, 1975 or 1978. C The time that elapsed from the isolation date to the last sighting date d Length of river between barrages e Annual average flows calculated by averaging daily flows for the period 1922 to 1961 (IUCN 2011). f Number of river confluences occurring within river section g Median daily discharge between October 1st and March 31st (the dry season) from the upstream barrage in cubic feet per second.  hDistance to the former range limit described by Anderson (1879)(Fig. 1). i Harike isolation date taken from completion date of Hussainiwala barrage nearby. k Median monthly discharge between October 1st and March 31st in cubic feet per second. N/K = not known. N/A = not applicable

Table A2 – Current and former fragments of Indus dolphin habitat listed in chronological order of their creation. River sections highlighted grey are still present

| **#** | **Fragment Description** | **Creation Date** | **End Date** | **Duration** | **Length** | **Dolphin extant** |
| --- | --- | --- | --- | --- | --- | --- |
| **0** | Former un-fragmented range | N/A | 1886 | N/A | 3208 | 1 |
| **1** | Sidhnai to Madhopur | 1886 | 1917 | 31 | 380 | 1 |
| **2** | Former range #0, minus #1 | 1886 | 1892 | 6 | 2828 | 1 |
| **3** | Khanki to Marala | 1892 | 2011 | 119 | 35 | 0 |
| **4** | Former range #0, minus #1 & 3 | 1892 | 1901 | 9 | 2793 | 1 |
| **5** | Upstream Rasul | 1901 | 2011 | 110 | 50 | 0 |
| **6** | Former range #0, minus #1, 3 & 5 | 1901 | 1926 | 25 | 2743 | 1 |
| **7** | Sidhnai to Balloki | 1917 | 2011 | 94 | 175 | 0 |
| **8** | Upstream Suleimanki | 1926 | 1927 | 1 | 360 | 1 |
| **9** | Former range, minus #3, 5, 7 & 8 | 1926 | 1927 | 1 | 2383 | 1 |
| **10** | Suleimanki to Hussainiwala | 1927 | 2011 | 84 | 110 | 0 |
| **11** | Upstream Hussainiwala | 1927 | 1955 | 28 | 250 | 1 |
| **12** | Islam to Suleimanki | 1927 | 2011 | 84 | 145 | 0 |
| **13** | Former range, minus everything upstream of Islam, Sidhnai, Rasul & Khanki barrages | 1927 | 1932 | 5 | 2238 | 1 |
| **14** | Downstream Sukkur to sea | 1932 | 1955 | 23 | 540 | 1 |
| **15** | Former range, minus everything upstream Islam, Sidhnai, Rasul & Khanki barrages, and downstream Sukkur | 1932 | 1933 | 1 | 1698 | 1 |
| **16** | Panjnad to Islam/Sidhnai/Rasul/Khani | 1933 | 1939 | 6 | 970 | 1 |
| **17** | All Indus River to Sukkur & Panjnad | 1933 | 1946 | 13 | 728 | 1 |
| **18** | Panjnad to Trimmu/Sidhnai/Islam | 1939 | 2011 | 72 | 435 | 0 |
| **19** | Trimmu to Rasul/Khanki | 1939 | 1967 | 28 | 535 | 1 |
| **20** | Upstream Jinnah | 1946 | 2011 | 65 | 35 | 0 |
| **21** | Jinnah to Sukkur & Panjnad | 1946 | 1959 | 13 | 693 | 1 |
| **22** | Sukkur to Kotri | 1955 | 2011 | 56 | 318 | 1 |
| **23** | Downstream Kotri to sea | 1955 | 2011 | 56 | 222 | 0 |
| **24** | Hussainiwala to Harike | 1955 | 2011 | 56 | 30 | 0 |
| **25** | Upstream Harike | 1955 | 2011 | 56 | 220 | 1 |
| **26** | Taunsa to Sukkur & Panjnad | 1959 | 1962 | 3 | 403 | 1 |
| **27** | Jinnah to Taunsa | 1959 | 1971 | 12 | 290 | 1 |
| **28** | Guddu to Sukkur | 1962 | 2011 | 49 | 126 | 1 |
| **29** | Taunsa to Guddu & Panjnad | 1962 | 2011 | 49 | 277 | 1 |
| **30** | Trimmu to Rasul & Qadirabad | 1967 | 2011 | 44 | 490 | 0 |
| **31** | Qadirabad to Khanki | 1967 | 2011 | 44 | 45 | 0 |
| **32** | Taunsa to Chashma | 1971 | 2011 | 40 | 230 | 1 |
| **33** | Jinnah to Chashma | 1971 | 2011 | 40 | 60 | 1 |

Note: Lengths listed here were measured using ArcView 3.2 and satellite images, and are shorter than those recorded during vessel-based surveys in the same sections of river. N/A = Not applicable.