**Assessing the conservation status of and challenges facing Asiatic black bears and Malayan sun bears in Bangladesh**

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Supplementary Table 1 Re-classified land cover categories for eastern Bangladesh and the corresponding categories (code, text code and legend) provided with the Sentinel-3 Sea and Land Surface Temperature Radiometer (SLSRT) level 2 dataset (Donlon et al., 2012).

| Re-classified category | Code | Text code | Legends |
| --- | --- | --- | --- |
| **Floodplain** |
|  | 11 | Irrigated cropland | post flooding or irrigated croplands |
|  | 14 | Rainfed croplands | rain-fed cropland |
| **Grassland-cropland mosaic** |
|  | 20 | Mosaic cropland | mosaic cropland (50–70%) / vegetation (grassland, shrubland, forest) (20–50%) |
|  | 30 | Mosaic vegetation | mosaic vegetation (grassland/shrubland/forest) (50–70%) / cropland (20–50%) |
|  | 110 | Mosaic forest | mosaic forest/shrubland (50–70%) / grassland (20–50%) |
| **Old growth forest** |
|  | 40 | Broadleaved evergreen forest | closed to open (< 15 %) broadleaved evergreen and/or semi-deciduous forest (> 5m) |
|  | 50 | Closed broadleaved deciduous forest | closed (> 40%) broadleaved deciduous forest (> 5 m) |
|  | 60 | Open broadleaved deciduous forest | open (15–40%) broadleaved deciduous forest (> 5 m) |
| **Secondary forest**–**orchard**–**tea garden mosaic (north-east)** **Secondary forest**–**orchard**–**swidden cultivation mosaic (south-east)** |
|  | 100 | Mixed forest | closed to open (> 15%) mixed leave broadleaved and needleleavedforest (< 5 m) |
|  | 130 | Shrubland | closed to open (> 15%) shrubland (< 5m) |
|  | 140 | Grassland | closed to open (> 15%) grassland |
| **Urban area** |  |  |  |
|  | 190 | Artificial surface | artificial surfaces and associated areas (urban areas > 50%) |
| **Waterbody** |  |  |  |
|  | 210 | Waterbody | waterbody |

Supplementary Table 2 Records of the Tibetan black bear *Ursus thibetanus thibetanus* and Malayan sun bear *Helarctos malayanus malayanus* in Bangladesh extracted from literature.

| Site | Latitude | Longitude | Presence  | Evidence |
| --- | --- | --- | --- | --- |
| **Black bear, north-east Bangladesh (Islam et al., 2010)**  |
| Rajkandi | 24.24392 | 91.9058 | Yes | Yes |
| Chautali | 24.35153 | 91.7909 | Yes | No |
| Lawachara NP | 24.32658 | 91.7874 | No | No |
| Jangal Bari | 24.17096 | 91.74508 | Yes | Yes |
| Patharkhola | 24.24845 | 91.79008 | Yes | Yes |
| Nahar Punji | 24.17578 | 91.74106 | Yes | Yes |
| Sheshil Bari | 24.23233 | 91.74624 | Yes | Yes |
| Longlia Punji | 24.18535 | 91.74793 | Yes | Yes |
| Mechanicheera | 24.15705 | 91.72546 | Yes | Yes |
| Horinchara | 24.17231 | 91.74501 | Yes | Yes |
| Biddabeel | 24.16473 | 91.70462 | Yes | Yes |
| Shibbari | 24.24575 | 91.73857 | Yes | Yes |
| Horinchara sector 87 | 24.16217 | 91.69427 | Yes | Yes |
| Horinchara sector 10 | 24.14547 | 91.73779 | Yes | Yes |
| Valu Kuchi | 24.15705 | 91.72548 | Yes | Yes |
| Nirala Punji | 24.15903 | 91.73863 | Yes | Yes |
| Kuttamara | 24.18804 | 91.74965 | Yes | Yes |
| Alubari | 24.14745 | 91.75122 | Yes | Yes |
| Sukcheera | 24.15327 | 91.73606 | Yes | Yes |
| Mohadebtila | 24.14761 | 91.7500 | Yes | Yes |
| Chalta Punji | 24.21861 | 91.74689 | Yes | Yes |
| Nihar Tea Garden | 24.18480 | 91.75176 | Yes | Yes |
| Tipracheera | 24.19175 | 91.72083 | Yes | Yes |
| Aslam Punji | 24.17241 | 91.74444 | Yes | Yes |
| Satchari National Park | 24.122121 | 91.445535 | Yes | Yes |
| Lebucheera | 24.127482 | 91.417569 | Yes | No |
| Chankhola | 24.144212 | 91.440077 | Yes | No |
| Duncan Brothers Tea Garden | 24.116657 | 91.471881 | No | No |
| Garo Hills | 25.2473828 | 90.0357136 | Yes | No |
| Madhutila | 25.203386 | 90.151658 | Yes | No |
| Madhupur Gar | 24.687173 | 90.102402 | Yes | No |
| **Black bear, south-eastern Bangladesh (Islam et al., 2010)** |
| Pransa | 22.05855 | 92.4794 | Yes | No |
| Ghalangya | 22.0493 | 92.49181 | Yes | No |
| Thanchi Sadar | 21.821096 | 92.435696 | No | No |
| Alikadam | 21.653009 | 92.314768 | Yes | Yes |
| Naikhongchhari | 21.4167 | 92.1833 | Yes | Yes |
| Budenjhiri | 22.0048 | 92.26926 | Yes | No |
| Kapru Para | 21.82081 | 92.304982 | Yes | No |
| Rinikhyang Bagan Para | 22.18535 | 92.39026 | Yes | No |
| Ranglai Chairman Para | 22.14625 | 92.41986 | Yes | No |
| Empu Para | 22.62738 | 92.50016 | Yes | No |
| Chini Para | 22.64191 | 92.43728 | Yes | No |
| Kurang Para | 22.62221 | 92.50795 | Yes | No |
| Swanglu Para | 22.26436 | 92.57555 | Yes | No |
| Bijoy Para | 22.32565 | 92.55536 | Yes | No |
| Khamtang Para | 22.103152 | 92.386721 | No | No |
| Paglachara Para | 22.25205 | 92.53273 | Yes | No |
| Rowangchhari Sadar Para | 22.25513 | 92.57891 | No | No |
| Tulachari Para | 22.31546 | 92.5756 | Yes | No |
| Garjantali | 22.64386 | 92.157406 | Yes | No |
| Dumoujjechara | 22.746637 | 92.382405 | Yes | No |
| Jakkobajei | 22.767503 | 92.409024 | Yes | No |
| Begenachari | 22.745646 | 92.378222 | Yes | No |
| Nah-Vanga | 22.6817 | 92.418641 | Yes | No |
| Bagchari | 22.702971 | 92.464249 | Yes | Yes |
| Ajachara-Bilaichari Moan | 22.432756 | 92.409521 | Yes | Yes |
| Punkua Para | 22.426566 | 92.344187 | Yes | No |
| Pukurpar | 22.01885 | 92.54311 | Yes | Yes |
| Boratoli | 22.45901 | 92.521697 | Yes | No |
| Baghaihat | 23.304788 | 92.191079 | No | No |
| Masalong | 23.366526 | 92.226599 | No | No |
| Lui-Lui para, Sajek | 23.391639 | 92.314127 | Yes | No |
| Bame Atarokchara | 23.026483 | 92.258639 | Yes | No |
| Maddochara | 23.62141 | 92.26078 | Yes | No |
| Badalchari Badichara | 22.961236 | 92.128742 | Yes | No |
| Ronjit Para | 22.842309 | 92.16013 | Yes | No |
| Duluchari | 22.968853 | 92.15275 | No | No |
| Rangi Para | 22.958652 | 92.287725 | Yes | No |
| Madya Karikata | 23.44825 | 92.26996 | Yes | No |
| Kalaboyna | 23.3836 | 92.32583 | Yes | No |
| Dhanuchari Para | 22.69683 | 92.40816 | Yes | No |
| Arachori Para | 22.66951 | 92.4243 | Yes | No |
| Kukkye Chari | 22.654 | 92.43436 | Yes | No |
| Rose Para | 22.51325 | 92.53673 | Yes | No |
| Baro Para | 21.878687 | 92.031242 | Yes | No |
| Krista Para | 21.822258 | 92.344924 | Yes | No |
| Boli Para | 21.895915 | 92.368169 | Yes | Yes |
| Kaptai NP | 22.541537 | 92.1536 | No | No |
| Wagga | 22.934201 | 92.262267 | Yes | No |
| Kamolchari | 23.142796 | 92.001241 | No | No |
| Kaptola Para | 23.089391 | 92.030058 | Yes | No |
| Chenachara Para | 22.992738 | 92.28001 | Yes | No |
| Alutila | 23.074757 | 91.960627 | Yes | No |
| Tarabunia | 23.37545 | 92.1645 | No | No |
| Khetropur | 23.37731 | 92.18628 | No | No |
| Matiranga Sadar | 23.039698 | 91.845315 | No | No |
| **Black bear, south-eastern Bangladesh (Chakma, 2016)** |
| Alikadam | - | - | Yes | Yes |
| Naikhongchhari | - | - | Yes | Yes |
| Naikhongchhari | - | - | Yes | Yes |
| Baghaichhari | - | - | Yes | Yes |
| Baghaichhari | - | - | Yes | Yes |
| Baghaichhari | - | - | Yes | Yes |
| Alikadam | - | - | Yes | Yes |
| Baghaichhari | - | - | Yes | Yes |
| Thanchi | - | - | Yes | Yes |
| Ruma | - | - | Yes | Yes |
| Lama | - | - | Yes | Yes |
| Kaptai National Park | - | - | Yes | Yes |
| Rajasthali | - | - | Yes | Yes |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Site | Latitude | Longitude | Presence  | Evidence |
| **Black bear, south-eastern Bangladesh (Creative Conservation Alliance, 2016)** |
| Alikadam | - | - | Yes | Yes |
| **Sun bear, south-eastern Bangladesh (Islam et al., 2010)** |
| Remakri | 21.6861 | 92.5333 | Yes | No |
| **Sun bear, south-eastern Bangladesh (Sarker et al., 2016)** |
| Kassalong | - | - | Yes | No |
| Korerhat | - | - | Yes | No |
| Dulahazra | - | - | Yes | No |
| Inani | - | - | Yes | No |
| Teknaf | - | - | Yes | No |
| Rangkheong | - | - | Yes | No |
| Sangu matamuhuri | - | - | Yes | No |
| Naikhongchhari | - | - | Yes | No |
| **Sun bear, south-eastern Bangladesh (Creative Conservation Alliance, 2016)** |
| Alikadam | - | - | Yes | Yes |
| **Sun bear, south-eastern Bangladesh (IUCN Bangladesh, 2022)** |
| Baghaichhari | - | - | Yes | Yes |

Supplementary Table 3 Characteristics of human–bear conflicts in Bangladesh collated from 2003–2023 media reports.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  | Outcome1 |  |  |
| No. | Date | District  | Subdistrict | Type of incident  |  | Season | Reason/activity | HD | HI  | BD | BR | Photo evidence | News Agency |
| 1 | 3 Apr. 2003 | Sherpur | Jhenaigati | Conflict |  | Summer | Unknown | 0 | 50 | 1 | 0 | No | AP |
| 2 | 3 Apr.2005 | Feni | Parshuram | Conflict |  | Summer | Unknown | 0 | 8 | 0 | 0 | No | bdnews24.com |
| 3 | 5 May 2014 | Khagrachhari | Panchhari | Conflict |  | Summer | Logging | 0 | 1 | 0 | 0 | No | parbattanews.com |
| 4 | 5 May 2014 | Bandarban | Rowangchhari | Poaching |  | Summer | Hunting | 1 | 0 | 1 | 0 | No | priyo.com |
| 5 | 29 Aug. 2015 | Rangamati | Baghaichhari | Poaching |  | Monsoon | Hunting  | 0 | 0 | 2 | 1 | Yes | Daily Star |
| 6 | 8 Dec. 2015 | Bandarban | Rowangchhari | Conflict |  | Winter | Logging | 0 | 3 | 1 | 0 | No | Chttimes24.com |
| 7 | 13 Mar. 2016 | Dhaka | Unknown | Poaching  |  | Summer | Trafficking | 0 | 0 | 1 | 0 | Yes | Facebook |
| 8 | 7 June 2018 | Rangamati | Barkal | Conflict |  | Monsoon | Swidden cultivation | 0 | 1 | 0 | 0 | No | Bangladesh Pratidin |
| 9 | 10 May 2019 | Rangamati | Baghaichhari | Conflict |  | Summer | Swidden cultivation | 0 | 1 | 0 | 0 | No | sarabangla.com |
| 10 | 22 May 2019 | Bandarban | Ruma | Conflict |  | Summer | Swidden cultivation | 0 | 1 | 0 | 0 | No | parbattanews.com |
| 11 | 1 Aug. 2019 | Moulvibazar | Juri | Conflict |  | Monsoon | Logging | 1 | 0 | 0 | 0 | No | bd-journal.com |
| 12 | 16 Nov. 2019 | Rangamati | Baghaichhari | Conflict |  | Winter | Logging | 0 | 1 | 0 | 0 | No | parbattanews.com |
| 13 | 20 Dec. 2019 | Rangamati | Baghaichhari | Conflict |  | Winter | Swidden cultivation | 0 | 1 | 0 | 0 | No | paharer-alo.com |
| 14 | 12 Apr. 2020 | Sherpur | Nalitabari | Conflict |  | Summer | Logging | 1 | 2 | 0 | 0 | No | Daily Inqilab |
| 15 | 24 June 2020 | Bandarban | Lama | Conflict |  | Monsoon | Stray dog | 0 | 0 | 0 | 1 | Yes | Dhaka Tribune |
| 16 | 26 Feb. 2021 | Bandarban | Ruma | Conflict |  | Summer | Swidden cultivation | 0 | 2 | 0 | 0 | No | Business Standard |
| 17 | 15 Mar. 2021 | Bandarban | Alikadam | Conflict |  | Summer | Fishing | 0 | 1 | 0 | 0 | No | surjodoy.com |
| 18 | 20 Apr. 2021 | Bandarban | Ruma | Conflict |  | Summer | Swidden cultivation | 0 | 1 | 0 | 0 | No | banglanews24.com |
| 19 | 25 May 2021 | Rangamati | Baghaichhari | Poaching |  | Summer | Trafficking | 0 | 0 | 0 | 1 | No | amarsangbad.com |
| 20 | 30 July 2021 | Bandarban | Ruma | Conflict |  | Monsoon | Swidden cultivation | 0 | 1 | 0 | 0 | No | parbattanews.com |
| 21 | 08 Oct. 2021 | Bandarban | Ruma | Conflict |  | Winter | Swidden cultivation | 0 | 1 | 0 | 0 | No | bartapost.com |
|  |  |  |  |  |  |  |  | Outcome1 |  |  |
| No. | Date | District  | Subdistrict | Type of incident  |  | Season | Reason/activity | HD | HI  | BD | BR | Photo evidence | News Agency |
| 22 | 10 Apr. 2022 | Bandarban | Rowangchhari | Poaching |  | Summer | Trafficking | 0 | 0 | 0 | 1 | Yes | Business Standard |
| 23 | 17 May 2022 | Bandarban | Alikadam | Poaching |  | Summer | Trafficking | 0 | 0 | 0 | 1 | Yes | paharbarta.com |
| 24 | Apr. 2018 | Moulvibazar | Kamalganj | Conflict |  | Summer | Honey collecting | 0 | 1 | 0 | 0 | Yes | paharbarta.com |
| 25 | Apr. 2022 | Moulvibazar | Kamalganj | Conflict |  | Summer | Honey collecting | 0 | 1 | 0 | 0 | Yes | paharbarta.com |
| 26 | 19 July 2022 | Bandarban | Ruma | Conflict |  | Monsoon | Swidden cultivation | 0 | 1 | 0 | 0 | Yes | banglanews24.com |
| 27 | 07 July 2021 | Rangamati | Baghaichhari | Conflict  |  | Monsoon | Logging | 0 | 1 | 0 | 0 | No | prothom alo |
| 28 | 23 Jan. 2023 | Cox's Bazar | Chakaria | Poaching |  | Winter | Trafficking  | 0 | 0 | 0 | 2 | Yes | Chanel24.com |
| 29 | 23 May 2023 | Khagrachhari | Guimara | Conflict |  | Summer | Swidden cultivation | 0 | 1 | 0 | 0 | Yes | parbattanews.com |

1The Outcome columns provide the numbers of the following for each incident: BD, bear death; BR, bear rescue; HD, human death; HI, human injury.

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Supplementary Plate 1 A Malayan sun bear *Helarctos malayanus malayanus* being illicitly kept at the Binodia Family Park, Jessore-Jhenaidah Highway, Jessore, Bangladesh. Photo: Amarta Galib Chowdhury.



Supplementary Plate 2 Screenshot of the report on the drive by the Bangladesh Forest Department that led to the confiscation of two live adult Tibetan black bears *Ursus thibetanus thibetanus* (Kar, 2014).



Supplementary Plate 3 Screenshot of the report on the drive by the Bangladesh Forest Department that led to the confiscation of one live adult Asiatic black bear (Shawan, 2021).

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Supplementary Plate 4 Screenshot of the *Times of India* report on the cross-border trade of bears (Mukherjee, 2022).



Supplementary Plate 5 Screenshot of the *Daily Star* report on two new-born bear cubs rescued from Chakaria, Cox’s Bazar District (The Daily Star, 2023).

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