

# Information Sheet on Ramsar Wetlands (RIS) – 2009-2012 version

Available for download from [http://www.ramsar.org/ris/key\\_ris\\_index.htm](http://www.ramsar.org/ris/key_ris_index.htm).

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

## Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 14, 3rd edition). A 4th edition of the Handbook is in preparation and will be available in 2009.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

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Designation date

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Site Reference Number

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**2. Date this sheet was completed/updated:**

8 October 2010

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**3. Country:**

Sri Lanka

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**4. Name of the Ramsar site:**

The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.

Kumana Wetland Cluster  
(Kumana Thethbim Samuhaya - *in Sinhala*)  
(Kumana Sathappu Nilankal - *in Tamil*)

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**5. Designation of new Ramsar site or update of existing site:**

This RIS is for (tick one box only):

- a) Designation of a new Ramsar site ; or  
b) Updated information on an existing Ramsar site

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**6. For RIS updates only, changes to the site since its designation or earlier update:**

**a) Site boundary and area**

**The Ramsar site boundary and site area are unchanged:**

or

**If the site boundary has changed:**

- i) the boundary has been delineated more accurately ; or  
ii) the boundary has been extended ; or  
iii) the boundary has been restricted\*\*

and/or

**If the site area has changed:**

- i) the area has been measured more accurately ; or  
ii) the area has been extended ; or  
iii) the area has been reduced\*\*

**\*\* Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

**b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:**

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### 7. Map of site:

Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) a **hard copy** (required for inclusion of site in the Ramsar List): ; See **Figure 1**
- ii) an **electronic format** (e.g. a JPEG or ArcView image) ;
- iii) a **GIS file providing geo-referenced site boundary vectors and attribute tables** .

**b) Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park, etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The proposed boundary (**Figure 1 & Figure 2**) which encompasses a rectangular coastal stretch has been demarcated based on physical properties, as described below.

**Length:** Approximately 31 km

Northern boundary: Wedagama tank (reservoir) border - Panama tank border - Panakala lagoon and mangrove

Southern boundary: Kumbukkan Oya river (estuary mouth up to the upstream right angle confluence, including the ancient Mahagalamuna Anicut)

Eastern Boundary: Indian Ocean (500 m from low water level)

Western Boundary: Kumbukkan Oya confluence up to Wedagama tank border.

**Width:** 500 m of shallow sea and up to 7 (seven) kilometres landward from the Low Tide Level in Beach.

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### 8. Geographical coordinates (latitude/longitude, in degrees and minutes):

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

See **Figure 2** for relevant Geographical Coordinates of the proposed site.

Goecoordinates of Center of Site:

6°37'23.865"N 81°44'16.197"E

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### 9. General location:

Include in which part of the country and which large administrative region(s) the site lies and the location of the nearest large town.

South-east of Sri Lanka: Eastern Province: Ampara District.

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### 10. Elevation: (in metres: average and/or maximum & minimum)

The general elevation of this area ranges from sea level to an average of approximately 25 metres.

Coastal plain of the area is generally flat, but several isolated rocky hills (erosional remnant) are located in the area. Kudumbigala (119 m), Bagure (41 m) Hichchigala (46 m), Kiri yawatawana (62 m), and Dammulla (42 m) are the prominent hills situated within about 2 km from the coastline.

**11. Area:** (in hectares)

19, 011 ha.

**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

The area consist of a diversity of coastal wetland habitats, including lagoons, estuaries, waterholes, *tanks* (ancient or modern irrigation reservoirs) mangroves, salt marshes, villus and mudflats, and natural rock pools, interspersed with sand dune, scrubland and forest vegetation. Small patches of shifting agricultural land and paddy fields are located in the northern parts of the area. The main feature is the 200 ha Kumana mangrove swamp and *villu* (wetland fed by overflow of river) surrounded by plains and a dry-zone tropical thorn forest. Several other large saline lagoons are present along the coast. The area is reputed for its avifauna which congregates in the mangrove and villu areas to nest, while other species of birds nest in the plains surrounding the lagoons, and an array of migratory waterbirds and shorebirds also visit the wetlands. The proposed area forms part of the Yala Important Bird Area (IBA) in Sri Lanka ([www.wetlands.org](http://www.wetlands.org)). The site supports 312 vertebrate species, which includes 24 species of fresh water and brackish water fish, 8 species of amphibians, 48 species of reptiles, 202 species of birds, and 30 species of mammals.

**13. Ramsar Criteria:**

Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9

**14. Justification for the application of each Criterion listed in 13 above:**

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

**Criterion 1:** Representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region.

The proposed coastal stretch functions as a unique ecotone that consists of a mixture of natural coastal wetlands, terrestrial natural vegetation types, and ancient man-made irrigation systems. The Kumana Villu in particular is a unique wetland in the island that functions as a regular and preferred nesting site of many species of waterbirds in large numbers.

**Criterion 2:** Supports vulnerable, endangered, or critically endangered species or threatened ecological communities.

Among the total species of vertebrate fauna recorded from the proposed area, 30 species are considered as nationally and/or globally threatened (based on species assessments conducted by IUCN at regional and/or global level). These include 11 species of reptiles, 9 species of birds, and 10 species of mammals.

Three species of globally threatened marine turtles: Green Turtle (*Chelonia mydas*; Endangered), Loggerhead Turtle (*Caretta caretta*; Endangered), and Olive Ridley Turtle (*Lepidochelys olivacea*; Vulnerable) visit the beaches of this region for nesting. Breeding populations of the globally vulnerable Muggger Crocodile (*Crocodylus palustris*) inhabits these wetlands.

The globally threatened avifauna in Kumana includes the vulnerable Lesser Adjutant (*Leptoptilus javanicus*). The globally near-threatened Spot-billed Pelican (*Pelecanus philippensis*) and the Black-necked Stork (*Ephippiorhynchus asiaticus*) also inhabits the site.

At the national level, the Oriental Pratincole (*Glareola maldivarum*) is considered endangered and the Small Pratincole (*Glareola lactea*) is considered vulnerable (IUCN SL and MOENR, 2007). The plains surrounding the coastal lagoons within the proposed site are the only known nesting locations of the former species for many decades to date, and one of the few nesting locations known for the latter species, in the island.

The Black-necked Stork (*Ephippiorhynchus asiaticus*) is also considered critically endangered at the national level (with less than 20 individuals remaining in the entire island). The area consisting of the Kumana N.P. coastal lagoons and the Kumana Villu is the most preferred feeding area for this species in the island. It is considered as near threatened at global level.

The globally threatened mammals in the site includes the Asian Elephant (*Elephas maximus*; Endangered), Water Buffalo (*Bubalus arnee*, Endangered), Toque Macaque (*Macaca sinica*), Sloth Bear (*Melursus ursinus*, Vulnerable), Fishing Cat (*Prionailurus viverrinus*, Endangered) and Rusty-spotted Cat (*Prionailurus rubiginosa*, Vulnerable). Other nationally endangered mammals inhabiting this area includes keystone carnivore species such as the Indian Otter (*Lutra lutra*), and the Leopard (*Panthera pardus kotiya*).

Coastal plant species such as *Scaevola plumieri* (Goodeniaceae), *Cassine balae* (Celastraceae) located in this area are recorded to be rare in Sri Lanka.

Among the fauna in the site, 21 species appear in CITES appendices, while 14 are listed in CMS appendices (see Table below).

| Scientific Name                   | English Name         | IUCN Global Status | CITES Status | CMS Status | IUCN National Status |
|-----------------------------------|----------------------|--------------------|--------------|------------|----------------------|
| <b>Reptiles</b>                   |                      |                    |              |            |                      |
| <i>Chelonia mydas</i>             | Green Turtle         | EN                 | I            | I          | Not Evaluated        |
| <i>Caretta caretta</i>            | Loggerhead Turtle    | EN                 | I            | I          | Not Evaluated        |
| <i>Lepidochelys olivacea</i>      | Olive Ridley Turtle  | VU                 | I            | I          | Not Evaluated        |
| <i>Crocodylus porosus</i>         | Saltwater Crocodile  | LC                 | I            | II         | NT                   |
| <i>Crocodylus palustris</i>       | Freshwater Crocodile | VU                 | I            |            | LC                   |
| <i>Geochelone elegans</i>         | Star Tortoise        | LC                 | II           |            | VU                   |
| <i>Lissemys punctata</i>          | Flap-shell Turtle    | LC                 | II           |            | VU                   |
| <b>Birds</b>                      |                      |                    |              |            |                      |
| <i>Leptoptilus javanicus</i>      | Lesser Adjutant      | VU                 |              |            | VU                   |
| <i>Ephippiorhynchus asiaticus</i> | Black-necked Stork   | NT                 |              |            | CR                   |
| <i>Platalea leucorodia</i>        | Eurasian Spoonbill   | LC                 |              | II         | LC                   |
| <i>Anas acuta</i>                 | Northern Pintail     | LC                 |              | II         | Not Evaluated        |
| <i>Anas querquedula</i>           | Garganey             | LC                 |              | II         | Not Evaluated        |
| <i>Charadrius mongolus</i>        | Lesser Sand Plover   | LC                 |              | II         | Not Evaluated        |

|                                 |                      |    |             |    |               |
|---------------------------------|----------------------|----|-------------|----|---------------|
| <i>Charadrius leschenaultii</i> | Greater Sand Plover  | LC |             | II | Not Evaluated |
| <i>Charadrius dubius</i>        | Little Ringed Plover | LC |             | II | Not Evaluated |
| <i>Charadrius alexandrinus</i>  | Kentish Plover       | LC |             | II | Not Evaluated |
| <i>Sterna albifrons</i>         | Little Tern          | LC |             | II | Not Evaluated |
| <i>Chlidonias leucopterus</i>   | White-winged Tern    | LC |             | II | Not Evaluated |
| <b>Mammals</b>                  |                      |    |             |    |               |
| <i>Elephas maximus</i>          | Asian Elephant       | EN | I           |    | VU            |
| <i>Bubalus arnee</i>            | Wild Water Buffalo   | EN | III (Nepal) |    | VU            |
| <i>Panthera pardus kotiya</i>   | Sri Lanka Leopard    | NT | I           |    | VU            |
| <i>Prionailurus viverrinus</i>  | Fishing cat          | EN | II          |    | VU            |
| <i>Prionailurus rubiginosus</i> | Rusty Spotted Cat    | VU | I           |    | VU            |
| <i>Felis chaus</i>              | Jungle Cat           | LC | II          |    | VU            |
| <i>Lutra lutra</i>              | Indian Otter         | NT | I           |    | VU            |
| <i>Melarsus ursinus</i>         | Sloth Bear           | VU | I           |    | EN            |
| <i>Ratufa macroura</i>          | Giant Squirrel       | NT | II          |    | VU            |
| <i>Loris hydekkerianus</i>      | Grey Slender Loris   | LC | II          |    | NT            |
| <i>Semnopithecus priam</i>      | Grey Langur          | NT | I           |    | NT            |
| <i>Macaca sinica</i>            | Toque Macaque        | EN | II          |    | NT            |
| <b>Butterflies</b>              |                      |    |             |    |               |
| <i>Troides darsius</i>          | Sri Lanka Birdwing   | LC | II          |    | NT            |

**Criterion 3:** Supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region.

The proposed area harbours breeding populations of 16 species of vertebrates that are endemic to Sri Lanka, hence contributing to maintain the biological diversity at a regional as well as global level. These include nine species of endemic birds: the Ceylon Spurfowl (*Galloperdix bicalcarata*), Ceylon Junglefowl (*Gallus lafayetti*), Ceylon Green Pigeon (*Treron pompadora*), Grey Hornbill (*Ocyeros gingalensis*), Crimson-backed Flameback (*Chrysocolaptes stricklandi*), Ceylon Swallow (*Hirundo hyperythra*), Ceylon Woodshrike (*Tephradornis affinis*), Black-capped Bulbul (*Pycnonotus melanicterus*), and Brown-capped Babbler (*Pellorneum fuscocappilum*). This area is a “paradise” for avifauna, with nearly 50% of the bird species in Sri Lanka being recorded here. The diversity of wetland and terrestrial habitats within this area contributes to sustain a high diversity of bird species.

Coastal plant species such as *Cassine balae* (Celastraceae) is endemic to Sri Lanka.

**Criterion 4:** Supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.

The lagoons and estuaries in the area serve as important refuge areas for the juvenile stages of commercially important crustaceans such as *Penaeus* spp., and *Macrobrachium* spp.

This area is one of the southern-most destinations of migratory aquatic birds along the Central - South Asian Migratory Flyway. The array of coastal wetlands provide ideal feeding and resting habitats for over 35 species of migratory aquatic birds (e.g., waterfowl such as Northern Pintail (*Anas acuta*), Garganey (*Anas querquedula*) waders such as Lesser Sand Plover (*Charadrius mongolus*), Black-tailed Godwit (*Limosa limosa*), Common Redshank (*Tringa totanus*), Marsh Sandpiper (*Tringa stagnatilis*), Terns such as Gull-billed Tern (*Gelochelidon nilotica*), Lesser Crested Tern (*Thalasseus bengalensis*) which arrive here to avoid cold weather seasons in their breeding areas in numerous localities across a large part of the Asian continent.

It is also one of the most important areas in the island for the nesting of other waterbirds. Extensive field observations to date carried out by Shirley Perera, former Park Warden of the Kumana National Park has enabled him to record the regular nesting of 22 waterbird species in the Kumana Villu, and 10 species on the plains surrounding the coastal lagoons within the proposed site (Perera, S., 2010, personal communication; Perera, 1966 to 1986) (See Annex 1Da for list of nesting waterbirds).

During his tenure Perera observed the nesting of 121 species of birds (waterbirds and others) within the proposed site (Perera, S., 2010, personal communication; Perera 1966 to 1986). His records included a collection of eggs of the majority of these. (See also Section 34: Bibliographical references: Perera, 1966 to 1986.)

The beaches in the proposed coastal stretch function as nesting sites of three species of globally threatened marine turtles (*Chelonia mydas*, *Caretta caretta*, and *Lepidochelys olivacea*).

**Criterion 6:** Regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

The following waterbird species in this area qualify for the >1% of a bioecographic population, according to the thresholds stated in the Wetland International publication *Waterbird Population Estimates* 4th Edition (2006) (“WPE4”).

Note: (a) The area where the site is located was one of the least visited by bird observers during the 2½ decades of armed conflict in the country which ended in mid-2009. (b) The waterbird census (see Section 29) is carried out islandwide by a limited number of reliable observers as a voluntary activity during a few selected days of January or February, and further, for the reason above, was conducted at this site only in 2003, 2004, 2007 and 2008. Hence, the actual numbers of waterbirds in the site, as in certain other sites in the country, are much higher than reflected by the short reports in the *Ceylon Bird Club Notes* or the waterbird census data WPE4.

**1. Spot-billed Pelican (*Pelicanus phillippensis*): WPE4 1% threshold is 135 birds.**

Kaluthota (2005) recorded 422 individuals roosting in the Kumana Villu (within the proposed site) in July 2005, where 44 active nests were documented. Comparably high numbers of Spot-billed Pelican observations at the Villu, including nesting, have been reported in the *Ceylon Bird Club Notes* (2002-2010). Antony and Samarasinghe (CBCN, 2004) had also observed over 100 individuals of Spot-billed Pelicans in Kumana villu.

**2. Painted Stork (*Mycteria leucocephala*): WPE4 1% threshold is 250 birds.**

Kaluthota (2005) recorded 728 individuals roosting in the Kumana Villu in July 2005, where 217 active nests were documented. The *Ceylon Bird Club Notes* record 300+ juveniles of the species at this Villu in August 2004 (Antony and Samarasinha, 2004).

**Criterion 8:** Important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend.

The lagoons and estuaries in the area serve as important spawning areas of commercially important crustaceans such as *Penaeus* spp., and *Macrobrachium* spp, and also offer refuge to their juvenile stages. The cluster of productive coastal wetlands in this stretch also supports a thriving near-shore fishery, due to the release of nutrients accumulated in the lagoons to shallow sea, especially during rainy seasons.

**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Biogeographic Realm: Indo-Malayan

Biome: Tropical and Subtropical Dry Broadleaf Forests

Local Biogeographic Classification: Dry Zone Coastal Region

**b) biogeographic regionalisation scheme** (include reference citation):

Global:

WWF Global 200 Ecoregions : Olson et al. (2001). *Terrestrial Ecoregions of the World: The New Map of Life on Earth. Bioscience*, 51 (11): 933-938)

Udvardy, M. D. F. (1975). *A classification of the biogeographical provinces of the world*. IUCN Occasional Paper no. 18. Morges, Switzerland: IUCN.

Local:

Mueller-Dombois, D. (1968). Ecogeographic analysis of a climate map of Ceylon with particular reference to vegetation. *The Ceylon Forester*, 8, N.S., 39-58.

**16. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

**Geology, Geomorphology & Origins**

Geologically Sri Lanka is subdivided in to three main lithotectonic units and the area between Kumbukkan Oya and Panama belongs to the Vijayan Complex. Depositional age of the Vijayana complex rocks is around 1.1 Ga, whereas its metamorphic ages are between 456 and 591 Ma (Kroner et al., 1991) (**Figure 3**).

The dominant lithologies of the areas are granitic gneiss, and hornblende biotite gneiss (**Figure 4**). Thickness of the overburden varies from place to place and it is more than 5 m in Panama estuary and Helawa lagoon. A calcrete layer, which formed by the ground water fluctuation is found in Panakala lagoon area. Beach sand composed of silica, ilmanite and some garnet is found along the coastline, whereas wind blown sand or lagoonal sediments constitute the overburden in the coastal plain.



Morphologically, the coastal zone of Sri Lanka belongs to Coastal Lowlands with an elevation ranging from sea level to 305 m and slope ranging up to 15° (Vitanage, 1972). Except for isolated erosional remnants (rocky hills) and sand dunes the coastal plain of this area has an elevation of <10 m. Progradation is a characteristic phenomenon along this coastal stretch. However, the beach erosion can be observed north of Bagure lagoon. Dune fields as high as ~10 m are situated along the coastal plain between Kumbukkan Oya and Panama (Figure 5). Coastal plain of the area is generally flat, but several isolated rocky hills (erosional remnant) are located in the area. Kudumbigala (119 m), Bagure (41 m) Hichchigala (46 m), Kiriawatawana (62 m), and Dammulla (42 m) are the prominent hills situated within about 2 km from the coastline. Beside these rocky hills, granitic rock boulders are abundant in the areas (Figure 5).

#### Soils of the area

Reddish brown earth is the dominant soil group in the area. Reddish brown nearly sodized and solonetz, reddish brown earth and low humic gley soil, and red yellow latosols are sub groups found in the area. Regosols are found on recent beaches, whereas alluvium is found on floodplains of the streams (Figure 6).

#### Hydrology, Water Depth, Water Permanence

Panama, Panakala, Salamba, Helawa, Kunukala, Bagura, Andarakala, Ilakala, and Yakkala are the lagoons located along this coastal stretch. Most of them have seasonal openings which are cut across by the seasonal barrier bars (Figure 5). Bagura Oya, which join Bagura lagoon, is the major perennial stream in the area. Helawa Ara, which joins the Helawa lagoon is a seasonal stream. Several paleo-lagoons have become coastal marshes known as *villus* due to beach progradation. The lagoons are generally shallow, and are subject to extensive drying out during the dry season. Bagura lagoon is seasonally tidal. The river Kumbukkan Oya flows along the southern boundary, and the estuary is connected to the Kumana Villu (200 ha) through a narrow channel. The confluence of the Alakola Ara and other streams flow to the Kumbukkan Oya. Several ancient irrigation tanks (e.g, Kumana tank in the South, Panama tank in the North) are also located in this coastal stretch.

#### General Climate

The proposed area belongs to the lowland dry zone of Sri Lanka. The mean annual rainfall varies between 1,500 - 2,000 mm, while the mean annual temperature of the area is ca. 25 – 27.5 °C, with a dry spell from March to September (National Atlas, 2008).

### 17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, and climate (including climate type).

Bagura Oya, the major perennial stream of the area originates in the Ruhuna National Park. This area is generally flat except for isolated rocky erosional remnants. Geology and soil type is similar to the description given in section 16. This area belongs to the Dry Zone of Sri Lanka, which receives a mean annual rainfall of <1750 mm.

Kumbukkan Oya, which flows along the southern boundary of the Kumana villu drains from the eastern slopes of the central highlands and Monaragala hills. Elevation of the upper catchment of the Kumbukkan Oya reaches 1,375 m. Tributaries of the Kumbukkan Oya originate in Monaragala hills, which are isolated hills on the eastern plains and rise to elevations over 900 m. Lower Kumbukkan Oya basin is generally flat. Isolated erosional remnants are common in the area.

Geologically upper Kumbukkan Oya catchment belongs to the Highland Complex of Sri Lanka. High-grade metasedimentary rocks such as pelitic gneisses, marble, quartzite as well as charnokites and charnokitic gneiss are common rock types in the area. Lower catchment belongs to the Vijayan complex and its geology is similar to the description given in section 16.

Upper catchment of Kumbukkan Oya belongs to the Intermediate climatic zone of the country, which receives a mean annual rainfall between 1750 - 2500 mm. Lower catchment belong to the Dry Zone having a mean annual rainfall of <1750 mm.

See further physical descriptions under section 16.

### 18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

The Panama tank contributes towards flood control in the Panama village and associated paddy cultivations. The cluster of coastal lagoons traps sediments and other nutrients from the forests, and supports a rich coastal and marine aquatic biodiversity.

The thick stand of riverine forests along the Kumbukkan Oya River contributes to stabilization of the river shoreline. Similarly, the scattered patches of mangrove in the area stabilize the shoreline of lagoons and estuaries in this area.

The ancient irrigation tanks and waterholes scattered contributes towards groundwater recharge.

### 19. Wetland Types

#### a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

Marine/coastal: A • B • C • D • E • F • G • H • I • J • K • Zk(a)

Inland: L • M • N • O • P • Q • R • Sp • Ss • Tp • Ts • U • Va •  
Vt • W • Xf • Xp • Y • Zg • Zk(b)

Human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

#### b) dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

J (lagoons) > I (mangrove swamps) > G (mudflats) > H (salt marshes) > E (sea shore and dunes) > F (estuaries) > M (permanent rivers and streams) > Xf (seasonally flooded riverine forest) > 4 (large irrigation tanks) > 3 (irrigated land/paddy fields) > 2 (small tanks) > Ts (seasonal ponds) > A (sea bay) > N (seasonal creeks/streams)

### Major Coastal Wetlands along a North-South Gradient of the Proposed Ramsar Site

| Name          | Type             | Approximate extent (Ha) | Location (Northern longitude) |
|---------------|------------------|-------------------------|-------------------------------|
| Panakala      | Lagoon           | 125                     | 6.73142                       |
| Kunukala      | Lagoon           | 75                      | 6.70584                       |
| Helawa        | Lagoon           | 125                     | 6.67677                       |
| Okanda        | Lagoon /Mangrove | 40                      |                               |
| Bagura        | Lagoon           | 120                     | 6.59519                       |
| Thunmulla     | Waterhole        | 2                       |                               |
| Kotalindawala | Waterhole        | 2                       |                               |
| Andarakala    | Lagoon           | 35                      | 6.57082                       |
| Itikala       | Lagoon           | 85                      | 6.55816                       |
| Yakkala       | Lagoon           | 100                     | 6.54685                       |
| Kumana        | Villu/Mangrove   | 200                     | 6.52525                       |

|               |                           |     |  |
|---------------|---------------------------|-----|--|
|               | swamp/Estuary             |     |  |
| Kumbukkan Oya | Estuary / riverine forest | 250 |  |

## 20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

### Main Habitats, Vegetation Types, and Plant Communities:

The main natural wetland habitats include streams, rivers, lagoons, estuaries, bays, villu/marshes, mangroves, riverine forests, and sea shore. The main terrestrial habitats and vegetation types include dry monsoon forests, semi-arid thorny scrub, coastal grasslands and plains, and sand dunes, while a few rock outcrops are also scattered in the area.

Man-made wetlands include ancient irrigation tanks, existing paddy cultivations, and small ponds. Aquatic plant species such as *Ludwigia* spp., *Nelumbo nucifera*, *Nymphaea pubescens*, *Aponogeton* spp., and *Neptunia oleracea* are common in ponds and tanks. The dominant aquatic plants in lagoons include *Typha angustifolia* and *Acrostichum aureum*.

The pristine riverine forests along Kumbukkan Oya are dominated by the giant *Terminalia arjuna* ("Kumbuk") trees. The dominant tree species in the Kumana Villu is *Sonneratia caseolaris*. The dominant plant communities associated with the dry monsoon forest patches include *Berrya cordifolia*, *Chloroxylon swietenia*, *Manilkara hexandra*, *Salvadora persica*, and *Vitex altissima*.

### Animal Communities:

Based on published records and personal observations, the fauna inhabiting the area includes a total of 312 vertebrate species, belonging to 111 families. These include 16 endemics and 30 nationally and/or globally threatened species (see table). The vertebrate fauna consist of 24 species of fresh water and brackish water fish belonging to 16 families (Annex 1A), 8 species of amphibians belonging to 3 families (Annex 1B), 48 species of reptiles belonging to 14 families (Annex 1C), 202 species of birds belonging to 60 families (Annex 1D), and 30 species of mammals belonging to 18 families (Annex 1E). Among the invertebrate fauna, the butterflies include 69 species belonging to five families (Annex 1F). Of them one species is endemic.

### Species richness of fauna in the Kumana Proposed Ramsar Site

| Group                       | Total species | Endemic species | Threatened species |
|-----------------------------|---------------|-----------------|--------------------|
| Fresh & brackish water fish | 24            | -               | -                  |
| Amphibians                  | 14            | 02              | -                  |
| Reptiles                    | 48            | 03              | 11                 |
| Birds                       | 202           | 09              | 09                 |
| Mammals                     | 30            | 02              | 09                 |
| Butterflies                 | 69            | 01              | -                  |

### Ecosystem Services of the Site:

This undisturbed and continuous stretch of coastal belt with a mixture of wetland and terrestrial ecosystems/habitats offer numerous ecosystem services, as summarized below:

| Ecosystem service category | Service types  | Details  |
|----------------------------|--|--|
| Provisioning services      | Fisheries Resources (coastal and near-shore fin fish and shell fish) | Many local communities in the area depend on fisheries related livelihoods   |
|                            | Non-timber forest products   | Local communities harvest seasonal fruits and other leafy vegetables from the forest and wetlands  |
|                            | Freshwater   | The scattered water holes, irrigation tanks, and rock outcrop ponds provide drinking water for local communities, pilgrims, domestic cattle, and other wildlife.             |
|                            | Fodder for domestic cattle   | The villagers tender cattle in patches of coastal grasslands in the area   |
| Supporting services        | Sustenance of a rich biodiversity                                    | The area supports a rich diversity of plants and animals, and provides resting and feeding habitats for large populations of migratory water birds.                          |
|                            | Breeding grounds for marine fish                                     | The coastal wetlands such as mangrove and lagoons offer spawning grounds for marine fish   |
| Regulating services        | Groundwater recharge   | The streams, rivers, tanks, water holes scattered in the area contributes towards groundwater recharge.  |
| Cultural services          | Sites of religious significance                                      | Several historical sites of religious worship for followers of Hindu and Buddhist faith; area falls in the route of a traditional annual pilgrimage ( <i>Paada Yaatra</i> ). |
|                            | Recreation   | Popular destination to observe wildlife, including migratory water birds.  |
|                            | Archaeological sites   | The area was settled by an ancient civilization dating back to 2nd century BC. Several archaeological sites are scattered in the area.                                       |

## 21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

The mangrove species in the Kumana villu (e.g. *Sonneratia caseolaris*, *Achrostichum aureum*) provide nesting habitat for several species of waterbirds.

Coastal plant species such as *Scaevola plumieri* (Goodeniaceae), *Cassine balae* (Celastraceae) located in this area are recorded to be rare in Sri Lanka. The latter species is endemic to Sri Lanka.

The large trees of *Terminalia arjuna* along the Kumbukkan Oya contribute to sustain a high biodiversity associated with the stretch of riverine forest.

## 22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14. Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Species which are threatened at a national level (but currently do not have threatened International Status) are listed below.

| <i>Scientific Name</i>     | English Name          | IUCN Global Status | CITES Status | CMS Status | IUCN National Status |
|----------------------------|-----------------------|--------------------|--------------|------------|----------------------|
| <b>Reptiles</b>            |                       |                    |              |            |                      |
| <i>Calotes ceylonensis</i> | Painted-lip Lizard    | DD                 |              |            | VU                   |
| <i>Mabuya bibroni</i>      | Bibron's Sand Skink   | LC                 |              |            | EN                   |
| <i>Echis carinatus</i>     | Saw-scaled Viper      | LC                 |              |            | VU                   |
| <i>Cerberus rhyncbops</i>  | Dog-faced Water Snake | LC                 |              |            | VU                   |
| <i>Eryx conicus</i>        | Sand Boa              | LC                 |              |            | VU                   |
| <b>Birds</b>               |                       |                    |              |            |                      |
| <i>Glareola maldivarum</i> | Oriental Pratincole   | LC                 |              |            | EN                   |
| <i>Glareola lactea</i>     | Small Pratincole      | LC                 |              |            | VU                   |
|                            |                       |                    |              |            |                      |
| <i>Porzana fusca</i>       | Ruddy-breasted Crake  | LC                 |              |            | EN                   |

The main fish species caught by the fishermen from the coastal wetlands in this area include Tilapia (*Oreochromis* spp.), *Etiloplus* spp. and Mullet (*Mugil* spp.), while *Channa* spp. (Snakeheads) are also caught occasionally. Commercially important edible crustaceans such as *Macrobrachium* spp., *Metapenaeus* spp. and *Penaeus* spp. are also caught from lagoons.

Among the waterbirds occurring in the site, the Oriental Darter (*Anhinga melanogaster*), and the Black-tailed Godwit (*Limosa limosa*) occur in high population numbers that may meet the WPE4 1% threshold for regional populations.

Kaluthota (2005) recorded 41 individuals of Oriental Darter roosting in the Kumana Villu in July 2005. In the Ceylon Bird Club waterbird population census data for the proposed site the highest count is 36 birds in 2003.

In 1984, the last year before the one in which militant attacks on the Kumana National Park (then named the Yala East National Park) forced its closure until recently (see Bibliographical references, Section 34: Perera, 1966 to 1986) a report in the *Ceylon Bird Club Notes* states the observation on Black-tailed Godwit as follows: "Thousands, especially in Itikala and Yakala" lagoons within it. (Dharmasena, 1984). It can be assumed that since then to date this migrant species has been arriving here in comparable numbers in most years.

The future population census on waterbirds planned to be carried out by the Ceylon Bird Club would reveal more specific data on the above species, and justify them to be considered under the 1% regional population threshold.

### 23. Social and cultural values:

a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

#### Socio-economic Values:

A historical cluster of villages called 'Panam Pattuwa' consisting of five traditional Sinhala villages, namely Panama, Lahugala, Hulannuge, Bakmtiyaava & Kumana are closely associated with this area. The original occupants of these villages were the Sinhalese who escaped from the Uva Wellassa area during the suppression of the Sinhalese revolt of Wellassa in 1818 by the colonialist British army.

At present, approximately 1,400 families inhabit the Panama village in the northern boundary of the Ramsar Site. They belong to three communities; Sinhala, Tamil, and Muslim. Their main livelihoods include agriculture, fisheries, and tending livestock. Villagers in Panama depend on the Ramsar Site for coastal fisheries, and also as feeding grounds of livestock. About 100 families in Panama are engaged in lagoon fishing, while they also practice beach seine fishery in the area – a form of traditional near-shore fishing technique. Villagers in Panama area also depend on seasonal non-timber forest products, such as the collection of Woodapple (*Feronia limonia*) fruits. The Kumana village is located towards the southern boundary of this site. However, it was abandoned about 15 years ago due to terrorist threats.

The Kumana Wetland Cluster is a popular wildlife watching destination among local and foreign visitors. According to statistics of the Department of Wildlife Conservation, the average monthly revenue from park visitation in 2010 has been approximately US\$ 2,300.

#### Archaeological Sites:

The area belonged to an ancient irrigation civilization under the Ruhunu-Magama kingdom around 200 B.C. There is a considerable amount of reference literature that describes the history of south-eastern Sri Lanka, including this kingdom. These have been summarized in the research work of Lewis (1916), Nicholas (1956), and more recently by Manathunga (2005), and Somadeva (2006). The first reference to this region is in the ancient *Mahavamsa* ("Great Chronicle") – a historical poem written in the Pali language on the kings of Sri Lanka, by the Buddhist monk Mahanama Mahathera in the 6th century AD (translated to English by Wilhelm Geiger in 1912). The distribution of the ancient human settlements in the Kumbukkan Oya river basin is reflected in the results of the exploration conducted by Hosei University, Japan (RARC 1995).

The remnants of the ancient irrigation systems are scattered throughout this area, and includes man-made reservoirs such as the Kumana Tank. The foundations of the ancient anicut across the Kumbukkan Oya river – the Mahagalamuna ("Great Stone Anicut") are still evident, and this had diverted water to the Kumana Tank. The ancient irrigation network in this area is elaborated in the work by Brohier (1934, reprinted 1979).

The Kudumbigala Forest Hermitage (*Kudumbigala Aranya Senasanaya*), 2 km inland from Okanda, is a Buddhist temple, a sacred area established in the 1st century BC. This covers an extent of 4,700 hectares and spreads around the Helawa lagoon. According to historical records, 225 known caves here were occupied by Buddhist monks as far back as the 1st century BC. One rock inscription of that time indicates the number of Arahata Theras (supremely enlightened monks) dwelt in this place. This hermitage is considered one of the most important ancient sacred sites in the country. There are several *stupas* (massive brick structures containing holy relics) here. One built on a rock called "Belum Gala" is a replica of the Dharmachakra Dhammika Stupa of Isipatanaranama in India and is the only such stupa in Sri Lanka. Another in the centre of the site shows extraordinary craftsmanship. A symbol in a rock

inscription at a cave housing the great "Sudharshana" rock statue is of unique design. The clusters of caves at Kudumbigala and Bambaragastalawa contain over 20 ancient rock inscriptions and paintings.

**Religious Importance:**

The route of an ancient pilgrimage done entirely on foot, *Paada Yaatra*, from the North to the South-east of Sri Lanka (see **Figure 7**) lies through the proposed Ramsar Site. The pilgrimage occurs during the months of June-July. Several important staging points of the journey are located along the proposed site, as highlighted below:

| Religious site               | Location           | Details  |
|------------------------------|--------------------|--|
| Pillaiyar Kovil              | Panama             | A place of worship devoted to Lord Pillaiyar – a Hindu Deity   |
| Sanyasi Malai                | Weherakema         | A tree shrine at the foothills of Weherakema rock outcrop, devoted to Lord Ganesh – a Hindu Deity          |
| Kudumbigala Forest Hermitage | Kudumbigala        | An ancient Buddhist Temple in rock outcrops. One of the cave monasteries dates back to ca. 2nd century BC. |
| Murugan Kovil                | Okanda             | A rock shrine devoted to Lords Murugan-Skanda and Valli – Hindu Deities                                    |
| Pattini Shrine               | Kumbukkan Oya bank | A tree shrine devoted to goddess Pattini – a Hindu and Buddhist Deity                                      |

Pilgrims from all parts of Sri Lanka, of varied faiths and cultures, seek grace at Okanda Murugan Shrine, especially during its great festival in July. The Okanda Murugan Kovil and is an important holy place of the aboriginal hunter-gatherers of Sri Lanka, Wanniya-laeto (“inhabitants of the forest”) also called the Veddas. On the top of the Okanda hill the Veddas maintain an ancient shrine dedicated to Valli Amma, the consort of God Skanda.

The Kudumbigala Forest Hermitage is an important site of religious worship for the Buddhists community in Sri Lanka. Devotees from all over the island visit it, and offer prayers and alms.

**b)** Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

If Yes, tick the box  and describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:

The proposed area belonged to an ancient civilization that thrived on irrigated agriculture during the Ruhunu-Magama Kingdom of Sri Lanka (around 200 B.C.). Remnants of its ancient irrigation network are scattered in this area, as evidenced by tanks (reservoirs), e.g. Kumana Tank, the foundation of anicut across the Kumbukkan Oya, and numerous water bodies. The Kumana Villu and the vast plains of this area were ancient paddy fields that were part of the irrigation network built and sustained by this ancient civilization. Existing paddy cultivations towards the northern boundary provide seasonal feeding habitats for many species of aquatic birds.

- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:

According to historical research (e.g., Manathunga 2005), this area has been inhabited by the indigenous hunter-gatherer tribal community in Sri Lanka, Wanniya-laeto or Veddas (see above), subsequent to the collapse of the ancient irrigation civilization. These tribal communities had also practiced agriculture in this area, and sustained some of the ancient irrigation networks.

- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

The forest and wetland areas adjacent to ancient religious sites such as the Kudumbigala Rock Temple and the Okanda Murugan Kovil are considered as sacred areas, where traditional laws shall take precedence over modern laws. The Kudumbigala Forest Hermitage is located around one of the lagoons in the proposed area (the Helawa Lagoon) and covers 4,700 hectares.

Sacred sites operate under the patronage and guidance of the villagers and priests as the custodians of the living tradition. Villagers and pilgrims here, as elsewhere in Sri Lanka, traditionally look upon the biodiversity of these sacred areas as of great spiritual value, hence enabling the preservation the natural character of the associated ecosystems.

The Okanda Murugan Kovil and its surrounding areas are reverentially observed as holy places by the indigenous hunter-gatherers of Sri Lanka. On the top of the Okanda hill the Veddas preserved the sanctity of the location with a simple shrine of sticks and leaves dedicated to Valli Amma, the consort of god Skanda. The Vedda community visit this location annually to perform their traditional rituals, make offerings and receive blessings from Valli Amma.

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#### **24. Land tenure/ownership:**

- a) within the Ramsar site:  
State (under the jurisdiction of the Department of Wildlife Conservation)
- b) in the surrounding area:  
Northern border – Private and State lands.
- 

#### **25. Current land (including water) use:**

- a) within the Ramsar site:  
Biodiversity conservation (Protected Area under the Department of Wildlife Conservation).
- b) in the surroundings/catchment:  
Fisheries and Agriculture
- 

#### **26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:**

- a) within the Ramsar site:

Illegal hunting and logging, as well as plundering of archaeological resources by treasure hunters have been reported in this area during the time of the Park was closed to visitors. The vegetation in the Kumana Villu was partially destroyed about 10 years ago by fishermen to facilitate fishing activities. However, these activities have been curtailed after the Park was reopened in December 2009.

Potential adverse effects:

- Disturbance to wildlife by over visitation.
- Cattle grazing around lagoons could lead to siltation and eutrophication.



- Spread of invasive alien aquatic plants (e.g. *Salvinia molesta*, *Typha angustifolia*) and exotic Tilapia (*Oreochromis* spp.) in Kumana Villu, lagoons and tanks, as well as the spread of feral Buffalo (*Bubalus bubalis*) could lead to harmful impacts on aquatic and terrestrial ecosystems.

b) in the surrounding area:

- Clearance of forest for human habitations and shifting cultivations.
- Over-use of agro-chemicals in cultivation.
- Illegal logging and poaching.

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### 27. Conservation measures taken:

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site: In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

The entire extent of the Ramsar Site falls within two existing protected areas: the Kumana National Park, and the Panama-Kudumbigala Sanctuary, which are administered by the Department of Wildlife Conservation (DWC). (See maps of these PAs under supplementary information).

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia ; Ib ; II ; III ; IV ; V ; VI

c) Does an officially approved management plan exist; and is it being implemented?:

A three-year development plan has been designed for Kumana National Park, but not implemented yet. An annual work plan is prepared by the Regional Assistant Director for the two PAs and the proposed development activities will be implemented on priority base, with the government funds. This includes development of the road network, waterholes and the other infrastructure.

d) Describe any other current management practices:

Department of Wildlife Conservation staff deployed at Okanda Park headquarters and Panama Range Office carry out patrolling and other protective measures. Groups of Park visitors are issued with entry permits at the entrance to the Park and provided with a Guide to accompany them while within the Park.

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### 28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

A three-year development plan has been prepared for Kumana National Park, which is scheduled to be implemented in 2011 (subjected to approval of funding from the World Bank).

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### 29. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

The Ceylon Bird Club conducts an annual countrywide waterbird census, and in the Kumana wetlands this is carried out with the support and participation of Park personnel.

The National Wildlife Training Centre carried out a rapid assessment of bird diversity in Kumana in 2010.

The Department of Wildlife Conservation encourages researchers to conduct research in this area, and provides necessary logistical for research.

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**30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:**

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

A Visitors' Centre at the Okanda Park office provides basic information on the Park to visitors. Printed publications of the Department of Wildlife Conservation are available at this office. The road network of the park provides access to important areas for visitation.

The Department of Wildlife Conservation makes the necessary funds available to the park authorities to conduct conservation awareness programmes for schoolchildren, annually.

Groups of schoolchildren are provided with trained Guides, to interpret Park resources, when visiting the Park.

**31. Current recreation and tourism:**

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

The Kumana Wetland Cluster is a popular wildlife watching destination among local and foreign visitors. It was reopened for visitors in December 2009 after being closed for over a decade due to terrorist activities. According to statistics of the Department of Wildlife Conservation, there has been a steady increase in park visitation during the months of 2010 (see Table below for data).

A motorable track extends from Panama to the Kumbukkan Oya, through the proposed area. Several designated campsites are located within the area. These include the popular Bagura campsite and the Madametota campsite bordering the Kumbukkan oya.

Kumana National Park Monthly Visitor Statistics for 2010

| Month     | Local  |               |                     | Foreign Adults |
|-----------|--------|---------------|---------------------|----------------|
|           | Adults | Child-<br>ren | School-<br>children |                |
| January   | 68     | 8             | -                   | -              |
| February  | 1109   | 60            | 121                 | 9              |
| March     | 937    | 57            | 303                 | 16             |
| April     | 1653   | 416           | 139                 | 87             |
| May       | 1656   | 193           | -                   | 27             |
| June      | 1490   | 188           | 166                 | 42             |
| July      | 1270   | 101           | 448                 | 48             |
| August    | 1921   | 228           | -                   | 128            |
| September | 1727   | 134           | -                   | 56             |
| October   |        |               |                     |                |
| November  |        |               |                     |                |
| December  |        |               |                     |                |

**32. Jurisdiction:**

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/Dept. of Environment, etc.

The Ramsar Site is State territory, and is administered by the Department of Wildlife Conservation as national protected areas, under the Fauna and Flora Protection Ordinance of Sri Lanka.

### 33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

#### Local Office:

Mr. Ajith Kumara  
Park Warden  
Kumana National Park  
Okanda, Panama, Pottuvil.  
Phone: +94-55-572-0222  
E-mail: None

Mr. M. C. G. Rupasinghe  
Assistant Director (Eastern Region)  
Department of Wildlife Conservation  
Dharmapala Mawata  
Ampara.  
Phone: +94-63-222-2501  
E-mail: None  
Fax: +94-63-222-2501

#### Head Office:

Mr. Ananda Wijesooriya  
Director General  
Department of Wildlife Conservation  
Bodhiraja Mawata  
Jayanthipura, Battaramulla.  
Phone: +94-11-288-8585  
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Mr. Manjula Amararathna  
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Email: manjulaamararathna@yahoo.com

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### 34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

Antony, P., Samarasingha, R. (2004). [Report on number of juvenile Painted Storks in location within proposed site]. *Ceylon Bird Club Notes*, August: 74.

Bibile, R. (1997). Kumana and the Pilgrim Path. *Loris*, Journal of the Wildlife and Nature Protection Society of Sri Lanka, XXI (No. 3): 87-93.

Brohier, R. L. (1934). *Ancient Irrigation Works in Ceylon*. Second edition. Part 1 (reprint 1979). Colombo: Sri Lanka Government Press.

Ceylon Bird Club. Numerous reports in *Ceylon Bird Club Notes* [monthly]. (2002 to 2009). 2002 July to 2009 October.

- Ceylon Bird Club. (2003 to 2008). Unpublished data on annual waterbird census.
- Cooray, P. G. (1994). The Precambrian of Sri Lanka, A historical overview. *Precambrian Research*, 66, 3-18.
- de Silva, C. (2005). Unpublished list of species of birds from area in reference, compiled during visit to area in reference in 2005 October.
- de Zylva, T. S. U. (2004). [Report on Oriental Pratincole nesting within proposed site]. *Ceylon Bird Club Notes*, June: 58.
- Dharmasena, C. D. (1984). [Report on number of Black-tailed Godwits within proposed site]. *Ceylon Bird Club Notes*, January: 5.
- Geiger, Wilhelm; Bode, Mabel Haynes (transl.); Frowde, H. (ed.) (1912). *The Mahavamsa or, The great chronicle of Ceylon / translated into English by Wilhelm Geiger ... assisted by Mabel Haynes Bode...under the patronage of the government of Ceylon*. London: Pali Text Society 1912 (Pali Text Society, London. Translation series; no. 3).
- Geological Survey & Mines Bureau. (2001). 1:100,000 Geology provisional map series: Sheet no. 18, Monaragala - Panama.
- IUCN Sri Lanka and the Central Environmental Authority (2006). *National Wetland Directory of Sri Lanka*. 342 pp.
- IUCN Sri Lanka & MENR (2007). *The 2007 Redlist of Threatened Fauna and Flora of Sri Lanka*. 148 pp.
- Kaluthota, C. (2005). Status of the Breeding Bird Colony at Kumana Villu. *Loris*, Journal of the Wildlife and Nature Protection Society of Sri Lanka, Vol.24, 1-2: 21-26.
- Kaluthota, C .D. et al. (2006). Discovery of new resident bird species from Sri Lanka. *Siyoth*, Vol.1. Field Ornithology Group of Sri Lanka.
- Kroner, A., Cooray, P. G., Vitanage, P. W. (1991). Lithotectonic subdivision of the Precambrian basement of Sri Lanka. In: The Crystalline crust of Sri Lanka - Part 1, Professional paper 5, Geological Survey Department Sri Lanka.
- Kumaranayagam, K. (2010). Unpublished list of species of birds from area in reference, compiled during visit to area in 2010 October.
- Kumaranayagam, K., Tirimanna, V., Wikramanayake, T. (2010). Unpublished material submitted for *Ceylon Bird Club Notes*, 2010 May to October.
- Lewis, F. (1916). Note on an exploration in Eastern Uva and Southern Panama Pattu. *Journal of Royal Asiatic Society*, XXIII: 276-294.
- Li, Z.W.D., A. Bloem, S. Delany, G. Martakis, J.O Quintero (2009). *Status of Waterbirds in Asia: Results of the Asian Waterbird Census: 1987 – 2007*. Wetland International. 276 pp.
- Manathunga, S. B. (2005). “*Kalyani Kannika*” – Ancient Eastern Kelaniya Archaeological Sites (Written In Sinhala). In: W.H. Wijayapala & A. Manathunga (2005). Ancient Philosophical Research Compilation. UNESCO Central Cultural Fund, Ministry of Cultural and National Heritage, Sri Lanka.

Nicholas, C. W. (1956). Some lesser-known pre-Christian ruins: Part 1 – Rohana. *Journal of Royal Asiatic Society*, V: 139-159.

Perera, S. (1966 to 1986). Shirley Perera, in several positions he held during this period in the Department of Wildlife Conservation, finally as Park Warden, maintained extensive written records of his observations of the birds in the Kumana National Park. The log books, notebooks and registers in which these were written were all lost, presumed destroyed, in an attack on the Park Office by armed militants in 1985. His personal notes have survived to date.

RARC (1995). *Ruins of the Ancient Ruhuna Civilization*. Japan: Hosei University Exploration Club.

Ranasinghe, P. N. (2010). Holocene coastal development in southeastern-eastern Sri Lanka: Paleo-depositional environments and paleo-coastal hazards. Unpublished PhD dissertation, Kent State University USA.

Rasmussen, P. C., Anderton, J. C. (2005). *Birds of South Asia*. Smithsonian Institution and Lynx Edicions.

Somadeva, R. (2006). *Urban Origins in Southern Sri Lanka*. Studies in Global Archaeology 3. Uppsala, Department of Archaeology and Ancient History, 436 pp., 9 diagrams, 18 maps, 122 figures, 130 plates, 201 tables, 9 appendices. ISSN 1651-1255, ISBN XXXX.

Somaweera, R., Sarathchandra, K., Karunaratne, S., Nuwansiri, C. (2004). A study on the avifauna and herpetofauna of Panama, Eastern province, Sri Lanka. *Sri Lanka Naturalist*, 2004 January/June, Vol.6, 1-2: 1-9.

Studio Times. (1974). *Handbook for the Ceylon Traveller*. Studio Times: 168-173.

The National Atlas of Sri Lanka (2008). 2nd Edition. Survey Department of Sri Lanka. 243 pp.

Vitanage, P.W. 1972. Post Precambrian uplifts and regional neotectonic movements in Ceylon, Proceed. 24th Intern. Geol. Cong., Montreal, 3: 624-654.

Wetlands International (2006). *Waterbird Population Estimates*, 4th Edition. [www.wetlands.org](http://www.wetlands.org).

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## Annexures

**Annex 1A:** Provisional list of freshwater and brackish-water fish recorded from rivers, streams, irrigation tanks, lagoons, and other coastal wetlands in Kumana Proposed Ramsar Site. Origin: Ex – Exotic.

| Family          | Species                                      | Common Name           |
|-----------------|--|-----------------------|
| Anguillidae     | <i>Anguilla bicolor</i>                      | Short-finned Eel      |
| Cyprinidae      | <i>Amblypharyngodon melettinus</i>           | Green Carplet         |
|                 | <i>Devario malabaricus</i>                   | Giant Danio           |
|                 | <i>Puntius spp.</i>                          | Barb                  |
| Cobitidae       | <i>Lepidocephalichthys thermalis</i>         | Common spiny loach    |
| Bagridae        | <i>Mystus vittatus</i>                       | Striped Dwarf Catfish |
| Siluridae       | <i>Ompok bimaculatus</i>                     | Butter catfish        |
| Channidae       | <i>Channa punctata</i>                       | Spotted Snakehead     |
|                 | <i>Channa striata</i>                        | Murrel                |
| Chanidae        | <i>Chanos chanos</i>                         | Milk Fish             |
| Carangidae      | <i>Caranx sexfasciatus</i>                   | Big-eye Trevally      |
| Clupeidae       | <i>Nematalosa nasus</i>                      | Bloch's Gizzard Shad  |
| Mastacembelidae | <i>Mastacembelus armatus</i>                 | Marbled spiny Eel     |
| Mugilidae       | <i>Mugil cephalus</i>                        | Flat-head Mullet      |
|                 | <i>Liza melinoptera</i>                      | Otomebora Mullet      |
| Gobiidae        | <i>Glossogobius giurus</i>                   | Bar eyed Goby         |
|                 | <i>Awaous melanocephalus</i>                 | Scribbled Goby        |
| Cichlidae       | <i>Oreochromis mossambicus</i> <sup>Ex</sup> | Tilapia               |
|                 | <i>Etroplus maculatus</i>                    | Orange Chromide       |
|                 | <i>Etroplus suratensis</i>                   | Pearl Spot            |
| Terapontidae    | <i>Terapon jarbua</i>                        | Jarbua Terapon        |
| Gerreid         | <i>Gerres abbreviatus</i>                    | Deep-body silverbidy  |
| Belontiidae     | <i>Trichogaster pectoralis</i>               | Snakeskin Gourami     |
| Monodactylidae  | <i>Monodactylus argenteus</i>                | Mono                  |

**Annex 1B:** Amphibians recorded from the proposed Kumana Ramsar Site  
E – Endemic species

| Family                       | Species                                   | Common Name                    |
|------------------------------|---|--------------------------------|
| Bufonidae                    | <i>Bufo melanostictus</i>                 | Common House Toad              |
|                              | <b><i>Bufo atukoralei</i><sup>E</sup></b> | <b>Athukorale's Dwarf Toad</b> |
| Myrohylidae                  | <i>Microhyla ornata</i>                   | Ornate Narrow Mouth Frog       |
|                              | <i>Uperodon systema</i>                   | Balloon Frog                   |
|                              | <i>Ramanella variegata</i>                | White-bellied Pugsnout Frog    |
|                              | <i>Kaloula taprobanica</i>                | Common Bull Frog               |
| Ranidae                      | <i>Euphlyctis hexadactylus</i>            | Six toed - Green Frog          |
|                              | <i>Euphlyctis cyanophlyctis</i>           | Skipper Frog                   |
|                              | <i>Sphaerotheca breviceps</i>             | Banded Sand Frog               |
|                              | <i>Sphaerotheca rolandae</i>              | Marbled Sand Frog              |
|                              | <i>Hoplobatrachus crassus</i>             | Jerdon's Bull Frog             |
|                              | <i>Fejervarya limnocharis</i>             | Common Paddy Field Frog        |
|                              | <b><i>Rana gracilis</i><sup>E</sup></b>   | <b>Sri Lanka Wood Frog</b>     |
| <i>Polypedates maculatus</i> | Chunam Tree Frog                          |                                |

**Annex 1C: Reptiles recorded from the proposed Kumana Ramsar Site**

Origin: E – Endemic; Conservation status: VU – Vulnerable, EN – Endangered, CR – Critically Endangered.

| Family       | Species   | Common Name               |
|--------------|---|---------------------------|
| Chelonidae   | <i>Chelonia mydas</i> <sup>VU</sup>               | Green Turtle              |
|              | <i>Caretta caretta</i> <sup>VU</sup>              | Loggerhead Turtle         |
|              | <i>Lepidochelys olivaceae</i> <sup>VU</sup>       | Olive Ridley Turtle       |
| Bataguridae  | <i>Melanochelys trijuga</i>                       | Parker's Black Turtle     |
| Trionychidae | <i>Lissemys punctata</i> <sup>VU</sup>            | Flapshell Turtle          |
| Testudinidae | <i>Geochelone elegans</i> <sup>VU</sup>           | Indian Star Tortoise      |
| Crocodylidae | <i>Crocodylus palustris</i> <sup>VU</sup>         | Mugger Crocodile          |
|              | <i>Crocodylus porosus</i>                         | Saltwater Crocodile       |
| Gekkonidae   | <i>Gehyra mutilata</i>                            | Four-claw Gecko           |
|              | <i>Hemidactylus brookii</i>                       | Spotted House Gecko       |
|              | <b><i>Hemidactylus depressus</i><sup>E</sup></b>  | <b>Kandyan Gecko</b>      |
|              | <i>Hemidactylus frenatus</i>                      | Common House Gecko        |
|              | <i>Hemidactylus leschenaultia</i>                 | Bark Gecko                |
| Agamidae     | <i>Hemidactylus triedrus</i>                      | Termite hill Gecko        |
|              | <i>Calotes calotes</i>                            | Green Garden Lizard       |
|              | <b><i>Calotes ceylonensis</i><sup>E, VU</sup></b> | <b>Painted lip Lizard</b> |
|              | <i>Calotes versicolor</i>                         | Common Garden Lizard      |
| Scincidae    | <i>Sitana ponticeriana</i>                        | Fanthroat Lizard          |
|              | <i>Lankascincus fallax</i>                        | Common Lankaskink         |
|              | <i>Mabuya carinata</i>                            | Common Skink              |
|              | <i>Mabuya macularia</i>                           | Bronzegreen Little Skink  |
|              | <i>Mabuya bibroni</i> <sup>EN</sup>               | Bibron's Sand Skink       |
| Varanidae    | <i>Lygosoma punctatus</i>                         | Dotted skink              |
|              | <i>Varanus bengalensis</i>                        | Land Monitor              |
|              | <i>Varanus salvator</i>                           | Water Monitor             |
| Typhlopidae  | <i>Ramphotyphlops braminus</i>                    | Common Blind Snake        |
| Colubridae   | <i>Ahaetulla nasuta</i>                           | Green Vine Snake          |
|              | <i>Ahaetulla pulverulenta</i>                     | Brown Vine Snake          |
|              | <i>Amphiesma stolatum</i>                         | Buff-striped Keelback     |
|              | <i>Atrretium schistosum</i>                       | The Olive keelback        |
|              | <i>Boiga forsteni</i>                             | Forsten's Cat Snake       |
|              | <i>Boiga trigonata</i>                            | Gamma Cat Snake           |
|              | <i>Cerberus rhynchops</i> <sup>VU</sup>           | Dog-faced Water Snake     |
|              | <i>Coelognathus Helena</i>                        | Trinket Snake             |
|              | <i>Dendrelaphis tristis</i>                       | Common Bronze-back        |
|              | <i>Liopeltis calamaria</i>                        | Reed Snake                |
|              | <i>Lycodon aulicus</i>                            | Common Wolf Snake         |
|              | <i>Oligodon arnensis</i>                          | Common Kukri Snake        |
|              | <i>Oligodon taeniolatus</i>                       | Variiegated Kukri Snake   |
|              | <i>Ptyas mucosa</i>                               | Rat Snake                 |
|              | <i>Xenochrophis piscator</i>                      | Checkered Keelback        |
| Boidae       | <i>Python molurus</i>                             | Python                    |
|              | <i>Eryx conicus</i> <sup>VU</sup>                 | Sand Boa                  |
| Elapidae     | <i>Bungarus ceruleus</i>                          | Common Krait              |
|              | <i>Calliophis melanurus</i>                       | Sri Lanka Coral Snake     |
|              | <i>Naja naja</i>                                  | Cobra                     |
| Viperidae    | <i>Daboia russelii</i>                            | Rusell's Viper            |
|              | <i>Echis carinatus</i> <sup>VU</sup>              | Saw-scaled Viper          |

**Annex 1D: Birds recorded from the site**

Sources: (See Section 34: Bibliographical references for further details.)

Ceylon Bird Club. (2002 to 2009)  
 de Silva, C. (2005)  
 Kaluthota, C.D. et al. (2006)  
 Kumaranayagam, K. (2010)  
 Kumaranayagam, K. et al. (2010)  
 Somaweera, R. et al. (2004).

Note: The observations used for this list have been limited to the last 15 years to date. See also Note under Section 14, Criterion 6.

The total number of species listed below is 202. Perera – see Section 34: Bibliographical references: Perera, 1966 to 1986 – has recorded 265 species within the proposed site.

National Conservation Status:

CR - Critically Endangered, EN - Endangered, VU - Vulnerable (Source: IUCN and MOENR, 2007).

Origin (in respect of Sri Lanka):

End - Endemic, Res - Resident, Mig - Migrant.

Relative abundance (site specific, as known from observations):

Cm - Common, Fc - Fairly Common, Uc - Uncommon, Ra - Rare.

| Family            | Species                                  | Common Name               |
|-------------------|--|---------------------------|
| Podicipedidae     | <i>Tachybaptus ruficollis</i> Res, Fc    | Little Grebe              |
| Pelecanidae       | <i>Pelecanus philippensis</i> Res, Cm    | Spot-billed Pelican       |
| Phalacrocoracidae | <i>Phalacrocorax niger</i> Res, Cm       | Little Cormorant          |
|                   | <i>Phalacrocorax fuscicollis</i> Res, Cm | Indian Shag               |
|                   | <i>Phalacrocorax carbo</i> Res, Uc       | Great Cormorant           |
| Anhingidae        | <i>Anhinga melanogaster</i> Res, Fc      | Oriental Darter           |
| Ardeidae          | <i>Egretta garzetta</i> Res, Cm          | Little Egret              |
|                   | <i>Egretta gularis</i> Mig, Ra           | Western Reef-heron        |
|                   | <i>Egretta alba</i> Res, Fc              | Great Egret               |
|                   | <i>Egretta intermedia</i> Res, Cm        | Intermediate Egret        |
|                   | <i>Ardea cinerea</i> Res, Fc             | Grey Heron                |
|                   | <i>Ardea purpurea</i> Res, Fc            | Purple Heron              |
|                   | <i>Bubulcus coromandus</i> Res, Cm       | Eastern Cattle Egret      |
|                   | <i>Ardeola grayii</i> Res, Cm            | Indian Pond-heron         |
|                   | <i>Butorides striatus</i> Res, Uc        | Striated Heron            |
|                   | <i>Nycticorax nycticorax</i> Res, Fc     | Black-crowned Night-heron |
|                   | <i>Gorsachius melanolophus</i> Mig, Ra   | Malayan Night-heron       |
|                   | <i>Ixobrychus sinensis</i> Res, Fc       | Yellow Bittern            |
|                   | <i>Ixobrychus cinnamomeus</i> Res, Ra    | Chestnut Bittern          |
|                   | <i>Dupetor flavicollis</i> Res, Uc       | Black Bittern             |
| Ciconiidae        | <i>Mycteria leucocephala</i> Res, Cm     | Painted Stork             |



|                   |   |             |                         |
|-------------------|---|-------------|-------------------------|
|                   | <i>Anastomus oscitans</i>                   | Res, Cm     | Asian Openbill          |
|                   | <i>Ciconia episcopus</i>                    | Res, Uc     | Woolly-necked Stork     |
|                   | <i>Ephippiorhynchus asiaticus</i>           | CR, Res, Ra | Black-necked Stork      |
|                   | <i>Leptoptilos javanicus</i>                | VU, Res, Uc | Lesser Adjutant         |
| Threskiornithidae | <i>Threskiornis melanocephalus</i>          | Res, Cm     | Black-headed Ibis       |
|                   | <i>Platalea leucorodia</i>                  | Res, Fc     | Eurasian Spoonbill      |
| Anatidae          | <i>Dendrocygna javanica</i>                 | Res, Cm     | Lesser Whistling-duck   |
|                   | <i>Nettapus coromandelianus</i>             | Res, Uc     | Cotton Teal             |
|                   | <i>Anas acuta</i>                           | Mig, Cm     | Northern Pintail        |
|                   | <i>Anas querquedula</i>                     | Mig, Cm     | Garganey                |
| Accipitridae      | <i>Pernis ptilorhynchus</i>                 | Res/Mig, Uc | Oriental Honey-buzzard  |
|                   | <i>Elanus caeruleus</i>                     | Res, Uc     | Black-winged Kite       |
|                   | <i>Haliaster indus</i>                      | Res, Fc     | Brahminy Kite           |
|                   | <i>Haliaeetus leucogaster</i>               | Res, Uc     | White-bellied Sea-eagle |
|                   | <i>Ichthyophaga ichthyaetus</i>             | Res, Uc     | Grey-headed Fish-eagle  |
|                   | <i>Spilornis cheela</i>                     | Res, Fc     | Crested Serpent-eagle   |
|                   | <i>Circus aeruginosus</i>                   | Mig, Ra     | Western Marsh Harrier   |
|                   | <i>Accipiter trivirgatus</i>                | VU, Res, Uc | Crested Goshawk         |
|                   | <i>Accipiter badius</i>                     | Res, Fc     | Shikra                  |
|                   | <i>Hieraaetus pennatus</i>                  | Mig, Ra     | Booted Eagle            |
|                   | <i>Spizaetus cirrhatus</i>                  | Res, Fc     | Crested Hawk-eagle      |
|                   | <i>Falco tinnunculus</i>                    | Res/Mig, Uc | Common Kestrel          |
| Phasianidae       | <i>Coturnix chinensis</i>                   | Res, Uc     | Blue-breasted Quail     |
|                   | <i>Galloperdix bicalcarata</i>              | End, Uc     | Ceylon Spurfowl         |
|                   | <i>Gallus lafayetii</i>                     | End, Cm     | Ceylon Junglefowl       |
|                   | <i>Pavo cristatus</i>                       | Res, Fc     | Indian Peafowl          |
| Turnicidae        | <i>Turnix suscitator</i>                    | Res, Fc     | Barred Buttonquail      |
| Rallidae          | <i>Amauromis phoenicurus</i>                | Res, Cm     | White-breasted Waterhen |
|                   | <i>Porzana fusca</i>                        | EN, Res, Uc | Ruddy-breasted Crake    |
|                   | <i>Porphyrio [ porphyrio] poliocephalus</i> | Res, Cm     | Purple Swamphen         |
|                   | <i>Gallinula chloropus</i>                  | Res, Fc     | Common Moorhen          |
|                   | <i>Fulica atra</i>                          | Res/Mig, Ra | Eurasian Coot           |
| Jacaniidae        | <i>Hydrophasianus chirurgus</i>             | Res, Cm     | Pheasant-tailed Jacana  |
| Charadriidae      | <i>Pluvialis fulva</i>                      | Mig, Fc     | Pacific Golden Plover   |
|                   | <i>Pluvialis squatarola</i>                 | Mig, Fc     | Grey Plover             |
|                   | <i>Charadrius hiaticula</i>                 | Mig, Ra     | Common Ringed Plover    |
|                   | <i>Charadrius dubius</i>                    | Res/Mig, Uc | Little Ringed Plover    |
|                   | <i>Charadrius alexandrinus</i>              | Res/Mig, Cm | Kentish Plover          |

|                  |   |                               |
|------------------|---|-------------------------------|
|                  | <i>Charadrius mongolus</i> Mig, Cm      | Lesser Sand Plover            |
|                  | <i>Charadrius leschenaultii</i> Mig, Ra | Greater Sand Plover           |
|                  | <i>Vanellus malabaricus</i> Res, Uc     | Yellow-wattled Lapwing        |
|                  | <i>Vanellus indicus</i> Res, Cm         | Red-wattled Lapwing           |
| Scolopacidae     | <i>Gallinago stenura</i> Mig, Uc        | Pintail Snipe                 |
|                  | <i>Limosa limosa</i> Mig, Cm            | 'Western' Black-tailed Godwit |
|                  | <i>Numenius phaeopus</i> Mig, Uc        | Whimbrel                      |
|                  | <i>Numenius arquata</i> Mig, Uc         | Eurasian Curlew               |
|                  | <i>Tringa totanus</i> Mig, Cm           | Common Redshank               |
|                  | <i>Tringa nebularia</i> Mig, Fc         | Common Greenshank             |
|                  | <i>Tringa stagnatilis</i> Mig, Cm       | Marsh Sandpiper               |
|                  | <i>Tringa ochropus</i> Mig, Ra          | Green Sandpiper               |
|                  | <i>Tringa glareola</i> Mig, Fc          | Wood Sandpiper                |
|                  | <i>Actitis hypoleucos</i> Mig, Fc       | Common Sandpiper              |
|                  | <i>Arenaria interpres</i> Mig, Fc       | Ruddy Turnstone               |
|                  | <i>Calidris alba</i> Mig, Fc            | Sanderling                    |
|                  | <i>Calidris minuta</i> Mig, Cm          | Little Stint                  |
|                  | <i>Calidris ferruginea</i> Mig, Cm      | Curlew Sandpiper              |
| Recurvirostridae | <i>Himantopus</i>                       |                               |
|                  | <i>himantopus</i> Res/Mig, Cm           | Black-winged Stilt            |
| Burhinidae       | <i>Burhinus indicus</i> Res, Uc         | Indian Stone-curlew           |
|                  | <i>Esacus recurvirostris</i> Res, Uc    | Great Thick-knee              |
| Glareolidae      | <i>Glareola maldivarum</i> EN, Res, Ra  | Oriental Pratincole           |
|                  | <i>Glareola lactea</i> VU, Res, Uc      | Small Pratincole              |
| Sternidae        | <i>Gelochelidon nilotica</i> Mig, Fc    | Gull-billed Tern              |
|                  | <i>Hydroprogne caspia</i> Mig, Fc       | Caspian Tern                  |
|                  | <i>Thalasseus bengalensis</i> Mig, Fc   | Lesser Crested Tern           |
|                  | <i>Thalasseus bergii</i> Res, Fc        | Great Crested Tern            |
|                  | <i>Sterna hirundo</i> Res/Mig, Uc       | Common Tern                   |
|                  | <i>Sterna albifrons</i> Res, Cm         | Little Tern                   |
|                  | <i>Chlidonias hybrida</i> Mig, Cm       | Whiskered Tern                |
|                  | <i>Chlidonias leucopterus</i> Mig, Fc   | White-winged Tern             |
| Columbidae       | <i>Streptopelia chinensis</i> Res, Cm   | Spotted Dove                  |
|                  | <i>Chalcophaps indica</i> Res, Fc       | Emerald Dove                  |
|                  | <i>Treron bicincta</i> Res, Fc          | Orange-breasted Green-pigeon  |
|                  | <i>Treron pompadora</i> End, Fc         | Ceylon Green-pigeon           |
|                  | <i>Ducula aenea</i> Res, Fc             | Green Imperial-pigeon         |
| Psittacidae      | <i>Psittacula eupatria</i> Res, Fc      | Alexandrine Parakeet          |
|                  | <i>Psittacula krameri</i> Res, Cm       | Rose-ringed Parakeet          |
| Cuculidae        | <i>Centropus [sinensis]</i>             |                               |
|                  | <i>parroti</i> Res, Fc                  | 'Southern' Coucal             |
|                  | <i>Taccocua leschenaultii</i> Res, Uc   | Sirkeer Malkoha               |
|                  | <i>Phaenicophaeus</i>                   |                               |
|                  | <i>viridirostris</i> Res, Uc            | Blue-faced Malkoha            |
|                  | <i>Clamator coromandus</i> Mig, Ra      | Chestnut-winged Cuckoo        |

|               |   |                                |
|---------------|---|--------------------------------|
|               | <i>Clamator jacobinus</i> <sup>Res, Fc</sup>                    | Jacobin Cuckoo                 |
|               | <i>Eudynamys scolopaceus</i> <sup>Res, Cm</sup>                 | Asian Koel                     |
|               | <i>Cacomantis sonneratii</i> <sup>Res, Uc</sup>                 | Banded Bay Cuckoo              |
|               | <i>Cacomantis passerinus</i> <sup>Mig, Fc</sup>                 | Grey-bellied Cuckoo            |
|               | <i>Surniculus [lugubris] dicruroides</i> <sup>VU, Res, Uc</sup> | 'Fork-tailed' Drongo-cuckoo    |
|               | <i>Cuculus micropterus</i> <sup>Res/Mig, Uc</sup>               | Indian Cuckoo                  |
| Strigidae     | <i>Otus sunia</i> <sup>Res, Fc</sup>                            | Oriental Scops-owl             |
|               | <i>Bubo nipalensis</i> <sup>Res, Uc</sup>                       | Forest Eagle-owl               |
|               | <i>Ketupa zeylonensis</i> <sup>Res, Uc</sup>                    | Brown Fish-owl                 |
|               | <i>Glaucidium radiatum</i> <sup>Res, Fc</sup>                   | Jungle Owlet                   |
|               | <i>Ninox scutulata</i> <sup>Res, Uc</sup>                       | Brown Hawk-owl                 |
| Caprimulgidae | <i>Caprimulgus indicus</i> <sup>Res, Cm</sup>                   | Indian Jungle Nightjar         |
|               | <i>Caprimulgus atripennis</i> <sup>Res, Fc</sup>                | Jerdon's Nightjar              |
| Apodidae      | <i>Cypsiurus balasiensis</i> <sup>Res, Fc</sup>                 | Asian Palm-swift               |
|               | <i>Tachymartia melba</i> <sup>EN, Res, Ra</sup>                 | Alpine Swift                   |
|               | <i>Apus affinis</i> <sup>Res, Cm</sup>                          | Little Swift                   |
| Hemprocnidae  | <i>Hemiprocne coronata</i> <sup>Res, Fc</sup>                   | Crested Treeswift              |
| Alcedinidae   | <i>Alcedo atthis</i> <sup>Res, Fc</sup>                         | Common Kingfisher              |
|               | <i>Pelargopsis capensis</i> <sup>Res, Fc</sup>                  | Stork-billed Kingfisher        |
|               | <i>Halcyon smyrnensis</i> <sup>Res, Cm</sup>                    | White-throated Kingfisher      |
|               | <i>Halcyon pileata</i> <sup>Mig, Ra</sup>                       | Black-capped Kingfisher        |
|               | <i>Ceryle rudis</i> <sup>Res, Uc</sup>                          | Lesser Pied Kingfisher         |
| Meropidae     | <i>Merops orientalis</i> <sup>Res, Cm</sup>                     | Little Green Bee-eater         |
|               | <i>Merops philippinus</i> <sup>Res/Mig, Cm</sup>                | Blue-tailed Bee-eater          |
|               | <i>Merops leschenaulti</i> <sup>Res, Uc</sup>                   | Chestnut-headed Bee-eater      |
| Coraciidae    | <i>Coracias benghalensis</i> <sup>Res, Fc</sup>                 | Indian Roller                  |
| Upupidae      | <i>Upupa epops</i> <sup>Res, Uc</sup>                           | Common Hoopoe                  |
| Bucerotidae   | <i>Ocyceros gingalensis</i> <sup>End, Fc</sup>                  | Ceylon Grey Hornbill           |
|               | <i>Anthracoceros coronatus</i> <sup>Res, Fc</sup>               | Malabar Pied Hornbill          |
| Capitonidae   | <i>Megalaima zeylanica</i> <sup>Res, Fc</sup>                   | Brown-headed Barbet            |
|               | <i>Megalaima haemacephala</i> <sup>Res, Fc</sup>                | Coppersmith Barbet             |
| Picidae       | <i>Dendrocopos nanus</i> <sup>Res, Uc</sup>                     | Indian Pygmy Woodpecker        |
|               | <i>Dendrocopos mahrattensis</i> <sup>VU, Res, Uc</sup>          | Yellow-fronted Pied Woodpecker |
|               | <i>Dinopium benghalense</i> <sup>Res, Fc</sup>                  | Black-rumped Flameback         |
|               | <i>Chrysocolaptes stricklandi</i> <sup>End, Uc</sup>            | Crimson-backed Flameback       |
|               | <i>Chrysocolaptes festivus</i> <sup>Res, Uc</sup>               | White-naped Flameback          |
| Pittidae      | <i>Pitta brachyura</i> <sup>Mig, Fc</sup>                       | Indian Pitta                   |
| Alaudidae     | <i>Mirafra affinis</i> <sup>Res, Cm</sup>                       | Jerdon's Bushlark              |
|               | <i>Eremopterix griseus</i> <sup>Res, Fc</sup>                   | Ashy-crowned Finch-Lark        |
|               | <i>Alauda gulgula</i> <sup>Res, Fc</sup>                        | Oriental Skylark               |

|                                  |                                 |                               |                           |
|----------------------------------|---------------------------------|-------------------------------|---------------------------|
| Hirundinidae                     | <i>Hirundo rustica</i>          | Mig, Cm                       | Barn Swallow              |
|                                  | <i>Hirundo daurica</i>          | Mig, Ra                       | Red-rumped Swallow        |
|                                  | <i>Hirundo hyperythra</i>       | End, Fc                       | Ceylon Swallow            |
| Motacillidae                     | <i>Dendronanthus indicus</i>    | Mig, Fc                       | Forest Wagtail            |
|                                  | <i>Motacilla cinerea</i>        | Mig, Ra                       | Grey Wagtail              |
|                                  | <i>Anthus rufulus</i>           | Res, Cm                       | Paddyfield Pipit          |
| Campephagidae                    | <i>Pericrocotus flammeus</i>    | Res, Fc                       | Orange Minivet            |
|                                  | <i>Pericrocotus</i>             |                               |                           |
|                                  | <i>cinnamomeus</i>              | Res, Fc                       | Small Minivet             |
| Monarchidae                      | <i>Tephrodornis affinis</i>     | End, Fc                       | Ceylon Woodshrike         |
|                                  | <i>Terpsiphone paradisi</i>     | Res/Mig, Fc                   | Asian Paradise Flycatcher |
|                                  | <i>Hypothymis azurea</i>        | Res, Uc                       | Black-naped Blue Monarch  |
| Rhipiduridae                     | <i>Rhipidura aureola</i>        | Res, Fc                       | White-browed Fantail      |
| Pycnonotidae                     | <i>Pycnonotus</i>               |                               |                           |
|                                  | <i>melanicterus</i>             | End, Uc                       | Black-capped Bulbul       |
|                                  | <i>Pycnonotus cafer</i>         | Res, Cm                       | Red-vented Bulbul         |
|                                  | <i>Pycnonotus luteolus</i>      | Res, Cm                       | White-browed Bulbul       |
| Aegithinidae                     | <i>Aegithina tiphia</i>         | Res, Cm                       | Common Iora               |
|                                  | <i>Aegithina nigrolutea</i>     | Res, Uc                       | Marshall's Iora           |
| Chloropseidae                    | <i>Chloropsis jerdoni</i>       | Res, Fc                       | Jerdon's Leafbird         |
| Laniidae                         | <i>Lanius cristatus</i>         | Mig, Fc                       | Brown Shrike              |
| Muscicapidae                     | <i>Muscicapa dauurica</i>       | Mig, Uc                       | Asian Brown Flycatcher    |
|                                  | <i>Cyornis tickelliae</i>       | Res, Fc                       | Tickell's Blue Flycatcher |
|                                  | <i>Copsychus saularis</i>       | Res, Fc                       | Oriental Magpie-robin     |
|                                  | <i>Copsychus malabaricus</i>    | Res, Fc                       | White-rumped Shama        |
|                                  | <i>Saxicoloides fulicatus</i>   | Res, Fc                       | Indian Black Robin        |
|                                  | <i>Pellorneum fuscicapillus</i> | End, Fc                       | Brown-capped Babbler      |
| Timaliidae                       | <i>Dumetia hyperythra</i>       | Res, Uc                       | Tawny-bellied Babbler     |
|                                  | <i>Rhopocichla atriceps</i>     | Res, Uc                       | Dark-fronted Babbler      |
|                                  | <i>Turdoides affinis</i>        | Res, Cm                       | Yellow-billed Babbler     |
|                                  | <i>Cisticola juncidis</i>       | Res, Fc                       | Zitting Cisticola         |
| Cisticolidae                     | <i>Prinia hodgsonii</i>         | Res, Fc                       | Grey-breasted Prinia      |
|                                  | <i>Prinia socialis</i>          | Res, Cm                       | Ashy Prinia               |
|                                  | <i>Prinia sylvatica</i>         | Res, Fc                       | Jungle Prinia             |
|                                  | <i>Prinia inornata</i>          | Res, Cm                       | Plain Prinia              |
|                                  | <i>Orthotomus sutorius</i>      | Res, Fc                       | Common Tailorbird         |
|                                  | Sylviidae                       | <i>Acrocephalus dumetorum</i> | Mig, Fc                   |
| <i>Acrocephalus [stentoreus]</i> |                                 |                               |                           |
| <i>brunnescens</i>               |                                 | Res, Uc                       | Indian Reed-warbler       |
| <i>Phylloscopus nitidus</i>      |                                 | Mig, Fc                       | Bright-green Warbler      |
| <i>Phylloscopus</i>              |                                 |                               |                           |
| <i>magnirostris</i>              | Mig, Fc                         | Large-billed Leaf-warbler     |                           |
| Sittidae                         | <i>Sitta frontalis</i>          | Res, Uc                       | Velvet-fronted Nuthatch   |
| Dicaeidae                        | <i>Dicaeum</i>                  |                               |                           |
|                                  | <i>erythrorhynchos</i>          | Res, Cm                       | Pale-billed Flowerpecker  |

|               |   |         |                              |
|---------------|---|---------|------------------------------|
| Nectariniidae | <i>Leptocoma zeylonica</i>                        | Res, Cm | Purple-rumped Sunbird        |
|               | <i>Cynnyris asiaticus</i>                         | Res, Cm | Purple Sunbird               |
|               | <i>Cynnyris lotenius</i>                          | Res, Fc | Loten's Sunbird              |
| Zosteropidae  | <i>Zosterops palpebrosus</i>                      | Res, Fc | Oriental White-eye           |
| Estrildidae   | <i>Euodice malabarica</i>                         | Res, Ra | Indian Silverbill            |
|               | <i>Lonchura striata</i>                           | Res, Fc | White-rumped Munia           |
|               | <i>Lonchura punctulata</i>                        | Res, Cm | Scaly-breasted Munia         |
|               | <i>Lonchura malacca</i>                           | Res, Uc | Tricoloured Munia            |
| Passeridae    | <i>Passer domesticus</i>                          |         |                              |
|               | <i>indicus</i>                                    | Res, Fc | House Sparrow                |
| Ploceidae     | <i>Ploceus manyar</i>                             | Res, Fc | Streaked Weaver              |
|               | <i>Ploceus philippinus</i>                        | Res, Fc | Baya Weaver                  |
| Sturnidae     | <i>Sturnus roseus</i>                             | Mig, Fc | Rosy Starling                |
|               | <i>Acridotheres tristis</i>                       | Res, Cm | Common Myna                  |
|               | <i>Gracula indica</i>                             | Res, Ra | Lesser Hill-myna             |
| Oriolidae     | <i>Oriolus xanthornus</i>                         | Res, Fc | Black-hooded Oriole          |
| Dicuridae     | <i>Dicurus leucophaeus</i>                        | Mig, Ra | Ashy Drongo                  |
|               | <i>Dicurus caerulescens</i>                       | Res, Fc | White-bellied Drongo         |
|               | <i>Dicurus paradiseus</i>                         | Res, Uc | Greater Racket-tailed Drongo |
| Artamidae     | <i>Artamus fuscus</i>                             | Res, Uc | Ashy Woodswallow             |
| Corvidae      | <i>Corvus splendens</i>                           | Res, Cm | House Crow                   |
|               | <i>Corvus [macrorhyncos]</i><br><i>culminatus</i> | Res, Fc | Indian Jungle Crow           |

### Annex 1Da: Nesting waterbirds in the proposed site

#### *In the Kumana Villu:*

- Little Grebe (*Tachybaptus ruficollis*)
- Spot-billed Pelican (*Pelecanus philippensis*)
- Little Cormorant (*Phalacrocorax niger*)
- Indian Shag (*Phalacrocorax fuscicollis*)
- Oriental Darter (*Anhinga melanogaster*)
- Little Egret (*Egretta garzetta*)
- Great Egret (*Egretta alba*)
- Intermediate Egret (*Egretta intermedia*)
- Grey Heron (*Ardea cinerea*)
- Purple Heron (*Ardea purpurea*)
- Indian Pond-heron (*Ardeola grayii*)
- Black-crowned Night-heron (*Nycticorax nycticorax*)
- Painted Stork (*Mycteria leucocephala*)
- Asian Openbill (*Anastomus oscitans*)
- Black-headed Ibis (*Threskiornis melanocephalus*)
- Eurasian Spoonbill (*Platalea leucorodia*)
- Lesser Whistling-duck (*Dendrocygna javanica*)
- White-breasted Waterhen (*Amaurornis phoenicurus*)
- Purple Swampphen (*Porphyrio [porphyrio] poliocephalus*)
- Common Moorhen (*Gallinula chloropus*)
- Pheasant-tailed Jacana (*Hydrophasianus chirurgus*)
- Black-winged Stilt (*Himantopus himantopus*).

On the plains surrounding the coastal lagoons within the proposed site:

Little Ringed Plover (*Charadrius dubius*)  
 Kentish Plover (*Charadrius alexandrinus*)  
 Yellow-wattled Lapwing (*Vanellus malabaricus*)  
 Red-wattled Lapwing (*Vanellus indicus*)  
 Black-winged Stilt (*Himantopus himantopus*)  
 Indian Stone-curlew (*Burhinus indicus*)  
 Great Thick-knee (*Esacus recurvirostris*)  
 Oriental Pratincole (*Glareola maldivarum*)  
 Small Pratincole (*Glareola lactea*)  
 Little Tern (*Sterna albifrons*).

### Annex 1E: Mammals recorded from the proposed Kumana Ramsar Site

Origin: E – Endemic

Conservation status: VU – Vulnerable, EN – Endangered, CR – Critically Endangered.

| Family          | Species                                       | Common Name                    |
|-----------------|---|--------------------------------|
| Manidae         | <i>Manis crassicaudata</i>                    | Pangolin                       |
| Cercopithecidae | <i>Macaca sinica</i> <sup>E</sup>             | Sri Lanka toque monkey         |
|                 | <i>Semnopithecus priam</i>                    | Grey langur                    |
| Lorisidae       | <i>Loris lydekkerianus nordicus</i>           | Grey slender loris             |
| Canidae         | <i>Canis aureus</i>                           | Jackal                         |
| Felidae         | <i>Felis chaus</i> <sup>VU</sup>              | Jungle cat                     |
|                 | <i>Panthera pardus</i> <sup>VU</sup>          | Leopard                        |
|                 | <i>Prionailurus rubiginosus</i> <sup>VU</sup> | Rusty-spotted cat              |
|                 | <i>Prionailurus viverrinus</i> <sup>VU</sup>  | Fishing cat                    |
| Herpestidae     | <i>Herpestes edwardsii</i>                    | Grey mongoose                  |
|                 | <i>Herpestes smithii</i>                      | Black-tipped or Ruddy mongoose |
|                 | <i>Herpestes vitticollis</i>                  | Stripe-necked mongoose         |
| Mustelidae      | <i>Lutra lutra</i> <sup>VU</sup>              | Otter                          |
| Ursidae         | <i>Melursus ursinus</i> <sup>EN</sup>         | Sloth bear                     |
| Viverridae      | <i>Paradoxurus hermaphoditus</i>              | Palm cat                       |
|                 | <i>Viverricula indica</i>                     | Ring-tailed civet              |
| Elephantidae    | <i>Elephas maximus</i> <sup>VU</sup>          | Elephant                       |
| Bovidae         | <i>Bubalus arnee</i> <sup>VU</sup>            | Wild buffalo                   |
| Cervidae        | <i>Axis axis</i>                              | Spotted deer                   |
|                 | <i>Cervus unicolor</i>                        | Sambar                         |
|                 | <i>Muntiacus muntjak</i>                      | Barking deer                   |
| Suidae          | <i>Sus scrofa</i>                             | Wild boar                      |
| Tragulidae      | <i>Moschiola meminna</i> <sup>E</sup>         | Sri Lanka mouse-deer           |
| Hystriidae      | <i>Hystrix indica</i>                         | Porcupine                      |
| Muridae         | <i>Mus musculus</i>                           | Indian house mouse             |
|                 | <i>Rattus rattus</i>                          | Common rat                     |
|                 | <i>Tatera indica</i>                          | Antelope rat                   |
| Sciuridae       | <i>Funambulus palmarum</i>                    | Palm squirrel                  |
|                 | <i>Ratufa macroura</i> <sup>VU</sup>          | Giant squirrel                 |
| Leporidae       | <i>Lepus nigricollis</i>                      | Black-naped hare               |

**Annex 1F: Butterflies recorded from the proposed Kumana Ramsar Site**

Origin: E – Endemic

| <b>Family</b>              | <b>Species</b>                      | <b>Common Name</b>       |
|----------------------------|-------------------------------------|--------------------------|
| Papilionidae               | <i>Troides darsius</i> <sup>E</sup> | Ceylon Birdwing          |
|                            | <i>Pachliopta hector</i>            | Crimson Rose             |
|                            | <i>Pachliopta aristolochiae</i>     | Common Rose              |
|                            | <i>Papilio crino</i>                | Banded Peacock           |
|                            | <i>Papilio demoleus</i>             | Lime Butterfly           |
|                            | <i>Papilio polytes</i>              | Common Mormon            |
|                            | <i>Papilio polymnestor</i>          | Blue Mormon              |
|                            | <i>Graphium agamemnon</i>           | Tailed Jay               |
|                            | <i>Graphium doson</i>               | Common Jay               |
|                            | Pieridae                            | <i>Leptosia nina</i>     |
| <i>Delias eucharis</i>     |                                     | Jezebel                  |
| <i>Catopsilia pyranthe</i> |                                     | Mottled Emigrant         |
| <i>Catopsilia pomona</i>   |                                     | Lemon Emigrant           |
| <i>Belenois aurota</i>     |                                     | Pioneer                  |
| <i>Cepora nerissa</i>      |                                     | Common Gull              |
| <i>Appias paulina</i>      |                                     | Lesser Albatross         |
| <i>Appias libythea</i>     |                                     | Striped Albatross        |
| <i>Ixias Marianne</i>      |                                     | White Orange Tip         |
| <i>Ixias pyrene</i>        |                                     | Yellow Orange Tip        |
| <i>Pareronia ceylanica</i> |                                     | Dark Wanderer            |
| <i>Colotis amata</i>       |                                     | Small Salmon Arab        |
| <i>Colotis danae</i>       |                                     | Crimson Tip              |
| <i>Eurema hecabe</i>       |                                     | Common Grass Yellow      |
| <i>Eurema brigitta</i>     |                                     | Small Grass Yellow       |
| Nymphalidae                |                                     | <i>Tirumala limniace</i> |
|                            | <i>Tirumala septentrionis</i>       | Dark Blue Tiger          |
|                            | <i>Parantica aglea</i>              | Glassy Tiger             |
|                            | <i>Danaus chrysippus</i>            | Plain Tiger              |
|                            | <i>Danaus genutia</i>               | Common Tiger             |
|                            | <i>Euploea core</i>                 | Common Crow              |
|                            | <i>Euploea sylvester</i>            | Double- banded Crow      |
|                            | <i>Ariadne ariadne</i>              | Angled Castor            |
|                            | <i>Phalanta phalantha</i>           | Leopard                  |
|                            | <i>Junonia almanac</i>              | Peacock Pansy            |
|                            | <i>Junonia atlites</i>              | Grey Pansy               |
|                            | <i>Junonia iphita</i>               | Chocolate Soldier        |
|                            | <i>Junonia lemonias</i>             | Lemon Pansy              |
|                            | <i>Hypolimnas bolina</i>            | Great Eggfly             |
|                            | <i>Hypolimnas misippus</i>          | Danaid Eggfly            |
|                            | <i>Neptis hylas</i>                 | Common Sailor            |
|                            | <i>Neptis jumbah</i>                | Chestnut-streaked Sailor |
|                            | <i>Dophla evelina</i>               | Red spot Duke            |
|                            | <i>Acraea violae</i>                | Tawny Coster             |
|                            | <i>Melanitis leda</i>               | Common Evening Brown     |
| <i>Mycalesis perseus</i>   | Common Bushbrown                    |                          |
| <i>Orsotriaena medus</i>   | Nigger                              |                          |
| <i>Nissanga patnia</i>     | Gladeye Bushbrown                   |                          |
| <i>Ypthima ceylonica</i>   | White Four-ring                     |                          |

|                             |                              |                         |
|-----------------------------|------------------------------|-------------------------|
| Lycaenidae                  | <i>Elymnias hypermnestra</i> | Common Palmfly          |
|                             | <i>Spalgis epeus</i>         | Apefly                  |
|                             | <i>Curetis thetis</i>        | Indian Sunbeam          |
|                             | <i>Arhopala amantes</i>      | Large Oakblue           |
|                             | <i>Zesius chrysomallus</i>   | Redspot                 |
|                             | <i>Spindasis vulcanus</i>    | Common Silverline       |
|                             | <i>Spindasis ictis</i>       | Ceylon Silverline       |
|                             | <i>Jamides celeno</i>        | Common Cerulean         |
|                             | <i>Lampides boeticus</i>     | Pea Blue                |
|                             | <i>Catochrysops strabo</i>   | Forget-me-not           |
|                             | <i>Castalius rosimon</i>     | Common Pierrot          |
|                             | <i>Freyeria trochilus</i>    | Grass Jewel             |
|                             | <i>Zizeeria karsandra</i>    | Dark Grass Blue         |
|                             | <i>Zizula hylax</i>          | Tiny Grass Blue         |
|                             | <i>Zizina otis</i>           | Lesser Grass Blue       |
|                             | <i>Talicauda nyseus</i>      | Red pierrot             |
|                             | Hesperiidae                  | <i>Hasora taminatus</i> |
| <i>Ampittia dioscorides</i> |                              | Bush Hopper             |
| <i>Tractrocera maevius</i>  |                              | Common Grass Dart       |
| <i>Spalia galba</i>         |                              | Indian Skipper          |