

# Sundarvan - An urban green space and its role in supporting wildlife diversity

## Introduction

Urban growth is occurring at an extraordinary scale. In 2008, for the first time, more than 50% of the global human population lived in urban environments. Much of this urbanization is occurring in developing countries, which are predicted to harbour 80% of the urban population of the world by 2030 (UNFPA 2007). Although urban areas remain a relatively small fraction of the terrestrial surface (about 4% globally), the urban ecological footprint extends beyond city boundaries and drives environmental change at local to global scales (Grimm et al. 2008).

Rapid urban expansion is impacting heavily on ecological processes (Goddard et al. 2009). People living in species-poor cities are increasingly disconnected from the natural world (Miller 2005). Here, we highlight the valuable role of urban green spaces in mitigating the detrimental impacts of urbanization and draw particular attention to the significance of such sites. Although the article mainly focusses on the biodiversity benefits, urban green spaces are also important for the provision of ecosystem services and can have a positive impact on quality of life, human health and well-being (Fuller et al. 2007; Mitchell & Popham 2008). They provide opportunities for people to interact with nature and are, therefore, vital in fostering a wider interest in nature conservation issues (Miller 2005). Such

green spaces in urban areas are especially significant in the development of a personal relationship with the natural environment (Gross & Lane 2007).

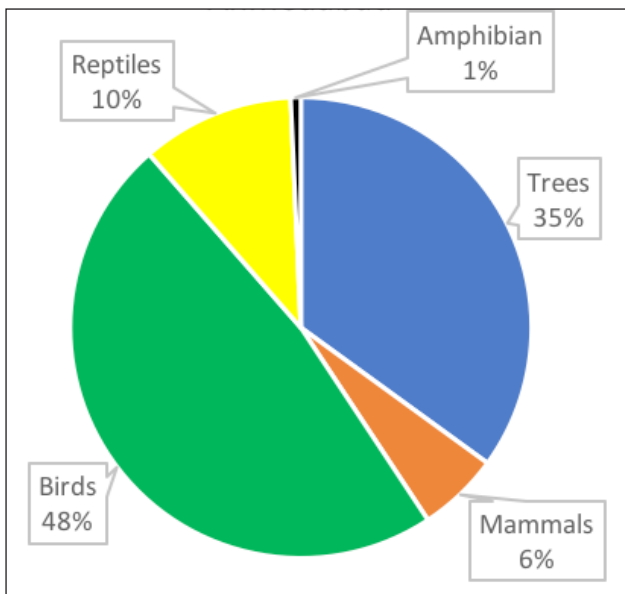
Urban green spaces are becoming an increasingly important refuge for native biodiversity. The potential value of gardens for enhancing biodiversity has long been recognised, as evidenced by many popular books, television programmes and information handouts advising on “wildlife-friendly” gardening (Goddard et al. 2009).

The objectives of the study are,

1. Documenting biodiversity of Sundarvan.
2. Through results, conveying importance of such small green spaces in urban environment to the city dwellers concerned authorities for their conservation.

## Study Area

Sundarvan, Nature Discovery Centre set in the heart of Ahmedabad, Gujarat, India, is a unique facility of the Centre for Environment Education (CEE). This four-acre land was originally a mango orchard, converted into a nature discovery centre from 28 October 1978. It is a green oasis of the city and has been categorized as a mini zoo, by the Central Zoo Authority (CZA), the apex governance body for Zoos of India.



**Richness of different groups recorded from Sundarvan, Ahmedabad.**

Sundarvan plays a very crucial role in sensitizing and creating appreciation for wildlife, specially the lesser known species like snakes and other reptiles. Regular Snake and other awareness programmes conducted in Sundarvan have sensitized the masses of the cities on the importance of these species and their ecological role. These awareness programmes have directly led to considerable reduction in the killing of snakes by people, hence emphasizing the conservation and wildlife educational role of this facility. Annually the visitation to the mini zoo is more than a lakh with around 200 schools visiting this facility to enhance their classroom learning.

### Methods

**Tree:** Trees with girth at breast height (GBH) more than 20cm were individually counted between 15 May and 15 June 2013. The species, number of dead and live trees, trees with or without leaves, flowers and fruits were also noted down during the study. The

GBH of every tree was measured and all the counted trees were marked with paint to avoid double count.

**Birds:** Bird counts were carried out intermittently (at least one count per month) in Sundarvan to find out species richness and seasonal abundance of birds (the later details will be published elsewhere) from December 2014 to August 2018. Apart from these counts, the incidental records of some rarely sighted bird species were also maintained. Authentic records reported in 'ebird' are also used in the article.

**Other faunal groups:** Record of other vertebrates such as mammals, reptiles and amphibians were maintained from incidental sightings made from January 2012 to August 2018.

### Results

A total of 48 tree species including one unidentified palm and four other unidentified trees belonging to 20 different families were recorded. Over 20cm GBH, 702 trees were recorded with 650 live and 52 dead trees. All tree species were with leaves, 13 species were with flowers and 19 species were with fruits. Among the most abundant trees, dead tree proportion against live tree was very high (22.7%) in *Azadirachta indica*. Only five trees of five different species had GBH over 200cm (Table 1).

Eight species of mammals, 67 species of birds belonging to 39 families and 15 species of reptiles were recorded from Sundarvan (See Table 2 to 4). Only one species of amphibian, Marbled Toad *Duttaphrynus*

Table 1. Details of tree species recorded in Sundarvan Nature Discovery Centre, Ahmedabad.

Species	No.	Live	Dead	WL	WF	WfT	GBH (in CM) of Live Trees				GBH (in CM) of Dead Trees								
							20 to 50	51 to 100	101 to 150	151 to 200	201 to 250	> 251	20 to 50	51 to 100	101 to 150	151 to 200	201 to 250	> 251	
<b>Family: Fabaceae</b>																			
1	<i>Butea monosperma</i>	2	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
2	<i>Derris indica</i>	7	0	7	0	0	4	3	0	0	0	0	0	0	0	0	0	0	0
3	<i>Erythrina indica</i>	5	0	5	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0
<b>Family: Mimosaceae</b>																			
4	<i>Acacia auriculiformis</i> *	2	1	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0
5	<i>Acacia</i> sp.	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	<i>Albizia lebbeck</i>	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
7	<i>Leucaena leucocephala</i> *	244	233	11	231	1	180	53	8	3	0	0	0	0	5	6	0	0	0
8	<i>Pithecellobium dulce</i>	11	11	0	11	0	5	4	0	1	1	0	0	0	0	0	0	0	0
9	<i>Prosopis chilensis</i> *	9	8	1	8	0	6	1	2	0	0	0	0	0	0	0	0	0	0
10	<i>Prosopis cineraria</i>	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
<b>Family: Caesalpinaceae</b>																			
11	<i>Bauhinia purpurea</i>	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
12	<i>Caesalpinia coriaria</i>	3	0	3	1	0	2	0	1	0	0	0	0	0	0	0	0	0	0
13	<i>Cassia fistula</i>	3	0	3	2	1	2	1	0	0	0	0	0	0	0	0	0	0	0
14	<i>Cassia siamea</i> *	4	0	4	1	0	2	0	2	0	0	0	0	0	0	0	0	0	0
15	<i>Delonix regia</i> *	14	14	0	14	6	7	5	2	0	0	0	0	0	0	0	0	0	0
16	<i>Peltophorum pterocarpum</i> *	5	5	0	5	1	1	1	1	2	0	0	0	0	0	0	0	0	0
17	<i>Tamarindus indica</i>	40	39	1	39	4	29	8	2	1	0	0	0	0	0	0	0	0	0
<b>Family: Rubiaceae</b>																			
18	<i>Neolamarckia cadamba</i>	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Species	No.	Live	Dead	WL	WF	WfT	GBH (in CM) of Live Trees				GBH (in CM) of Dead Trees								
							20 to 50	51 to 100	101 to 150	151 to 200	201 to 250	> 251	20 to 50	51 to 100	101 to 150	151 to 200	201 to 250	> 251	
<b>Family: Meliaceae</b>																			
19	<i>Azadirachta indica</i>	132	102	30	100	1	74	24	40	30	8	0	0	6	16	7	1	0	0
<b>Family: Malvaceae</b>																			
20	<i>Bombax ceiba</i>	2	1	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0
21	<i>Guazuma ulmifolia</i>	6	6	0	6	3	0	4	2	0	0	0	0	0	0	0	0	0	0
<b>Family: Arecaceae</b>																			
22	<i>Caryota urens</i>	3	3	0	3	0	0	1	1	1	0	0	0	0	0	0	0	0	0
23	<i>Phoenix sylvestris</i>	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
24	Unidentified Palm Species	4	3	1	3	0	0	1	3	0	0	0	0	0	0	0	0	0	0
<b>Family: Ehretiaceae</b>																			
25	<i>Cordia obliqua</i>	2	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
26	<i>Cordia sebestena</i>	2	2	0	2	2	2	0	2	0	0	0	0	0	0	0	0	0	0
27	<i>Cordia wallichii</i>	12	9	3	8	1	2	7	1	1	0	0	0	2	1	0	0	0	0
<b>Family: Moraceae</b>																			
28	<i>Ficus benghalensis</i>	15	15	0	15	0	2	10	3	0	1	0	1	0	0	0	0	0	0
29	<i>Ficus racemosa</i>	6	6	0	6	0	3	0	3	2	0	1	0	0	0	0	0	0	0
30	<i>Ficus mysorensis</i>	4	4	0	4	0	0	0	2	1	1	0	0	0	0	0	0	0	0
31	<i>Ficus religiosa</i>	7	7	0	7	0	7	0	1	1	4	0	1	0	0	0	0	0	0
<b>Family: Ulmaceae</b>																			
32	<i>Holoptelea integrifolia</i>	34	34	0	30	0	1	17	12	4	0	0	1	0	0	0	0	0	0
<b>Family: Anacardiaceae</b>																			
33	<i>Mangifera indica</i>	2	2	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0
<b>Family: Sapotaceae</b>																			
34	<i>Manilkara hexandra</i>	17	17	0	17	0	0	13	4	0	0	0	0	0	0	0	0	0	0
35	<i>Mimusops elengi</i>	10	10	0	10	1	1	9	1	0	0	0	0	0	0	0	0	0	0

Species	No.	Live	Dead	WL	WF	Wft	GBH (in CM) of Live Trees				GBH (in CM) of Dead Trees							
							20 to 50	51 to 100	101 to 150	151 to 200	201 to 250	> 251	20 to 50	51 to 100	101 to 150	151 to 200	201 to 250	> 251
<b>Family: Moringaceae</b>																		
36		9	0	7	1	9	1	2	4	2	0	0	0	0	0	0	0	0
<b>Family: Euphobiaceae</b>																		
37		1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
38		13	0	13	0	0	6	5	1	1	0	0	0	0	0	0	0	0
<b>Family: Annonaceae</b>																		
39		44	0	44	0	1	41	2	1	0	0	0	0	0	0	0	0	0
<b>Family: Salvadoraceae</b>																		
40		1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0
<b>Family: Sapindaceae</b>																		
41		3	1	2	0	1	1	2	0	0	0	0	0	0	0	0	0	0
<b>Family: Myrtaceae</b>																		
42		5	0	5	0	2	4	1	0	0	0	0	0	0	0	0	0	0
<b>Family: Combretaceae</b>																		
43		1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0
44		3	1	2	0	0	1	1	0	0	0	0	1	0	0	0	0	0
<b>Unidentified Tree Species</b>																		
45	Unidentified species1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
46	Unidentified species2	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
47	Unidentified species3	5	0	5	0	0	3	2	0	0	0	0	0	0	0	0	0	0
48	Unidentified species4	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

Note: WL – With leaf; WF – With Flower; Wft. – With Fruit; \* - Exotic.

**Table 2. Mammal species recorded from Sundarvan Nature Discovery Centre.**

	English Name	Scientific Name	IUCN Status
<b>Family: Herpestidae</b>			
1	Small Indian Mongoose	<i>Herpestes auro punctatus</i>	LC
<b>Family: Cercopithecidae</b>			
2	Northern Plains Langur	<i>Semnopithecus entellus</i>	LC
<b>Family: Sciuridae</b>			
3	Five-striped Palm Squirrel	<i>Funambulus pennantii</i>	LC
<b>Family: Soricidae</b>			
4	House Shrew	<i>Suncus murinus</i>	LC
<b>Family: Hystricidae</b>			
5	Indian Crested Porcupine	<i>Hystrix indica</i>	LC
<b>Family: Muridae</b>			
6	Indian Field Mouse	<i>Mus booduga</i>	LC
7	House Rat	<i>Rattus rattus</i>	LC
<b>Family: Pteropodidae</b>			
8	Indian Flying Fox	<i>Pteropus giganteus</i>	LC
<b>Note: LC – Least Concern</b>			

*stomaticus* was recorded from the place. Highest species diversity was of birds (42%) and the lowest was of amphibians (1%).

## Discussion

The interaction with the senior employees showed that the entire area of Sundarvan was with only one tree species, i.e. *Mangifera indica*. When a huge amount of soil was brought to Sundarvan from the campus of Centre for Environment Education (CEE), the tree species richness increased through various seeds brought accidentally. Death of *Mangifera indica* in different points of time provided more open space and these were occupied by other trees through natural process and plantation made by

the management. The exotic *Leucaena leucocephala* was the most abundant tree species and this along with *Tamarindus indica* occupy 53.5%. Apart from these tree species, the place has wide range of shrubs, herbs and grass species including wide variety of ornamental species planted by the Sundarvan Management. This diversity of plant species ensures the faunal diversity, though it is a small patch of green space located in the middle of the concrete structures.

A large roost of around 500 Indian Flying Foxes *Pteropus giganteus* is located in the zoo. The wide range of plants in Sundarvan premises offers them variety of food, though mostly the bats get food from other places in the city and its neighbourhood. The Indian Crested Porcupine *Hystrix indica* is not a permanent resident in Sundarvan and used to visit from the Indian Space Research Organisation (ISRO) campus located next to Sundarvan till 2016. Once the entries to Sundarvan and the exits in ISRO were sealed, their movement is restricted only within ISRO now. There should be at least one more species of fruit bat and two microchiropteran bats in Sundarvan, as these were sighted in several occasions, but not identified. Hence, these were not included in the list in this article.

Very high bird diversity is maintained in the place. The large prominent species like the Indian Peafowl *Pavo cristatus* breeds regularly. Dead trees provide foraging space for different birds and nesting sites for hole nesting birds such as parakeets, barbets and flamebacks. The fruits of *Ficus* spp. attract

**Table 3. Bird species recorded from Sundarvan Nature Discovery Centre, Ahmedabad.**

	English Name	Scientific Name	Migratory Status	IUCN Status
<b>Anatidae (Ducks, geese, swans)</b>				
1	Lesser Whistling Duck	<i>Dendrocygna javanica</i>	R	LC
<b>Phasianidae (Pheasants, Partridges, Turkeys, Grouse)</b>				
2	Indian Peafowl	<i>Pavo cristatus</i>	R	LC
3	Grey Francolin	<i>Francolinus pondicerianus</i>	R	LC
<b>Columbidae (Pigeons)</b>				
4	Rock Pigeon	<i>Columba livia</i>	R	LC
5	Yellow-footed Green-Pigeon	<i>Treron phoenicoptera</i>	R	LC
6	Red-collared Dove	<i>Streptopelia tranquebarica</i>	R	LC
7	Eurasian Collared Dove	<i>Streptopelia decaocto</i>	R	LC
8	Laughing Dove	<i>Streptopelia senegalensis</i>	R	LC
<b>Apodidae (Swifts)</b>				
9	Indian House Swift	<i>Apus affinis</i>	R	LC
<b>Cuculidae (Cuckoos)</b>				
10	Greater Coucal	<i>Centropus sinensis</i>	R	LC
11	Asian Koel	<i>Eudynamys scolopaceus</i>	R	LC
<b>Rallidae (Rails and Coots)</b>				
12	White-breasted Waterhen	<i>Amauornis phoenicurus</i>	R	LC
<b>Ardeidae (Hérons)</b>				
13	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	R	LC
14	Indian Pond Heron	<i>Ardeola grayii</i>	R	LC
15	Cattle Egret	<i>Bubulcus ibis</i>	R	LC
16	Little Egret	<i>Egretta garzetta</i>	R	LC
<b>Threskiornithidae (Ibises, spoonbills)</b>				
17	Black-headed Ibis	<i>Threskiornis melanocephalus</i>	R	NT
18	Red-napped Ibis	<i>Pseudibis papillosa</i>	R	LC
<b>Charadriidae (Plovers &amp; Lapwings)</b>				
19	Red-wattled Lapwing	<i>Vanellus indicus</i>	R	LC
<b>Burhinidae (Stone curlews)</b>				
20	Indian Stone Curlew	<i>Burhinus indicus</i>	R	LC
<b>Accipitridae (Hawk, Eagles)</b>				
21	Shikra	<i>Accipiter badius</i>	R	LC
22	Black Kite	<i>Milvus migrans</i>	R	LC
<b>Strigidae (Owls)</b>				
23	Spotted Owlet	<i>Athene brama</i>	R	LC
<b>Tytonidae (Barn Owls)</b>				
24	Barn Owl	<i>Tyto alba</i>	R	LC
<b>Bucerotidae (Hornbills)</b>				
25	Indian Grey Hornbill*	<i>Ocyrceros birostris</i>	R	LC

	English Name	Scientific Name	Migratory Status	IUCN Status
<b>Picidae (Woodpeckers)</b>				
26	Black-rumped Flameback	<i>Dinopium benghalense</i>	R	LC
<b>Megalaimidae (Asian Barbets)</b>				
27	Coppersmith Barbet	<i>Psilopogon haemacephalus</i>	R	LC
<b>Meropidae (Bee-eaters)</b>				
28	Green Bee-eater	<i>Meropes orientalis</i>	R	LC
<b>Alcedinidae (Kingfishers)</b>				
29	White-throated Kingfisher	<i>Halcyon smyrnensis</i>	R	LC
<b>Psittacidae (Parrots)</b>				
30	Alexandrine Parakeet	<i>Psittacula eupatria</i>	R	LC
31	Rose-ringed Parakeet	<i>Psittacula krameri</i>	R	LC
<b>Campephagidae (Cuckoo-shrikes)</b>				
32	Small Minivet	<i>Pericrocotus cinnamomeus</i>	R	LC
<b>Oriolidae (Orioles and Figbirds)</b>				
33	Indian Golden Oriole	<i>Oriolus kundoo</i>	LM	LC
<b>Aegithinidae (Ioras)</b>				
34	Common Iora	<i>Aegithina tiphia</i>	R	LC
<b>Dicruidae (Drongos)</b>				
35	Black Drongo	<i>Dicrurus macrocercus</i>	R	LC
36	Ashy Drongo	<i>Dicrurus leucophaeus</i>	R	LC
<b>Rhipiduridae (Fantails)</b>				
37	White-browed Fantail	<i>Rhipidura aureola</i>	R	LC
<b>Corvidae (Crows and Jays)</b>				
38	Rufous Treepie	<i>Dendrocitta vagabunda</i>	R	LC
39	House Crow	<i>Corvus splendens</i>	R	LC
40	Large-billed Crow	<i>Corvus macrorhynchos</i>	R	LC
<b>Monarchidae (Monarchs)</b>				
41	Black-napped Monarch	<i>Hypothymis azurea</i>	LM	LC
42	Indian Paradise Flycatcher	<i>Terpsiphone aradise</i>	M	LC
<b>Dicaeidae (Flowerpeckers)</b>				
43	Thick-billed Flowerpecker	<i>Dicaeum agile</i>	R	LC
44	Pale-billed Flowerpecker	<i>Dicaeum erythrorhynchos</i>	R	LC
<b>Nectariniidae (Sunbirds)</b>				
45	Purple-rumped Sunbird	<i>Leptocoma zeylonica</i>	R	LC
46	Purple Sunbird	<i>Cinnyris asiaticus</i>	R	LC
<b>Estridiidae (Finches)</b>				
47	Indian Silverbill	<i>Euodice malabarica</i>	R	LC
<b>Motacillidae (Wagtails and pipits)</b>				
48	Western Yellow Wagtail	<i>Motacilla flava</i>	M	LC

	English Name	Scientific Name	Migratory Status	IUCN Status
<b>Cisticolidae (Cisticolas and allies)</b>				
49	Ashy Prinia	<i>Prinia socialis</i>	R	LC
50	Common Tailorbird	<i>Orthotomus sutorius</i>	R	LC
<b>Hirundinidae (Swallows and martins)</b>				
51	Dusky Crag Martin	<i>Ptyonoprogne concolor</i>	R	LC
<b>Pyconotidae (Bulbuls)</b>				
52	Red-vented Bulbul	<i>Pycnonotus cafer</i>	R	LC
<b>Phylloscopidae (Leaf-warblers)</b>				
53	Greenish Warbler	<i>Seicercus trochiloides</i>	M	LC
<b>Sylviidae (Old World Warblers)</b>				
54	Lesser Whitethroat	<i>Curruca curruca</i>	M	LC
55	Booted Warbler	<i>Iduna caligata</i>	M	LC
<b>Zosteropidae (White-eyes)</b>				
56	Oriental White-eye	<i>Zosterops palpebrosus</i>	R	LC
<b>Leiothrichidae (Laughingthrushes and allies)</b>				
57	Jungle Babbler	<i>Turdoides striata</i>	R	LC
<b>Sturidae (Starlings)</b>				
58	Rosy Starling	<i>Pastor roseus</i>	M	LC
59	Brahminy Starling	<i>Sturnia pagodarum</i>	R	LC
60	Common Myna	<i>Acridotheres tristis</i>	R	LC
<b>Muscicapidae (Chats and Old-World flycatchers)</b>				
61	Indian Robin	<i>Saxicoloides fulicatus</i>	R	LC
62	Oriental Magpie Robin	<i>Copsychus saularis</i>	R	LC
63	Brown-breasted Flycatcher	<i>Muscicapa muttui</i>	M	LC
64	Tickell's Blue Flycatcher	<i>Cyornis tickelliae</i>	LM	LC
65	Bluethroat	<i>Luscinia svecica</i>	M	LC
66	Grey-headed Canary Flycatcher	<i>Culicicapa ceylonensis</i>	LM	LC
67	Red-breasted Flycatcher	<i>Ficedula parva</i>	M	LC
<b>Note: All species were recorded by the author except the one marked * (was included from ebird data); R – Resident; M – Migratory; LM – Local Migratory; LC – Least Concern; NT – Near Threatened.</b>				

green pigeons to the place. The Indian Grey Hornbill *Ocyrceros birostris* was not recorded during the study period and reported later by others (ebird).

Among the reptiles, large snakes such as cobra *Naja naja* and Indian Rat Snake *Ptyas mucosa* mostly come from ISRO campus in search of food. The rat snakes are one of

the most frequently sighted snakes in the premises, probably due to their commonness and their large size.

The place was surrounded by agricultural fields and large areas of fallow land with some waterbodies few decades back. Due to the land cover and land use changes in recent decades, the waterbodies and wildlife-

**Table 4. List of Reptiles recorded from Sundarvan Nature Discovery Centre.**

	English name	Scientific Name	IUCN Status
<b>Family: Gekkonidae</b>			
1	Northern House Gecko	<i>Hemidactylus flaviviridis</i> Ruppell, 1835	NE
2	Brook's Gecko	<i>Hemidactylus brookii</i> Gray, 1842	LC
<b>Family: Scincidae</b>			
3	Bronze Grass Skink	<i>Eutropis macularia</i> (Dumeril & Bibron, 1839)	NE
4	Spotted Snake-skink	<i>Lygosoma punctatum</i> (Gmelin, 1789)	NE
5	White-dotted Snake-skink	<i>Lygosoma albopunctatum</i> (Gray, 1846)	NE
<b>Family: Agamidae</b>			
6	Garden lizard	<i>Calotes versicolor</i> (Daudin, 1802)	NE
<b>Family: Varanidae</b>			
7	Common Indian Monitor Lizard	<i>Varanus bengalensis</i> (Daudin, 1802)	LC
<b>Family: Typhlopidae</b>			
8	Brahminy Worm Snake	<i>Indotyphlops braminus</i> (Daudin, 1803)	NE
<b>Family: Boidae</b>			
9	Common Sand Boa	<i>Eryx conicus</i> (Schneider, 1801)	NE
<b>Family: Colubridae</b>			
10	Indian Rat Snake	<i>Ptyas mucosa</i> (Linnaeus, 1758)	NE
11	Common Wolf Snake	<i>Lycodon aulicus</i> (Linnaeus, 1758)	NE
<b>Family: Elapidae</b>			
12	Spectacled Cobra	<i>Naja naja</i> (Linnaeus, 1758)	NE
13	Common Indian Krait	<i>Bungarus caeruleus</i> (Schneider, 1801)	NE
<b>Family: Trionychidae</b>			
14	Indian Flap-shell Turtle	<i>Lissemys punctata</i> (Bonnaterre, 1790)	LC
15	Gangetic Softshell Turtle	<i>Nilssonina gangetica</i> (Cuvier, 1825)	VU
<b>Note: LC – Least Concern; NA – Not Evaluated; VU – Vulnerable</b>			

friendly green spaces disappeared. This is the main reason for very low diversity of amphibians. A small artificial pond found in Sundarvan supports few introduced fish species like catfish and ornamental guppies and also aquatic reptiles such as the exotic Red-eared Slider Turtles *Trachemys* sp., native Flap-shell Turtles *Lissemys punctata* and Gangetic Softshell Turtle *Nilssonina gangetica* (One individual introduced by someone).

Plants are essential to the existence of the fragile skin of life surrounding our planet and its rich diversity. They play a primary role in ecosystem function (Given & Meurk 2000). Besides providing foraging and breeding space to wide range of animal species, such small patches act as corridor to maintain links with larger green spaces around. As mentioned above, the place provides a wonderful opportunity to connect urban dwellers with nature through various activities of Sundarvan. Interest in maintaining and

even enhancing biodiversity within urban landscapes is increasing, not only for the inherent value of biodiversity conservation itself but also because of the tangible societal benefits (e.g., environmental awareness, and the mental health and well-being) realised from viewing and interacting with biodiversity (Livesley et al. 2016).

Ahmedabad is the seventh largest metropolis in India and the largest in the state. The city is known as the commercial capital of the state and known as the textile capital of India (Avadia & Patel, 2018). Ahmedabad is the third fastest growing city in India with an estimated population of 5.5 million (Jashnani 2015). Ahmedabad has been selected in the list of 100 cities under the Ministry of Urban Development (MoUD), Government of India's Smart City Mission.

The future planning should be inclusive of preservation of its green spaces and wildlife. These green spaces in urban areas are very important. Sundarvan already lost considerable area for developmental activities such as road expansion. The future developmental activities should spare such places to maintain urban biodiversity, also considering other services such as production of oxygen, carbon sequestration, reduction of heat wave, space for urban dwellers to stay connected with nature, etc. The city administration may identify and map all available green spaces of the city for future conservation to ensure betterment of the city dwellers.

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## S. Sivakumar

Centre for Environment Education, Thaltej, Ahmedabad 380054, Gujarat.  
Present Address: Bombay Natural History Society, Hornbill House, Dr. Salim Ali Chowk, S.B. Singh Road, Mumbai 400001, Maharashtra . Email: [wildlifessiva2050@gmail.com](mailto:wildlifessiva2050@gmail.com)

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