

**PEOPLES' BIODIVERSITY REGISTER (PBR)
KOLKATA MUNICIPAL CORPORATION
WARD NO. 52**



**DOCUMENTED & PREPARED
BY
MAULANA AZAD COLLEGE
KOLKATA-700013**

MARCH, 2020

CONTRIBUTORS

TEACHERS

Dr. Subhasis Panda (Botany)

Dr. Dipak Kumar Som (Zoology)

Dr. Santanu Ghosh (Economics)

Dr. Avishek Ghosh (Microbiology)

Dr. Mahua Patra (Sociology)

Dr. Partha Pal (Statistics)

STUDENTS

**BOTANY, ZOOLOGY, MICROBIOLOGY, ECONOMICS,
SOCIOLOGY & STATISTICS**

(Total = 41)



Govt. of West Bengal

Maulana Azad College

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Memo No. 1073/PBR

Date: 05/03/20

To
Sri Debasish Kumar
Hon'ble Member-Mayor-In-Council &
Chairman, Biodiversity Management Committee (BMC)
Kolkata Municipal Corporation (KMC)
5, S.N. Banerjee Road
Kolkata-700013.

*Sub. Submission of Preliminary PBR Report of Kolkata Municipal Corporation
Ward No. 52 vide your letter no. nil dated 11/02/2020.*

Sir,

With the subject mentioned above, I am to inform you that our trained PBR Team is submitting the preliminary PBR Report to your office before the deadline on 10th March, 2020 on KMC Ward No. 52 as per discussion during PBR Workshop Training day dated 18th February, 2020. Our PBR Team consisting of total 41 students belong to six departments viz., Botany, Microbiology, Zoology, Economics, Sociology and Statistics under the supervision of six Teachers viz., Dr. Subhasis Panda (Botany), Dr. Dipak Kumar Som (Zoology), Dr. Avishek Ghosh (Microbiology), Dr. Santanu Ghosh (Economics), Dr. Mahua Patra (Sociology) and Dr. Partha Pal (Statistics) who got workshop training on 18th February, 2020 at KMC Conference Room. The team will submit the detailed report on Ward no. 52, 53 & 62 after detailed investigations within six months.

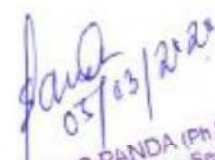
With Regards,

Thanking You.

Yours faithfully,


Principal
Maulana Azad College
Kolkata-700013.

Principal
Maulana Azad College
Kolkata


05/03/2020
DR. SUBHASIS PANDA (Ph.D., FIAT)
[West Bengal Education Service]
Associate Professor of Botany
Maulana Azad College
Kolkata-700 013



Maulana Azad College

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Thanking You.

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Kolkata-700013.

Principal
Maulana Azad College
Kolkata

Dr. Dipak K. Som, W.B. & A
Associate Professor of Zoology
Maulana Azad College, Kolkata
Govt. of West Bengal

DR. SUBHASIS PANDA (Ph.D., FIAT)
West Bengal [Public Health Service]
Associate Professor of Botany
Maulana Azad College
Kolkata-700 013

In-Charge
(PBR)

DEBASISH KUMAR
MEMBER-MAYOR-IN-COUNCIL &
CHAIRMAN BMC



THE KOLKATA MUNICIPAL CORPORATION
5, S.N. BANERJEE ROAD, KOLKATA - 700013.

From : The Chairman,
Bio-Diversity Management Committee (BMC),
Kolkata Municipal Corporation (KMC),
Kolkata.

To : The Principal,
M.L. Ghosh College,
Kolkata.

Sir / Madam,

This is to inform you that the KMC has constituted BMC for its area of jurisdiction as per the Biological Diversity Act & Rules. The primary activity of the BMC is to prepare PBR as mandated by the said Act & Rules.

In connection with the order passed by the NCT to complete the PBR at the earliest, considerable number of manpower / expertise support is very much in need.

In this regard, it is to request you to provide your support. In this direction, Teachers & Students of the Departments of Botany / Zoology / Environmental Science / Geography would be of immensely helpful. Dr. Subhas Panda, Department of Botany and others (Students) may be spared to involve in this endeavor. This activity may be assigned to the students as their project activity on which their evaluation may be considered as a part of their educational curriculum. Besides, all will be provided a certificate from the BMC of KMC.

It is bring to your notice also that West Bengal Bio-diversity Board has agreed to co-ordinate the whole process. A workshop on this PBR process has been scheduled on 17.02.2020 at 2.30 p.m. in the Conference Hall - 1 of CMO Building at 5, S.N. Banerjee Road, Kolkata - 700013. You are therefore requested to kindly ensure that Dr. Subhas Panda along with students attend the aforesaid meeting.

Your positive response will be solicited.

*Dr. S. Panda -
Please do the needful.
Phon 12/2/20.*

Debasish
SRI DEBASISH KUMAR
CHAIRMAN, BMC OF KMC
&
MEMBER-MAYOR-IN-COUNCIL
(PARKS & GARDEN)
Member, M.L. Ghosh
Parks & Squares Sports and Advt.
The Kolkata Municipal Corporation

*Dr. Subhas Panda
HOD,
M.L. Ghosh College
11/2/20*

comfortable, it's strange leaving the house. But we must
Sen Lane have
Urvi's digging.

KMC to prepare biodiversity register, submit findings to NGT by March 18

Saikat Ray
& Subhro Niyogi | TNN

NGOs, COLLEGE STUDENTS TO BE ROPED IN

Kolkata: Civic authorities in Kolkata have embarked on an ambitious project of preparing a people's biodiversity register (PBR) for the city. A preliminary biodiversity management committee has been set up to oversee the project that will enumerate parks, squares, tanks and ponds in 144 wards under Kolkata Municipal Corporation (KMC) and the flora and fauna inhabiting there.

At a meeting held on Monday, KMC officials interacted with various non-government organisations working in the space of environment protection and wildlife and urged them to quickly carry out a biodiversity survey in the ward where they are present. "We are looking at a preliminary report by this month-end and a more comprehensive report by March 10," a civic official told TOI.

The exercise is part of an order by the National Green



Maidan and Rabindra Sarobar are two of the city's ecologically sensitive zones

- KMC was asked to prepare a Peoples Biodiversity Register (PBR) by the NGT by 2020
- KMC has set up a biodiversity management control committee, comprising officials from Project Management Unit (PMU), parks and squares and roads depts
- KMC has roped in NGOs and students from 18 colleges to do the survey
- KMC to submit a preliminary report on the PBR to NGT by March 18

Tribunal (NGT) to several major cities, including Kolkata, asking them to carry out a biodiversity survey, enumerating the land area, greenery, waterbodies and count of trees, birds and other mammals and animals inhabiting in the urban area. Though such an exercise for a city as large as Kolkata is ti-

me-consuming, KMC is keen to present the report at the NGT's next meeting on March 18 and hence the urgency and tight deadlines.

Among the NGOs that have agreed to take up the work is WWF-India, which had done three different surveys about a decade-and-a-half ago. "We had carried out sur-

veys on trees, birds and butterflies in the Maidan area around Tata Centre in 2005-06. We will update the reports through a fresh survey and submit them to KMC," said WWF-India state director Saswati Sen.

Students of 18 colleges, including Bethune, Maulana Azad and Ashutosh are also

being roped in to carry out the survey. A workshop will be carried out to train the students in ways to collect the data.

Around a decade and a half ago, the Centre for Environment and Development (Endev), an NGO led by former Zoological Survey of India director Ashish Ghosh, had carried out a survey of parks and gardens in wards 1 to 100 but had not taken stock of the 41 more wards. Later, Endev carried out a survey of waterbodies in wards 101 to 141 but this survey left out wards 1 to 100.

"Both the reports prepared by Endev were submitted to KMC. In fact, it was the second report on the disappearance of 431 of the 1,430 listed waterbodies that had caught everyone's attention about the manner in which the developers were usurping waterbodies," pointed out Endev secretary Anurag Danda. Endev though does not wish to take part in the project as it feels the timeline as too tight.

1. Introduction

Ward-Number: 52 [22.55.8245°N 88.356611°E]

Borough: VI

District: KOLKATA

State: WEST BENGAL

Location: It is an administrative division of Kolkata Municipal Corporation in Borough No. 5, covering parts of Taltala (Collin Street-Marquis Street) and Janbazar neighbourhoods in central Kolkata, in the Indian state of West Bengal.

- **Habitat and topography**

Ward No. 52 is bordered on the north by Lenin Sarani, on the east by Rafi Ahmed Kidwai Street, on the south by Marquis Street and on the west by Rani Rashmoni Street and Mirza Ghalib Street. The ward is served by Taltala and New Market police stations of Kolkata Police. Taltala Women police station covers all police districts under the jurisdiction of the Central division of Kolkata Police, i.e. Bowbazar, Burrabazar, Girish Park, Hare Street, Jorasanko, Muchipara, New Market, Taltala and Posta.

- **Agriculture: Nil**

- **Forests: Nil**

- **Climate:** Kolkata has a Tropical wet-and-dry climate. The annual mean temperature is 24.8 °C (80 °F); monthly mean temperatures range from 15 °C to 30 °C (59 °F to 86 °F). Summers are hot and humid with temperatures in the low 30's and during dry spells the maximum temperatures often exceed 40 °C (104 °F) during May and June.^[1] Winter tends to last for only about two and a half months, with seasonal lows dipping to 9 °C – 11 °C (48.2 °F – 51.8 °F) between December and January. The highest recorded temperature is 43.9 °C (111 °F) and the lowest is 5 °C (41 °F).^[1] Often during early summer, dusty squalls followed by spells of thunderstorm and heavy rains lash the city, bringing relief from the humid heat. These thunderstorms are convective in nature, and is locally known as *Kal baisakhi* (কালবৈশাখী, Nor'westers).

Rains brought by the Bay of Bengal branch of South-West monsoon lash the city between June and September and supplies the city with most of its annual rainfall of 1,582 mm (62.3 inches). The highest rainfall occurs during the monsoon in August (306 mm). The city receives 2,528 hours of sunshine per annum, with the maximum sunlight occurring in March. Pollution is a major concern in Kolkata, and the Suspended Particulate Matter (SPM) level is high when compared to other major cities of India,^{[5][6]} leading to regular smog and haze. Severe air pollution in the city has caused rise in pollution-related respiratory ailments such as lung cancer.

- **Demography:** As per the [2011 Census of India](#), Ward No. 52, Kolkata Municipal Corporation, had a total population of 16,869, of which 10,205 (60%) were males and 6,664 (40%) were females. Population below 6 years was 1,289. The total number of literates in Ward No. 52 was 13,427 (86.18% of the population over 6 years).
- **Major livelihoods:** Business (Tyre repairing & products, Hardware Shops, Plumber shops, Vegetable shops, Fruit stall, Tea stall, Grocery Shop, Hotel, Footpath shops, Fish stall, Chicken stall, Tea shop, Car and bike repairing, Helmet shop, electrical goods shop).



2. Methodology

Landscape, lifescape and peopescap data were collected by 44 students of six departments (Botany, Zoology, Microbiology, Sociology, Economics & Statistics) of Maulana Azad College, Kolkata. The PBR work has been initiated on 19/02/2020 from Ward No. 52 Maulana Azad College area.

Plants (wild, ornamental, invasive & avenue) images were taken using Nikon Camera along with Samsung Mobile-based detailed GPS information to document authenticity in respect to locality and date. **Participants:** BOTANY Students. **Guide:** Dr. Subhasis Panda, Associate Professor of Botany. **Identification:** authenticated by the experts from Botanical Survey of India.

Animals (mostly birds) images were taken using Nikon camera along with Samsung mobile-based detailed GPS information. But most of the birds were seen during 4 pm to 6 pm. Participants: ZOOLOGY Students. Guide: Dr. Subhasis Panda & Dr. Dipak Kumar Som (Associate Professor of Zoology). Identification: authenticated by the experts from Zoological Survey of India.

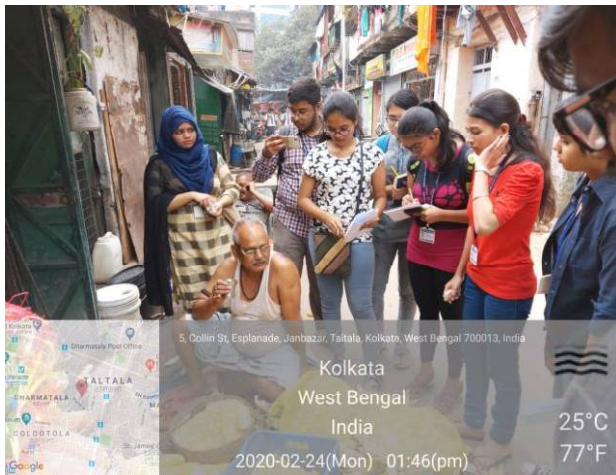
Microbes: sample collected from 5 different areas in and around Ward nos. 52, 53 & 61. Participants: MICROBIOLOGY Students. Guide: Dr. Avishek Ghosh (Assistant Professor of Microbiology). Identification: not identified yet.

Fungi: documented by Botany students. Identification: Dr. Prakash Pradhan (Scientist, West Bengal Biodiversity Board).

ITKs (Indigenous Traditional Knowledge) & Peoplescape: First hand data mainly taken from elderly and knowledgeable people during oral interview. Participants: SOCIOLOGY Students. Guide: Dr. Subhasis Panda (Botany). Authentication: by cross checking with at least 10 persons.

Market Survey: First hand data were taken from different markets such as, Fruits, fish, vegetables etc. Participants: ECONOMICS Students. Guide: Dr. Subhasis Panda (Botany).

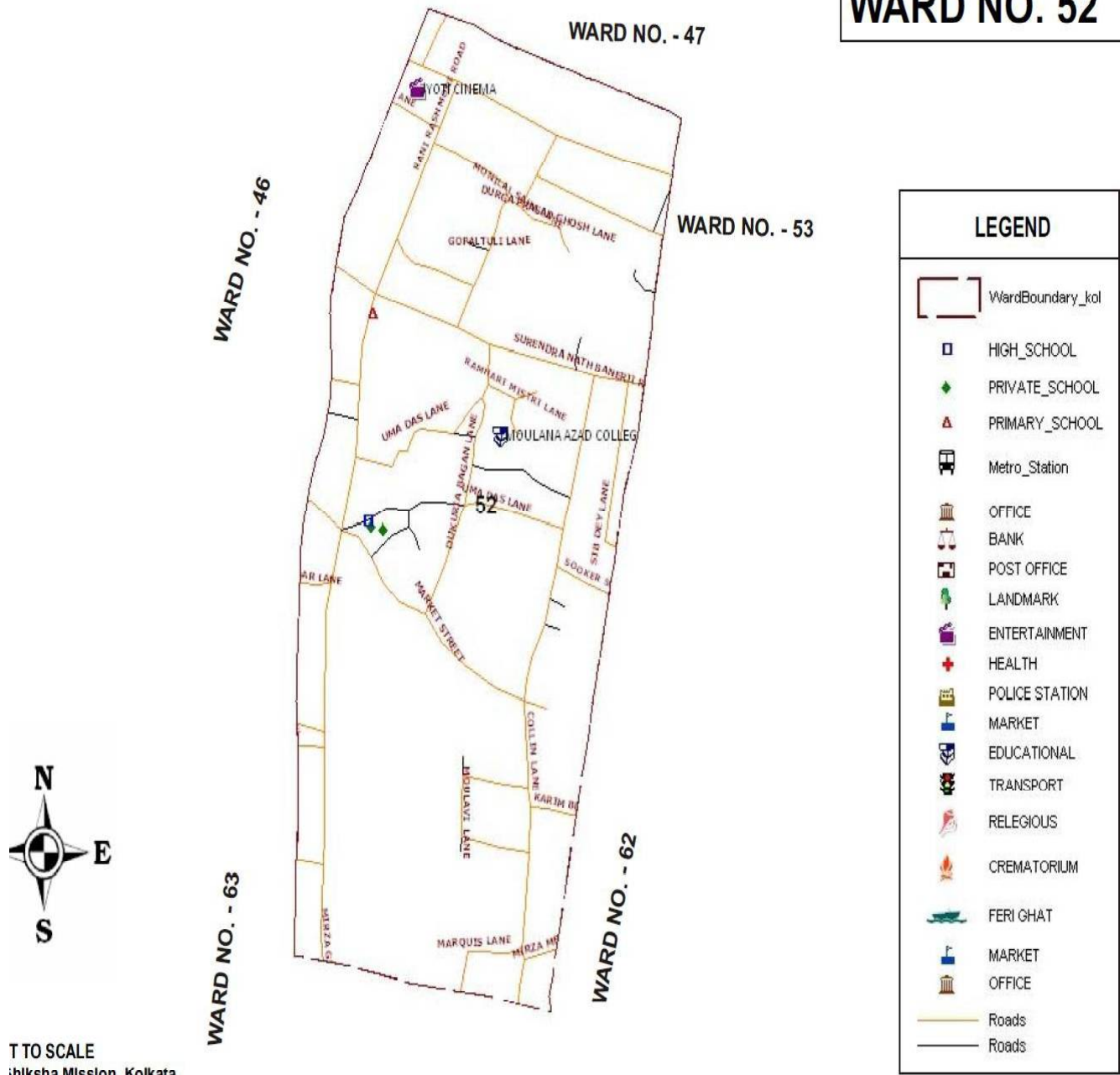
Landscape Diversity: First hand data not taken yet. Participants: STATISTICS Students. Guide: Dr. S. Panda (Botany).



3. Landscape Diversity

- Introduction about landscape of Ward with map

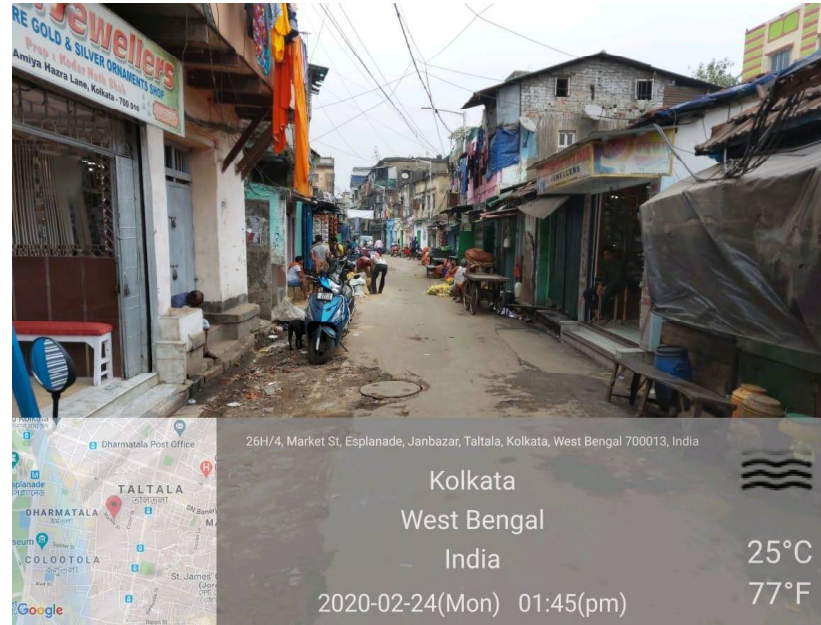
WARD NO. 52



NOT TO SCALE
ihksha Mission, Kolkata

3. Landscape Diversity

Sl. No.	Types / specification of Landscape elements	Area	Ownership	Feature of the landscape elements	use pattern	History of change of ownership (if any)
1.	Maulana Azad College. 8 Rafi Ahmed Kidwai Rd.	Approx.2 acre land.	Higher Education Department, Govt. of West Bengal	3-storied Heritage Building consisting of 27 Room, 1 big Hall, 4 Garden incl. one Medicinal Plant Garden.	Centre of learning excellency since 1926.	
2.	Prabhu Jisur Girja	Approx. 2 acre land.	Controlled and maintained by Church of North India.	3 big buildings under Girja.	Mainly for the purpose of prayers by the local Christians, and also montesory education for poor children.	
3.	Mahishadal House	Approx. 1.5 acre land.	Private property of Mahishadal Raja.	Protected place of Mahishadal House authority.	Business	
4.	Metalled Road	4 (small & big)	Govt of West Bengal.	Concrete & Pitched Roads.	Public transport.	
5.	Lanes	14	Govt of West Bengal.	Mostly concrete-made; some pitched.	Public transport & walking.	
6.	Tram Lines	4	Govt of West Bengal.	Concrete Rd with Tram lines.	do	



3. Lifescape Diversity

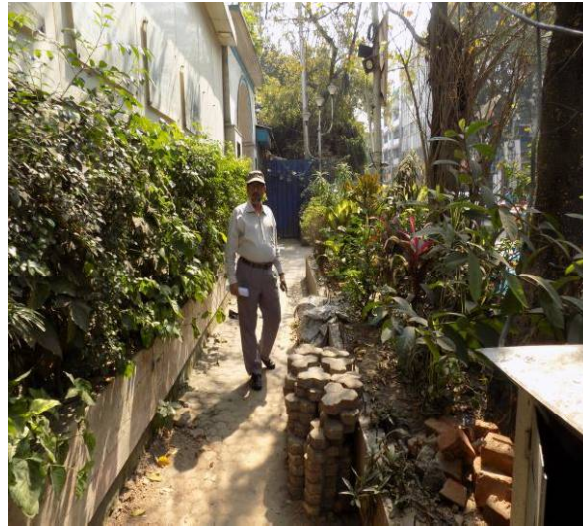
3.1. Agricultural Diversity (Paddy) [If any] NIL

3.2. Agricultural Diversity (Other than paddy) [If any] / Horticultural Diversity/Kitchen Garden/Ornamental diversity

Sl. No.	Name of the variety	Characteristics	Method of cultivation/ plantation	Advantages and disadvantages of the variety	Present status of cultivation (with reason)	Availability at present (Locality)
1.	Tomato-orange round.	Oval-rounded, orange	Planted from seedlings.	Adv. 2-3 kg yield per plant Disadv. more water required.	Very small area at Maulana Azad College Garden—1 decimal area.	Maulana Azad College; Collin street as Kitchen Garden.
2.	Canna indica (Kalabati) –Yellow & Red varieties.	Yellow & Red flowers seen	From tubers	Plants are grown in less water & shady areas.	Maulana Azad College Gardens (4 decimal area)	Maulana Azad College, Kolkata.
3.	Grand Crinum Lily/Spider lily/Poison bulb (<i>Crinum asiaticum</i> L.)	White flowers	From bulbs	Shady & wet places	Maulana Azad College Gardens.	Maulana Azad College, Kolkata.
4.	Adenium (<i>Adenium obesum</i>)	Pink, reddish-pink to light pink flowers	From grafting	Sunny as well as shady places.	Maulana Azad College Garden.	Maulana Azad College, Kolkata.

5.	Patabahar (<i>Codiaeum variegatum</i> (L.) A. Juss.)	Yellow leaves with purple-blackish spots throughout.	From grafting	Sunny as well as shady places.	Maulana Azad College Garden; Prabhu Jisur Girja inside garden; Mahisadal House;	Maulana Azad College; Prabhu Jisur Girja at Rafi Ahmed Kidwai Rd.; Mahisadal House.
6.	Coloured Lantana	Red, yellow & orange flowers.	From Grafting	Sunny as well as shady places.	Maulana Azad College Garden; Prabhu Jisur Girja inside garden.	Maulana Azad College; Prabhu Jisur Girja at Rafi Ahmed Kidwai Rd.
7.	Bagan Jhau (<i>Thuja</i> sp.- Gymnosperms).	Light green leaves with showy plant.	From grafting	Sunny as well as shady places.	Maulana Azad College Garden; Prabhu Jisur Girja inside garden; Mahisadal House;	Maulana Azad College; Prabhu Jisur Girja at Rafi Ahmed Kidwai Rd.; Mahisadal House.
8.	Bougainvillea	Pink and Yellow varieties	From grafting	Sunny as well as shady places.	Do + 24 Market Street, Janbazar	Do +24 Market Street, Janbazar in front of old Masjid.
9.	Marigold	Hybrid variety (Big yellow)	From seeds	Sunny as well as shady places.	Front gate of Muslim Institute; Maulana Azad College 3 rd Garden.	Muslim Institute; Hazi Md. Mohsin Square; Maulana Azad College.

10.	Chinese Tagar (Small)	White flowers	From grafting	Do	Maulana Azad College; Prabhu Jisur Girja.	Maulana Azad College; Prabhu Jisur Girja.
11.	Cycas plants (as ornamental garden)	Brown megasporophylls appearing like snakes	Horticultural breeds	Do	Maulana Azad College; Prabhu Jisur Girja.	Maulana Azad College; Prabhu Jisur Girja.
12.	Kanchan (<i>Bauhinia</i> spp.)	White, pinkish-purple	From grafting	Do	Maulana Azad Colege Garden; Prabhu Jisur Girja; Mahishadal House	Maulana Azad Colege Garden; Prabhu Jisur Girja; Mahishadal House.
13.	Fishtail Palm	Dark green leaves with spines	Horticultural variety	Shady places	Maulana Azad College; Mahishadal House.	Maulana Azad Colege Garden; Prabhu Jisur Girja; Mahishadal House.



3. Lifescape Diversity

3.3. Plant Diversity: MEDICINAL PLANTS

Sl. No.	Local name of the plant	Scientific identity	Indicative Characteristic features / folk description	Habitat	Use	Planted/ natural but grow with care/ wild	Present status	Local Distribution
1.	Basak	<i>Justicia adhatoda</i> (Acanthaceae)	White flowers with purple spots inside; leaves lanceolate.	Grown in dry soil	Leaves extract used to cure cough & cold and throat pain.	Planted at Maulana Azad College Medicinal Plant Garden.	3-4 Plants are seen.	Only seen in MAC Medicinal Plant Garden
2.	Nayantara	<i>Catharanthus roseus</i> (L.) G.Don (Apocynaceae)	2 varieties: Purple-pink & White flowers	Grown in dry as well as wet soil.	<u>Leaves:</u> juice taken in empty stomach in the morning to reduce high blood pressure and to cure diabetes mellitus.	Planted at Maulana Azad College; Prabhu Jisur Girja.	8-10- plants	Maulana Azad College Medicinal Plant Garden; Prabhu Jisur Girja.
3.	Sarpagandha	<i>Rauvolfia serpentina</i> Benth. ex Kurz (Apocynaceae)	White flowers with pinkish brown corolla tube; mature fruits black.	Grown in dry as well as wet soil.	Roots: extracts used to cure high blood pressure, eczema and snake bites.	Planted.	6-7 plants are seen.	Only seen in Maulana Azad College Medicinal Plant Garden.

4.	Swet Chita	<i>Plumbago zeylanica</i> L. (Plumbaginaceae)	White flowers	Grown in dry as well as wet soil.	<u>Roots</u> : extract used to treat piles, diarrhea, leprosy; <u>Leaves</u> : extract applied to cure swelling and elephantiasis.	Planted (Maulana Azad College);	8-10 plants.	Only seen in Maulana Azad College Medicinal Plant Garden.
5.	Rakta Chita	<i>Plumbago indica</i> L. (Plumbaginaceae).	Rose-red flowers.	do	Milky juice from stem and leaves used to treat ophthalmia, scabies and leucoderma.	Planted.	6-7 plants	Only seen in Maulana Azad College Medicinal Plant Garden.
6.	Harjora	<i>Cissus quadrangularis</i> L. (Vitaceae).	4-angled jointed stems with Greenish-white flowers.	Do	Extract of stem with turmeric crushed used to heal bone fracture.	Planted.	3 plants seen	Do
7.	Nishinda	<i>Vitex negundo</i> L. (Lamiaceae)	Purple flowers; leaves aromatic scented on crushing.	Do	Extract of leaves used to treat stomachic, asthma, bronchitis, leucoderma, toothache and promotes growth of	Naturalized	2 plants up to height of 2 m seen.	do

8.	Lajjabati	<i>Mimosa pudica</i> L. (Leguminosae: Mimosoideae).	Capitate inflorescence; corolla pinkish.	Do	hairs. Roots: extract used to treat leprosy, dysentery, uterine complaints.	Naturalized.	3 plants seen.	Only seen in Maulana Azad College Medicinal Plant Garden.
9.	Ghritakumari	<i>Aloe barbadensis</i> Mill. (Syn. <i>Aloe</i> <i>vera</i> L.) (Liliaceae).	Succulent greenish leaves.	Moist places.	Fleshy juice used to cure chronic constipation, piles, menstrual suppressions, abdominal tumors.	Planted.	25-20 plants.	Do
10.	Ramtulsi	<i>Ocimum</i> <i>gratissimum</i> L. (Lamiaceae).	Aromatic scented leaves; corolla greenish-white.	Dry as well as moist places.	Decoction of leaves used to cure septic wounds; leaf- powder smoked to get relief from asthma.	Planted.	7 plants	Do
11.	Thankuni	<i>Centella asiatica</i>	Dark purple	Moist places	Extract of	Planted and	Plenty.	Maulana Azad

		(L.) Urban. (Apiaceae).	flowers with rounded-oval leaves, aromatic scented on crushing.		leaves used to cure weakness, constipation, indigestion, cold & cough, dysentery, jaundice.	naturalized.		College Medicinal Plant Garden; Prabhu Jisur Girja.
12.	Anantamul	<i>Hemidesmus indicus</i> R. Br. (acanthaceae)	Climbing plant with opposite decussate leaves.	Moist & dry places.	Root extract used to cure kidney troubles, chronic rheumatism, syphilis, piles, used to promote production of breast milk.	Planted/naturalized.	7-8 plants	Only seen in Maulana Azad College Medicinal Plant Garden.
13.	Krishna Dhutra	<i>Datura innoxia</i> Mill. (Solanaceae)	Flowers blackish-purple but white inside.	Do	Extract of roots used to treat dogbite, madness.	Planted.	4 plants	Do
14.	Ban dhane	<i>Scoparia dulcis</i> L. (Scrophulariaceae)	Flowers white; leaves sweet in taste.	Moist places	Leaves extract used to cure kidney stone, painful urination, diabetes mellitus.	Wild	Common	Maulana Azad College campus, Muslim Institute, Mahishadal House, Collin

15.	Salparni	<i>Desmodium gangeticum</i> DC. (Fabaceae)	Flowers white	Moist places	Root decoction used to cure piles, asthma, bronchitis and vomiting.	Wild/naturalized	Threatened	street. Maulana Azad College Garden; Muslim Institute.
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*availability/ siting of the plant and change over time (if any) with reasons



3. Lifescape Diversity

3.4. Mushroom / Macro Fungi Diversity

Sl. No.	Local name of the mushroom (Macro Fungi)	Scientific identity	Characteristic features	Habitat	Use	Cultivated/ natural but grow with care/ wild	Present status/ *	Local Distribution	Remarks
1.	----	<i>Polyporus</i> sp.	Blackish-brown fruiting body with numerous pores on ventral side	On fallen woods at MAC Graden	Poisonous	Natural	4-5 seen	Maulana Azad College campus on fallen wood.	
2.		<i>Ganoderma</i> sp.	Blackish-brown fruiting body.	On tree trunk	Poisonous	Natural	1 seen	In front of Muslim Institute on Streblus plant.	
3.		<i>Schizophyllum commune</i>	Grey-white fruiting body	On fallen tree trunk	poisonous	Natural	A small population seen.	Maulana Azad College campus.	

*availability/ siting of the plant and change over time (if any) with reasons



3. Lifescape Diversity

3.3. Plant Diversity: WILD/NATURALIZED PLANTS----HERBS

Sl. No.	Local name of the plant	Scientific identity	Indicative Characteristic features / folk description	Habitat	Use	Planted/ natural but grow with care/ wild	Present status	Local Distribution
1.	Bhui kamri/ Bhuisushni	<i>Evolvulus nummularius</i> L. (Fam. Convolvulaceae)	Repand herbs, generally forming mats along ground with white flowers.	Grown along wet and moist places.	Decoction of leaves mixed with a glass of water used to treat amoebic dysentery.	Wild.	rare	Maulana Azad College Medicinal plant and other 3 gardens; Prabhu Jisur Girja campus.
2.	Durba/Dubo	<i>Cynodon dactylon</i> L. (Fam. Poaceae)	Grown luxuriantly and forming mats on ground.	Very common, found as ground cover	Antidysentric, haematuria, leprosy, conjunctivitis	Wild	Abundant	Sporadic distribution
3.	Creeping lickstoop/Latane Malati(Beng)/	<i>Dentella repens</i> L. (Fam.	Creeping low herb, leaves elliptic/oblong, flowers 1cm long,	Native to India,	-	Wild	Abundant	Maulana Azad College Garden

		Rubiaceae)	yellowish white					
4.	Khet papra	<i>Oldenlandia corymbosa</i> (L.) Lam. (Fam. Rubiaceae)	Erect to decumbent herb with white flowers	Very common and forming ground cover.		wild	abundant	Throughout ward no. 52
5.	Khet papra	<i>Oldenlandia paniculata</i> L. (Fam. Rubiaceae)	Erect herb, mostly along old walls.	Mostly along old walls.		wild	Common	do
6.	Malaysian false pimpernel	<i>Lindernia crustaceae</i> (L.) F. Muell. (Linderniaceae)	Prostrate decumbent herb often forming mats on ground cover; flowers light purple	Common in gardens, parks, along the ban of water bodies, on old walls.		wild	Common	do
7.	Baby jump-up	<i>Macardonia procumbens</i> (Mill.) Small (Fam. Plantaginaceae)	Prostrate decumbent herb forming mats on ground cover, with bright yellow flowers.	Rarely seen in gardens, parks, along the ban of water bodies, on old walls.		wild	Rare	do
8.	Ban Tamak	<i>Nicotiana</i>	Erect stout herb	Rarely seen		wild	Rare	do

		<i>plumbaginifolia</i> Viv. (Fam. Solanaceae)	with mucilaginous adhesive throughout, and white tubular corolla.	in gradens, park, road side, mostly during rainy season.				
9.	Berela/Atibala	<i>Sida rhombifolia</i> L. (Fam. Malvaceae)	Erect bush-forming herb to dwarf shrub with pale orange corolla	Common in gardens, parks, along road side, lawns.	Decoction of roots mixed with cow milk administered to drin to relieve rom rheumatic pain and Leucorrhoea	wild	common	do
10.	Amrul shak	<i>Oxalis corniculata</i> L. (Fam. Oxalidaceae)	Prostrate decumbent mat forming herbs, often seen in gardens, parks, lawns. <i>Leaves taste sour due to presence of oxalic acid.</i>	Common in gardens, parks, along road side, lawns.	Extract juice from the leaves & stems used to treat dysentery, piles and diarrhea.	wild	common	do
11.	Fringed Spider	<i>Cleome ruidosperma</i>	Erect soft plant with light purple	Common in gardens,		Introduced/naturalized	common	do

	flower	DC. (Fam. Cleomaceae)	corolla.	parks, along road side, lawns.		invasive plant.		
12.	Parashi	<i>Cleome icosandra L.</i> (Syn. <i>Cleome viscosa L.</i>) Fam. Cleomaceae	Erect stout herb with golden yellow corolla; pungent scented.	Rarely seen in gardens, parks, along road side, lawns.	Decoction of leaves used to cure blood dysentery.	Wild	Rare	do
13.	Kesud	<i>Eclipta prostrate (L.) L.</i> Fam. Asteraceae	Erect as well as prostrate herb with white capitulum inflorescence.	Rarely seen in gardens, parks, along road side, lawns.	Leaf-juice used to treat asthma, bronchitis, on scalp of head to grow new hairs.	wild	common	do
14.	Indian Field Cress	<i>Rorippa indica (L.) Hiern</i> (Fam. Brassicaceae)	Erect herb with linear green fruits and yellow flowers.	Rarely seen in gardens, parks, along road side, lawns.	Leaves are used as vegetables as selling in the Market.	Wild/naturalized	Rarely seen.	do
15	Chhotsibjata/Pindi	<i>Rungia pectinata (L.) Nees.</i> (Fam.	Prostrate decumbent mat forming herb with	Rarely seen in gardens, parks, along	Extract of leaves given to the children	Wild/naturalized	Rarely seen.	do

		Acanthaceae)	bluish-purple corolla.	road side, lawns.	suffering small pox.			
16	Kakmachhi	<i>Solanum nigrum</i> L. (Fam. Solanaceae)	Erect bushy much branched herb with white flowers and round-shaped berries.	Commonly seen in gardens, parks and lawns .	Extract of leaves used to treat asthma, bronchitis, gout, dysentery and kidney trouble.	Wild/naturalized	Rarely seen.	do
17	Ban Notey	<i>Amaranthus viridis</i> L. Fam. Amaranthaceae	Erect dwarf shrub to herb with dark-purple inflorescence without spines.	rarely seen in gardens, parks and lawns .	Extract of leaves and stems used to cure stomachic, colitis, piles, bronchitis, and to improve appetite.	Wild/naturalized	Rarely seen.	do
18	Kanta Notey	<i>Amaranthus spinosus</i> L. Fam. Amaranthaceae	Erect dwarf shrub to herb with pale green inflorescence with spines.	rarely seen in gardens, parks and lawns .	Extract of leaves and stems used to cure stomachic, colitis, piles,	Wild/naturalized	Rarely seen.	do

					bronchitis, and to improve appetite.			
19	Kansira	<i>Commelina benghalensis</i> L. (Fam. Commelinaceae)	Prostrate soft mat forming herb with bluish-purple corolla.	Rarely seen in gardens, parks and lawns .	Extract of whole plants used to treat leprosy, rheumatic pain, ringworm and eczema.	Wild/naturalized	Rarely seen.	do
20	Bara Dudhe	<i>Euphorbia hirta</i> L. Fam. Euphorbiaceae	Prostrate decumbent herb with dull brown inflorescence.	Rarely seen in gardens, parks and lawns.	Extract of whole plants used to treat dysentery, diarrhea and colic.	Wild/naturalized	Rarely seen.	do
21	Indian Goose grass	<i>Eleusine indica</i> (L.) Gaertn. Fam. Poaceae	Erect herb with 3-6 spikelet branches at top.	commonly seen in gardens, parks and lawns.		Wild/naturalized	Common.	do
22	Sanchi	<i>Alternanthera sessilis</i> DC.	Prostrate mat form herb with	commonly seen in	Extract of whole plant	Wild/naturalized	Common.	do

		(Fam. Amaranthaceae)	white papery bracteates inflorescence.	gardens, parks and lawns.	used to treat night blindness and snake bites			
23	Khokli/ Buno Muktojhuri	<i>Acalypha indica</i> L. (Fam. Euphorbiaceae)	Erect stout herb with broadly ovate lamina and greenish leafy inflorescence bracts.	Commonly seen in gardens, parks, lawns.	Extract of leaves used to treat gastro-intestinal irritant, constipation and stomach ulcer.	Wild/Naturalized	Common	do
24	Bhui amla	<i>Phyllanthus fraternus</i> Webster Fam. Phyllanthaceae	Erect herb with greenish flowers.	Commonly seen in gardens, parks, lawns.	Extract of whole plant used to treat dysentery and genitor-urinary problem.	Wild/Naturalized	Common	do
25.		<i>Pouzolzia zeylanica</i> (L.) Benn. Fam. Urticaceae	Erect herb with shiny leaves and dark brown flowers	Commonly seen in gardens, parks, lawns.		Wild/Naturalized	Common	do



3. Lifescape Diversity

3.4. TREES

Sl. No.	Local name	Scientific identity	Indicative characteristic features/folk description	Habitat	Importance	Present status	Local distribution
1	Shimul	<i>Bombax ceiba</i> L. Fam. Malvaceae	Tall tree with root buttresses and blood red flowers during February-March.	Tall tree along road side, inside Garden corner.	Provides shelter and nests for more than 10 spp. of birds and other insects.	Total 17 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House and MAC Garden
2	Aam	<i>Mangifera indica</i> L. Fam. Anacardiaceae	Tall bushy much-branched tree with scented greenish-yellow flowers during February-March.	along road side, inside Garden corner.	Provides shelter and nests for several spp. of birds, squirrels, lizards, snakes and other insects.	Total 24 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House and MAC Garden.
3	Debdaru	<i>Polyalthia longifolia</i> Sonn. Fam. Annonaceae	Tall showy tree.	along road side, inside Garden corner.	Provides shelter for several spp. of birds, squirrels, lizards, snakes and other insects.	Total 32 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House and MAC Garden.

4	Royal Palm	<i>Roystonea regia</i> (Kunth) O.F.Cook Fam. Arecaceae	Tall straight tree with top canopy and branches.	along road side, inside Garden corner.	Provides shelter for squirrels, lizards, Woodpecker and several spp. of insects.	Total 14 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House and MAC Garden.
5	Mahua	<i>Madhuca longifolia</i> (J.Konig) J.F.Macbr. Fam. Sapotaceae	Tall bushy much branched tree with scented flowers and fruits during March.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards, Woodpecker, owls, bats (big) and several spp. of insects.	Total 5 trees seen throughout Ward no. 52	Ward no. 52 road side and MAC campus.
6	Bakul	<i>Mimusops elengi</i> L. Fam. Sapotaceae	Bushy dwarf much branched tree with scented grey-white flowers and edible fruits.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards, Woodpecker, owls, bats (big) and several spp. of insects.	Total 14 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim Institute and MAC campus.
7	Portia tree	<i>Thespesia populnea</i> Correa Fam. Malvaceae	Bushy tall much branched tree with beautiful yellow flowers and edible fruits.	along road side, inside Garden and	Provides shelter for several spp. of birds, squirrels, lizards,	Total 8 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim

				park.	and several spp. of insects.		Institute and MAC campus.
8	Sheora	<i>Streblus asper</i> L. Fam. Rutaceae	Bushy dwarf much branched tree with beautiful greenish-yellow flowers and yellow coloured edible fruits.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards including Woodpeckers, snakes, owls and several spp. of insects.	Total 6 trees seen throughout Ward no. 52 <i>But 300 year old big tree seen inside Muslim Institute</i>	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim Institute.
9	Indian Charcoal tree	<i>Trema orientalis</i> (L.) Bl. Fam. Cannabaceae	Bushy dwarf much branched tree with beautiful greenish flowers.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards and several spp. of insects.	Total 8 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim Institute and MAC Garden.
10	Neem	<i>Azadirachta indica</i> A. Juss. Fam. Meliaceae	Tall much branched tree with beautiful greenish-yellow flowers and greenish fruits.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards and several spp. of insects.	Total 9 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim Institute and MAC Garden.
11	Jagydumur	<i>Ficus glomerata</i> Roxb.	Bushy dwarf much branched tree with	along road side, inside	Provides shelter for several spp.	Total 6 trees seen throughout	Ward no. 52 road side, Jisur

		Fam. Moraceae	greenish immature fruits. (leaves shorter)	Garden and park.	of birds, squirrels, lizards and several spp. of insects.	Ward no. 52	Girja, Mahisadal House, Muslim Institute and MAC Garden.
12	Dumur	<i>Ficus hispida</i> L.f. Fam. Moraceae	Bushy dwarf much branched tree with greenish immature fruits. (Leaves larger)	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards and several spp. of insects.	Total 5 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim Institute and MAC Garden.
13	Bot	<i>Ficus benghalensis</i> L. Fam. Moraceae	Bushy tall much branched tree with orange-yellow fruits.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards, ows, bats and several spp. of insects.	Total 12 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim Institute and MAC Garden.
14	Pakur	<i>Ficus religiosa</i> L. Fam. Moraceae	Bushy tall much branched tree with Reddish fruits.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards, ows, bats and several spp. of insects.	Total 10 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim Institute and MAC Garden.
15	Pakur	<i>Ficus rumphii</i> Bl.	Bushy dwarf much	along road	Provides shelter	Total 4 trees	Ward no. 52

		Fam. Moraceae	branched tree with orange-yellow fruits.	side, inside Garden and park.	for several spp. of birds, squirrels, lizards, ows, bats and several spp. of insects.	seen throughout Ward no. 52	road side, Jisur Girja, Mahisadal House, Muslim Institute and MAC Garden.
16	Pepe	<i>Carica papaya</i> L. Fam. Caricaceae	dwarf tree with greenish-yellow flowers.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards, ows, bats and several spp. of insects.	Total 6 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim Institute and MAC Garden.
17	Jarul	<i>Lagerstroemia speciosa</i> (L.) Pers. Fam. Lythraceae	Tall much-branched tree with purple flowers.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards, ows, bats and several spp. of insects.	Total 8 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim Institute and MAC Garden.
18	Kamranga	<i>Averrhoa carambola</i> L. Fam. Oxalidaceae	Dwarf and bushy much-branched tree with purple-brown flowers.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards, ows, bats and several spp. of	Total 2 trees seen throughout Ward no. 52	Jisur Girja, and Muslim Institute.

					insects.		
19	Tecoma	<i>Tecoma stans</i> Kunth Fam. Bignoniaceae	Dwarf much-branched tree with golden yellow flowers.	along road side, inside Garden and park.	Provides shelter for several spp. of birds and several spp. of insects.	Total 3 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House.
20	Cycas	<i>Cycas</i> sp. Fam. Cycadaceae	Dwarf upper crowned small tree.	inside Garden and park.	Provides shelter for several spp. of insects.	Total 9 trees seen throughout Ward no. 52	Jisur Girja, Mahisadal House and MAC Garden.
21	Bon Jhau	<i>Thuja occidentalis</i> L. Fam. Cupressaceae	Dwarf crown-forming tree with blackish-blue cones.	inside Garden and park.	Provides shelter for several spp. of insects.	Total 16 trees seen throughout Ward no. 52	Jisur Girja, Mahisadal House and MAC Garden.
22	Christmas tree	<i>Cryptomaria japonica</i> (L.f.) D.Don Fam. Cupressaceae	Tall crown-forming tree with blackish-brown cones.	inside Garden and park.	Provides shelter for several spp. of insects.	Total 6 trees seen throughout Ward no. 52	Jisur Girja, Mahisadal House and MAC Garden.
23	Bel	<i>Aegle marmelos</i> (L.) Correa Fam. Rutaceae	Dwarf much-branched bush forming tree with greenish-white flowers.	along road side, inside Garden and park.	Provides shelter for several spp. of birds and several spp. of	Total 7 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House and MAC

					insects.		Garden.
24	Siris	<i>Albizia lebbbeck</i> (L.) Benth. Fam. Fabaceae	Tall much-branched canopy forming tree with greenish-white flowers.	along road side, inside Garden and park.	Provides shelter for several spp. of birds and several spp. of insects.	Total 4 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House and MAC Garden.
25	Araucaria	<i>Araucaria araucana</i> Pav. Fam. Araucariaceae	Tall crown-forming tree with blackish-brown cones.	inside Garden and park.	Provides shelter for several spp. of insects.	Total 4 trees seen throughout Ward no. 52	Jisur Girja, Mahisadal House and MAC Garden.
26.	Kathbadam	<i>Terminalia catappa</i> L. Fam. Combretaceae	Tall much-branched bush forming tree.	inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards, ows, bats and several spp. of insects.	Total 2 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja & Mahisadal House.
27.	Chhatim	<i>Alstonia scholaris</i> (L.) R. Br. Fam. Apocynaceae	Dwarf much-branched bush-forming tree with white scented flowers.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards, ows, bats and several spp. of insects.	Total 7 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim Institute and MAC Garden.

28.	Rudra palash	<i>Spathodea campanulata</i> P. Beauv. Fam. Bignoniaceae	Tall much-branched bush-forming tree with red-brown showy flowers.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards, ows, bats and several spp. of insects.	Total 5 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim Institute and MAC Garden.
29	Kadam	<i>Neolamarckiana cadamba</i> (Roxb.) Bosser Fam. Rubiaceae	Tall much-branched bush-forming tree with round heads scented inflorescence.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards, ows, bats and several spp. of insects.	Total 12 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim Institute and MAC Garden.
30	Rabar tree	<i>Ficus elastica</i> Roxb. Fam. Moraceae	Dwarf much-branched bush-forming tree.	along road side, inside Garden and park.	Provides shelter for several spp. of birds, squirrels, lizards, ows, bats and several spp. of insects.	Total 6 trees seen throughout Ward no. 52	Ward no. 52 road side, Jisur Girja, Mahisadal House, Muslim Institute and MAC Garden.





3. Lifescape Diversity

3.5. INVASIVE PLANT SPECIES

Sl. No.	Local name	Scientific identity	Indicative characteristic features/folk description	Habitat	Importance	Present status	Local distribution
1	Uchunti	<i>Ageratum conyzoides</i> L. Fam. Asteraceae <i>(native of Mexico & Central American Plant)</i>	Erect herb with light purple to white capitulum, opposite leaf phyllotaxy.	Along old moist walls, gardens, park	Reducing the growth of native species.	plenty	Throughout Ward no 52 every where.
2	Chhoto Kuksime	<i>Vernonia cinerea</i> L. Fam. Asteraceae <i>(native of Mexico & Central American Plant)</i>	Erect herb with dark purple capitulum, alternate leaf phyllotaxy	Along old moist walls, gardens, park	Reducing the growth of native species.	plenty	Throughout Ward no 52 every where.
3	Phutium	<i>Bidens pilosa</i> L. Fam. Asteraceae <i>(native of Central American Plant)</i>	Erect herb with pale yellow capitulum, compound leaves.	Along old moist walls, gardens, park	Reducing the growth of native species.	plenty	Throughout Ward no 52 every where.

4	Rabanlata	<i>Mikania macrantha</i> Kunth Fam. Asteraceae <i>(native of Central American Plant)</i>	climbingt shrub with greenish-white capitulum, simple leaves.	Along old moist walls, climbing along trees of gardens & parks.	Reducing the growth of native species.	plenty	Throughout Ward no 52 every where.
5	Putus	<i>Lantana camara</i> L. Fam. Verbenaceae <i>(native of Central American Plant)</i>	Erect shrub with curved thorny stem and branches; colourful corolla ranging from yellow, red to orange.	Road side corners, gardens and park, on old walls.	Reducing the growth of native species.	plenty	Throughout Ward no 52 every where.
6		<i>Cleome rutidosperma</i> DC. Fam. Cleomaceae	Erect herb with purple corolla, trifoliate compound leaves.	Along old moist walls, gardens, park	Reducing the growth of native species.	plenty	Throughout Ward no 52 every where.
7	Chaanchi	<i>Alternanthera tenella</i> Colla Fam. Amaranthaceae <i>(Central Americal plant)</i>	Mat forming herbs with white papery flowers.	Along old moist walls, gardens, park	Reducing the growth of native species.	plenty	Throughout Ward no 52 every where.



3. Lifescape Diversity

3.5. Animal Diversity : Wild

Sl. No.	Local name	Scientific Identity	Indicative Characteristic features / folk description	Habitat	Importance	Present status*	Local Distribution	Remarks
1.	Kathberali	Three striped palm Squirrel <i>Psittacula krameri</i>	Grey body with three striped.	Mahua Tree of Maulana Azad College, Kolkata	Pollinating Mahua flowers	2 seen	All over on big trees in and around Ward No. 52. Maulana Azad College Campus.	
2.	Kak (House Crow)	<i>Corvus splendens</i>	Entirely black body	Very common throughout Ward no. 52. Nests seen on big trees.	Clearing all dead & rotten bodies as "Scavengers"	Plenty	Throughout Ward No. 52.	
3.	Pecha (Owl) (Laxmi Pecha)/ Eastern Barn Owl	Order: <i>Strigiformes</i> (<i>Tyto javanica</i>)	Grey-brown body with white mouth	Old building holes	Lowering rat populations.	Rarely seen.	Maulana Azad college Campus; Throughout other areas especially on the old buildings of Ward No. 52.	

4.	Cheel/Black Kite	<i>Milvus migrans</i>	Pale-Black body.	Nests seen on old trees	As scavengers.	Plenty.	Throughout Ward No. 52.
5.	Kokil/Asian Koel	<i>Eudynamis scolopacea</i>	Entirely Black Body.	often seen during February-March.	Indicating spring time.	Common during February-March.	Throughout Ward No. 52.
6.	Spotted Dove/Chhite Ghughu	<i>Sreptopelia chinensis</i>	Greyish-brown body	Not common	Not known	Not common	Throughout Ward no. 52 (Maulana Azad College, Muslim Institute, Mahishadal House, on the branches of trees)
7.	House sparrow/ Chhoti Charai	<i>Passer domesticus</i>	Grey-brown body	Common	Not known	Common	Throughout Ward no. 52: Maulana Azad College campus trees; Muslim Institute Sheora tree; road side trees.
8.	Red-Vented Bulbul/Bulbul	<i>Pycnonotus cafer</i>	Black body with red vent	Often seen on tree branches.	Not known	Not common	Do.
9.	Common Myna/Salik	<i>Acridotheres tristis</i>	Grey/pale Brown body	Do	Do	Common	Do

10.	Asian Pied Starling/Guye Salik	<i>Sturnus contra</i>	Blackish-white body	Rarely seen	Do	Threatened	Do	
11.	Woodpecker [Common Golden back woodpecker]	<i>Dinopium</i> sp. Family: Picidae	Orange-yellow body with red head and white neck; tail black.	Often seen after 4 PM regularly on palm tree.	It is eating larvae of some unknown insects from Bar of the tree.	Not seen in other areas.	Maulana Azad College Campus 2 nd Garden Palm Tree.	
12.	Indian Flying Fox/Frugivorous Bat (Big)	Order: Chiroptera [<i>Pteropus</i> sp.]	Black body with orange-yellow ventral side.	Maulana Azad College, Mahua tree.	Fruits eating mammals (Mahua, Kadam, mango etc) <u>Role:</u> <i>Pollinating flowers.</i>	Rare & Threatened.	seen on the branches of Mahua plant of Mulana Azad College; Muslim Institute; Prabhu Jisur Girja campus; Mahisadal House.	
13.	Moutusi /Sunbird	Order: Passerine <i>Cinnyris asiaticus</i>	Grey yellow ventrally, brownish back with long pointed bill.	Maulana Azad College Mahua plant.	<i>Pollinating flowers</i>	Threatened.	Maulana Azad College, Kolkata.	
14.	Bar-winged Prinia	<i>Prinia familiaris</i> Fam. <i>Cisticolidae</i>	Greyish-brown body with white ventral surface	MAC Medicinal plant Garden	<i>Insect eaters</i>	Very rare	Maulana Azad College Medicinal plant Garden.	

15.	Magpie Robin	<i>Copsychus saularis</i> Fam. Muscicapidae	Bluish-black on the dorsal side. White on the ventral side.	Mango tree MAC Medicinal plant Mango tree.	<i>Insect eaters</i>	Common	Maulana Azad College Campus Garden.
16.	Copper smith Barbet/Basanta bouri	<i>Megalaima</i> sp. Fam. Megalaimidae	Olive-Green body with crimson forehead & throat, red spot on the forehead.	MAC Mahua Plant	<i>Insect & fruit eaters</i>	Common.	Maulana Azad College; Muslim Institute; Mahisadal House; Collin street.
17.	Tiktiki (House Gecko)	<i>Hemidactylus flaviviridis</i> Fam. Geckkonidae	Pale yellowish brown body with pentadactylus limb & clawed digits.	MAC Class rooms	<i>Insect eaters</i>	Common	Inside and outside house throughout Ward no. 52.
16.	Garden Lizard	<i>Calotes</i> sp.	Pale yellowish body with black transverse bars.	MAC Medicinal Plant Garden.	<i>Insect eaters</i>	Rarely seen.	Maulana Azad College; Muslim Institute; Mahisadal House.
17.	Dhere Indur (Rat)	<i>Bandicota bengalensis</i>	Ash colour body; big sized.	MAC 1 st Garden	<i>Plant roots, tubers, waste foods</i>	Common	Maulana Azad College; Muslim Institute; Mahisadal House; Collin street.

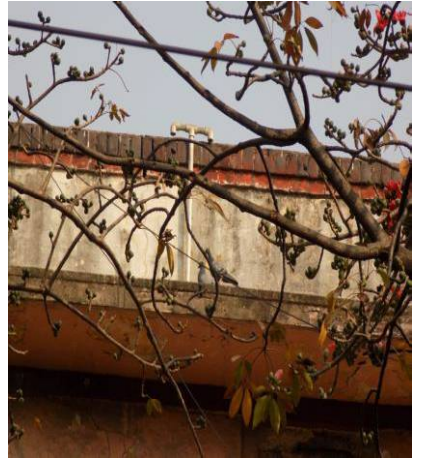
18.	Chhucho	<i>Talpa</i> sp. Fam. Talpidae	Dark brown body	Botany Department	Waste foods; earthworms, insect & centipede.	Common	Throughout Ward no. 52.	
19.	Mete Sap		Grey-yellow body with small round spots	MAC Medicinal plant garden	Small frogs, toad	Not common	Maulana Azad College; Muslim Institute; Mahisadal House and road side trees.	
19.	Kecho (Earthworm)	<i>Lumbricus terrestris</i> Order: Opisthopora	Blackish-brown body.	Do	Organic matters & small microbes found in soil.	Common	Maulana Azad College; Muslim Institute; Mahisadal House and road side trees.	
20.	Arshola (Cockroach)	<i>Periplanata americana</i> Order. Blattodea.	Redish-brown winged body.	Througout ward no. 52	Eating small dead insects and waste foods.	Common	Do.	
21.	Dragonfly (Faring)	<i>Sympetrum</i> sp. Order:Odonata	Transparent Brown wing;	Throughout ward no. 52.	Eating mosquitoes, flies and other flying insects.	Common.	Maulana Azad College Garden.	

22.	Damselfly (Bans Faring)	<i>Ischnura heterosticta</i> Order: Odonata	Green colour body & legs.	Throughout ward no. 52.	Eating leaves juice	Common.	MAC Garden.	
23.	Honey bees	<i>Apis indica</i> Fam. Apidae	Black-yellow body seen inside and on Honey hives on Simul tree, MAC.	Honey hives on Simul tree, MAC.	Eating flower nectar.	Common.	MAC Garden, Simul tree.	
24.	Grasshopper	<i>Omocestus viridulus</i> Fam.Orthoptera	Green body and legs.	Mac Garden, Muslim institute park, Jisur Girja Garden	Eating Leaf juice.	Common	Throughout ward no. 52 (Park, garden etc).	
25.	Toad (kuno beng)	<i>Duttaphrynus melanostictus</i> Order. Anura	Dark brownish-yellow body.	Mac Gardens, old house corners.	Eating small insects.	Common	Do.	
26.	Bham Beral/Civet cat	<i>Viverricula</i> sp.	Greyish-yellow with blackish stripes and long tail.	Mac campus	IUCN Red listed	Rarely seen during night.	Throughout ward no. 52, especially in old and broken buildings.	
27.	Prajapati/ Butterflies	6 spp.	Black-white (common crow), orange and black (Common Tiger), White.	Road side trees, gardens and parks.	Common	Mostly seen inside MAC Medicinal	Do	

28.	Black Ant	Family: Formicidae	Shiny black body.	Along trunk of Simul and Mahua trees, Maulana Azad College Garden.	Common.	Garden. Mostly seen in Maulana Azad College Campus Garden.	Do.	
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*availability/ siting of the animal and change over time (if any) with reasons





3. Lifescape Diversity

3.6. Animals Diversity (Domesticated)

Sl. No.	Name of the breed	Indicative characteristics	Importance: advantages and disadvantages of domestication of breed	Source of the breeds	Opinions(if any) of the locals on changing pattern of domestication	Availability	Remarks
1.	Kukur (Dog)	Neri/Road side sheltered	Mainly act as “scavengers”, night guard for a particular area.	Desi-domesticated	Their number is increasing day by day, KMC should look after this matter.	Plenty; every locality throughout Ward no.52.	
2.	Goru (Cow)	i. <i>Bangla</i> —body rectangular, small head, long snout, strong neck. ii. <i>Punjab/Bihar</i> —Reddish-brown colour, often black with white belts.	i. milk production is less, however cost to look after---less. ii. Milk production is high and cost is also high.	i. Indigenous to West Bengal. ii. Taken from Punjab & Bihar	Maintaining cost for Bihar/Punjab breed is too high compare to milk production, rather Desi-Bangla breed is better (mostly interviewed).	Available on the street (Collin street, Rafi Ahmed Kidwai Rd, Muslim Institute area), on open grounds/wastelands.	
3.	Beral (Cat)	i. Feral Cat—strong flexible body; sharp teeth & Claws; usually white in colour, rarely black.	Decreasing rat population throughout Ward no. 52. Still they are disturbing local people by eating their foods.	Feral Cat	Their number is increased compare to last 10 years. KMC should look after the matter.	Plenty; mostly seen on streets, old building corners, walls etc.	

4.	Murgi (Hen)	<p>i.Poultry—Small compact light body.</p> <p>ii.Desi—small head with well set comb.</p>	These are main protein food for local people.	<p>i.Poultry</p> <p>ii.Desi</p>	<p>i. price is going to be increased day by day</p> <p>ii. less available compare to its demand and price is increased.</p>	<p>i.available at every Chicen Meat Shop</p> <p>ii.available on the street; in front of house and inside cage of Chicen Shop</p>	
5.	Hans (Duck)	<p>i.<i>Gadwall</i>—Elongated, broad body; bill broad; wing long and smooth.</p> <p>ii.<i>Pintail</i>—slightly shorter with strong scaly legs; wing short & pointed.</p>	These are domesticated for the purpose of supplementary protein food purpose.	<p>i.Gadwal</p> <p>ii.Pintail</p>	Maintaing cost is too high than market demand.	Earlier Ducks were plenty, even at every house, but now it is domesticated by a few local people.	
6.	Chhagal (Goat)	<p>i.<i>Jumnapari</i>—long ears with short horns, upward curved tail, various colours—black, white and brown.</p> <p>ii.<i>Nabad</i>—Long hairs with short horns but but body</p>	These are domesticated for their meats. But price is too high.	<p>i.<i>Jumnapari</i></p> <p>ii.<i>Nabad</i></p>	Due to high price maret demand is going to be less.	Earlier Desi Goat was domesticated at every house, but recently due to high maintaining cost, people are not interested to rear goats at their house. And main problem	

		hairs are long.				is shortage of Goat-huts.	
7.	Tia (Rose-ringed Parrot)	Rose-ringed—green coloured body with red beak and rose-ring neck.	Domesticated inside cage by very few people.	Rose-ring	Maintaining cost is high, so people are not interested.	People are thinking caged birds are not good for conservation, it is better birds must be inside their nests of trees.	
8.	Badar (Monkey)	Grey-brown--	Domesticated and trained one for the purpose of livelihood.	Grey brown	Maintaining cost is high.	Earlier monkeys were seen plenty on the nearby trees, but now their number is decreased due to rapid urbanization.	
9.	Badri –5-Breeds (Parrot)	4- breeds: yellow, blue, green with black stripes, grey-white	Domesticated At the house of Sumit Routh, Maulana Azad College Campus Quarter	4- breeds: yellow, blue, green with black stripes, grey-white	Maintaining cost is high.	This is a breed	



4. Peoplescape Diversity

4.1. Primary user group

Sl. No.	Primary user group	Biodiversity resources used for livelihood
1.	Collin Street: Marowari community	1. Maize (<i>Zea mays</i> L.)---Bhutta (Source: College Street)
2.	8, Rafi Ahmed Kidwai Road in front of Maulana Azad College: Majhi community	2. Cucumber (<i>Sasha/Khira</i>)---selling 150-200 pieces per day---earned Rs 350-400 per day as profit, which is the only means of her family livelihood. (Source of Cucumber: Sealdah market).
3.	Janbazar Footpath area: Agarwal Community	3. Fruits Stall (Apple, Oranges, Papaya, banana, Grapes, Mango, Water melon, Quebe)—coming from Jammu & Kashmir, Himachal Pradesh, Nasik & Nagpur (Maharashtra). They earned Rs. 300-500/- per day as profit, which is the means of their livelihood.
4.	Muslim Institute Front Gate: Muslim community	4. Fruit Stall (Apple (Kashmir & Himachal Pradesh), Orange (Nagpur), Papaya (Sealdah market), Grapes (Nasik), banana (Sonarpur)---he earned Rs. 400-500/- per day as profit, which is the only means of livelihood.



4. Peoplescape Diversity

4.3. Knowledgeable persons (traditional knowledge holders related to biodiversity)

Sl. No.	Name and address	Occupation	Nature of their knowledge	Whether this knowledge/ information is being transferred to others
1.	Sri Asim Das (Age: 52) Ward No. 52, Maulana Azad College, Kolata.	Maulana Azad College Gate keeper	<ol style="list-style-type: none"> 1. Earlier and present animals: Bats, kites, Owls 2. Medicinal plants and their uses. 3. Bioresources used in Onkarnath Puja 	Yes. He conveyed these to young generations.
2.	Sri Sumit Rout, Ward No. 52. Maulana Azad College Staff Quarter.	Maulana Azad College	<ol style="list-style-type: none"> 1. Bioresources used during Chhat Puja. 2. Animals: Bat & Bham 	Yes. He conveyed to all.
3.	Smt. Purnima Singh (46) Maulana Azad College Staff Quarter, 8,Rafi Ahmed Kidwai Road. Kolkata-13.	Housewife	<ol style="list-style-type: none"> 1. <u>Animals</u>: Rose-ringed Parrot, Bats (one week interval seen), Owl (often come on bat trees), Kathberali, Chandrabora snake, Munia bird (she caught), Ghighu, Dove 2. Medicinal plants. 	She conveyed to all.



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9, Rafi Ahmed Kidwai Road Kolkata 700013, (Opp-Crown Cinema), Janbazar, Taltala, Kolkata, West Bengal, 700013, India

Kolkata
West Bengal
India

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4. Peoplescape Diversity

4.4. Rituals and festivals related to biodiversity

Sl. No.	Name of the ritual/ festival	Communities who perform/participate in/ celebrate the ritual/ festival	Time period of ritual/ festival	Bioresources utilized in ritual/ festival	Socio-cultural significance of the bioresource	Remarks
1.	Chhat Puja	Bihari Sudra Informant: Smt. Parvati Sharma (Age: 62) Collin Street, near Sonar Bangla Hotel.	3 days during October-November: Evening & Morning.	Theua Ladoo, Banana leaves, Mango leaves, coconut, carrot, cucumber, Sugarcane, rice, turmeric, ginger plant, apple, banana, musambi lebu etc.	Social peace and mental peace of every house must be established in this community.	1. Prior to one week of this Puja, every family must start vegetarian foods. 2. Big Pond or river water needed, so they visit Babughat Ganga river Ghat every year.
2.	OM PUJA/Omkarnath Baba Puja	Kayastha community Informant: Sri Ashim Das (Age: 52) Maulana Azad College gate Keeper.	1 day: Daily Worshipper must read " <i>Gayatri Mantra</i> " daily in front of Baba Omkarnath.	Belpata, Datura flower, Marigold flower.	For peace at home.	

3	Sabeharat	Muslim Community Informant: MD. Shoab Alam (Age: 71). Muslim Institute Lane.	2 days with day time fasting, only during Sabeharat festival time. They need to stay awake during night.	Halwa (Suji)---they eat at night.	Peace at Home.	
4	Sabeharat	Muslim: Sunni community: Informant: MD. Ansar Ali (Age: 55) Maulana Azad College Staff Quarter.	2 days during Sabeharat festival like above.	Halwa (Suji) & Puri.	To respect their ancestors and mental peace at every home.	
5	Kali Puja	Hindu community: Informant: Shurun Singh, Janbazar more, Taltala, Kol-13. Ward no. 52.	1 day at night.	Flowers: Jaba, Dhutra, Akanda & Belpata. 5 types of fruits needed: Apple, Banana, Orange, Potato, Brinjal.	For peace at every home.	



5. Traditional folklore/ lyrics/ songs related to biodiversity

1. Ward No. 52: Maulana Azad College Campus, 8 Rafi Ahmed Kidwai Road, Kolkata:

“Kalmeghe rakta saf, Basake kaf saf, nim jale dub dile chale jay pap”---Smt Purnima Singh (age 46).

2. Ward No. 52: Collin Street, near Sonal Bangla Hotel:

“Pratidin Sakale Belpata khele budhhi bare o Khide pai”----Smt. Shippa Rai (Age: 68)

6. Problems, Planning, Recommendations and Aspirations of the local people regarding biodiversity of the Ward No. 52

i. Smt. Purnima Singh (Maulana Azad College Staff Quarter, Rafi Ahmed Kidwai Road)

Owls and bats are often visiting the banyan tree , mainly to eat fruits, so she recommends to conserve this big Banyan tree, so more than 15 spp. of birds, squirrels, lizards, and snakes can peacefully get shelter here.

ii. Asim Das (Maulana Azad College Gate Keeper)

Big Bats often visit Mahua tree, especially during March-april. Besides, Owl, woodpecker and Kites are also visiting this tree. So he recommend to conserve this tree inside the campus.

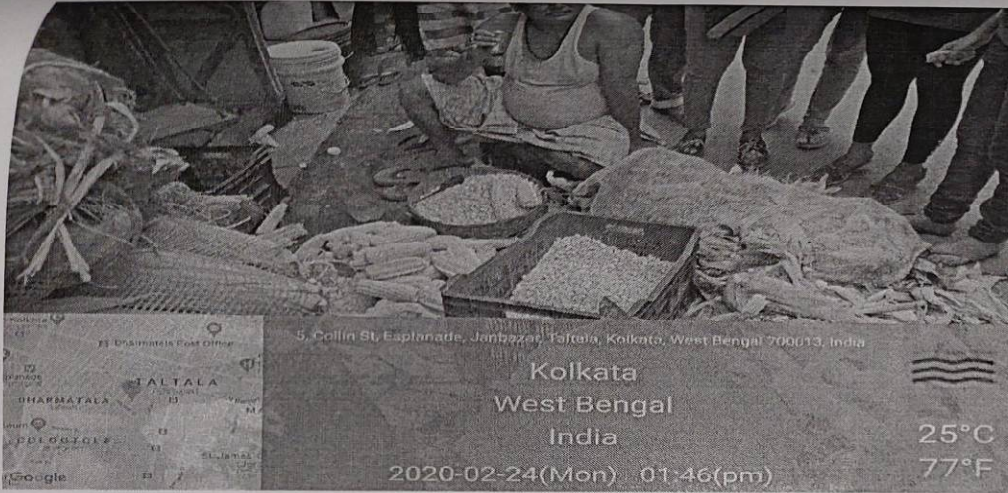
2. Annexures

Market Survey

Sl. No.	Bioresource	Use(s)	Cultivated/ wild and source area	Range of selling price	Remarks
1	Fruits: In front of Muslim Institute gate: Informant: MD. Adris Ali (Age 62). Ward No. 52	Eaten as raw by the local people	Cultivated and coming from outside West Bengal: Apple: Kashmir & Himachal Pradesh Orange: Nagpur (Maharashtra) Grapes: Nasik (Maharashtra) Banana: West Bengal (North & South 24-Pgs) Quebi: Nasik Watermelon: Bihar & WB	Apple: 30 kg per week (profit Rs. 10/ per kg) Orange: 20 dozen per week (profit Rs 12 per dozen) Grapes: 50 kg per week (Profit Rs. 20/- per kg) Water melon: 50 kg per week (profit Rs. 12/- per kg) Banana: 30 dozen per week (profit Rs. 12 per dozen) Quebi: 5 kg per week (profit Rs. 30/- per kg)	His family (consisting of 7 members) is entirely dependent on this bioresource selling.







5, Collin St, Esplanade, Janbazar, Taltala, Kolkata, West Bengal 700013, India

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West Bengal
India

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Kolkata, West Bengal 700016, India

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Principal
Maulana Azad College
Kolkata



[Handwritten Signature]
5/3/2020
Dipak K. Som, W.B.E.S.
Associate Professor of Zoology
Maulana Azad College, Kolkata
Govt of West Bengal

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