

Sipna Shikshan Prasarak Mandal, Amravati's
ARTS, SCIENCE AND COMMERCE COLLEGE

CHIKHALDARA, DISTT. AMRAVATI (Maharashtra State)



CRITERION – VII

7.2 Best Practices

7.21

**Describe Two Best Practices Successfully Implemented
by The Institution as Per NAAC Format Provided in
The Manual**

■ President
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SIPNA SHIKSHAN PRASARAK MANDAL'S AMRAVATI

ARTS, SCIENCE &

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Distt. Amravati (Maharashtra) 444 807
NAAC Reaccredited 3rd Cycle with CGPA 2.77 at grade B++ (2018-2023)

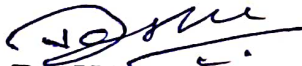
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
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DECLARATION

This is to declare that the information, photos, reports, true copies, numerical data, etc. furnished in this file as supporting documents is verified by IQAC and found correct.


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Sipna Shikshan Prasarak Mandal's, Amravati
ARTS, SCIENCE AND COMMERCE, COLLEGE
CHIKHALDARA, DISTT. AMRAVATI (Maharashtra State)



SUPPORTING DOCUMENTS

Sipna Shikshan Prasarak Mandal, Amravati's
ARTS, SCIENCE AND COMMERCE COLLEGE
CHIKHALDARA, DISTT. AMRAVATI (Maharashtra State)

Metric No. 7.2.1

I N D E X

| Sr. No | Name of Document | Page No. |
|---------------|---|-----------------|
| | Best Practice 1 | |
| 1 | Report of Conservation Medicinal Plants | 6-9 |
| 2 | Reports of Training to the Frontline Staff of Forest Department of Forest, Government of Maharashtra (Last Five Years) | 10-217 |
| 3 | Reports of Save Electricity programme (Last Five Years) | 218-223 |
| 4 | Reports of Plastic Free Environment (Last Five Years) | 224-236 |
| 5 | Reports of Rainwater Harvesting | 237-247 |
| 6 | Report of Census of Heritage Trees of Chikhaldara Area | 248-256 |
| | Best Practice 2 | |
| 7 | Reports of Admission Counselling | 258-276 |
| 8 | Reports of Mentor-Mentee Arts Faculty | 277-281 |
| 9 | Reports of Mentor-Mentee Science Faculty | 282-286 |
| 10 | Reports of Mentor-Mentee Commerce Faculty | 287-292 |
| 11 | Reports of Felicitation of Meritorious Students | 293-297 |
| 12 | Reports of Best Student Award (Last Five Years) | 298-311 |
| 13 | Reports of Admission Abstract Certified by the Affiliating University | 312-316 |

Best Practice 1

Sipna Shikshan Prasarak Mandal Amravati
Arts, Science and Commerce College, Chikhaldara
Department of Botany
A Report
Conservation of Medicinal Plants
2017-2022

Objective :- To Conserve Medicinal Plants

Introduction :

Ethnobotany is the study of how people of a particular culture and region make use of indigenous (native) plants. Ethnobotany is a scientific discipline that comprises the study of human interaction with plants. It mainly focuses on the study of a region's plants along with the practical knowledge of those plants with the help of the traditional knowledge of local people and their culture. Edward Palmer - Father of Ethnobotany. Ethnobotany studies plants and their relationship to humans. The medical ethnobotany of India is the study of Indian medicinal plants and their traditional uses. Plants have been used in the Indian subcontinent for treatment of disease and health maintenance for thousands of years, and remain important staples of health and folk medicine for millions.

Conservation of Medicinal Plants :

Arts , Science and Commerce College Chikhaldara , Department of Botany runs Certificate Course in Ethnobotany for the students of Botany from the academic year 2013-14 . Under the title of this course the department propagate some local indigenous medicinal plants distributed in Melghat Forest , some important plants conserved are.

| Sr. No. | Scientific Name | Local Name | Current status of plant as per IUCN data |
|---------|-------------------------------|----------------|--|
| 1 | <i>Adhatoda vasica</i> | Vasak | Rare |
| 2 | <i>Phyllanthus amarus</i> | Bhuawala | Rare |
| 3 | <i>Plumbago zeylanica</i> | Chitrak | Endangered |
| 4 | <i>Tinospora cordifolia</i> | Giloy / Gulwel | Common |
| 5 | <i>Curcuma amada</i> | Ran Ambe Halad | Endemic / Rare |
| 6 | <i>Curcuma pseudomontana</i> | Wild Curcuma | Endemic |
| 7 | <i>Tectaria crenata</i> | Bachnag | Rare |
| 8 | <i>Costus Speciosus</i> | Ran adrak | Rare |
| 9 | <i>Asparagus speciosus</i> | Shatawari | Endemic |
| 10 | <i>Argeria nervosa</i> | Samudrashosh | Rare |
| 11 | <i>Ruta graveolens</i> | Satap | Endemic |
| 12 | <i>Gymnema sylvestris</i> | Gudmar | Rare , Endemic |
| 13 | <i>Four species of Ocimum</i> | Tulas | Common |

| | | | |
|----|------------------------------|--------------|----------------|
| 14 | <i>Cymbopogon citratus</i> | Gawati chah | Endemic |
| 15 | <i>Piper longum</i> | Lendi pimpri | Endemic |
| 16 | <i>Iphiginia staluta</i> | Wild garlic | Rare |
| 17 | <i>Alove Vera</i> | Korphad | Common |
| 18 | <i>Andropogon paniculata</i> | Bhui neema | Rare |
| 19 | <i>Eugenia jambolana</i> | Jamun | Common |
| 20 | <i>Vitiveria zizanioides</i> | Khus | Rare |

Propogation, conservation and sharing knowledge is very important. We have developed a ethnobotany garden at Alladoh College campus. Students studied propogation and conservation practically.

Conservation Practices:

- Selection of medicinal plants from Melghat forest area.
- Utility of medicinal plants by tribes of melghat – Korku , Gond , Bhilla.
- Propagation of selected medicinal as per soil suitability in college campus.
- Seeds collection propagation.
- Vegetative propagation
- Nomenclature and uses of plants display board.
- List of medicinal plants prepared with uses.

Applications / Beneficiary of this Medicinal (Ethnobotanical) Garden :

- ✓ Students of Apiculture , Botany , Environmental Science .
- ✓ Students of Ayurveda.
- ✓ Forest Department field staff.
- ✓ Students of S. G. B. Amravati University Amravati –U. G. and P. G.

| Sr. No. | Academic Year | Beneficiary | | Remark |
|---------|---------------|------------------|--------|--------------|
| | | College Students | Others | |
| 1 | 2017-18 | 20 | 42 | |
| 2 | 2018-19 | 39 | 35 | |
| 3 | 2019-20 | Nil | Nil | COVID period |
| 4 | 2020-21 | Nil | Nil | COVID period |
| 5 | 2021-22 | 51 | 78 | |

Medicinal plants conservation type : Ex situ conservation.


 Principal
PRINCIPAL
 Art, Science & Commerce
 College, Chikhaldara


 Coordinator

Photos :-



Dr. U.R. Kokate Delivering information



Dr. U.R. Kokate Delivering information



Extension Activity Report

"Training to the Frontline staff of Forest Department for Grasslands Management in Protected Areas"



Training by

Prof. G. D. Muratkar

Assist. Prof. & Head Dept. of Environmental Science
Arts, Science & Commerce College, Chikhaldara
Dist. Amravati - 444 807 M.S.

Duration of Activity

2021 - 2022

Department of Environmental Science
Arts, Science & Commerce College, Chikhaldara
Dist. Amravati - 444 807 M.S.

Extension Activity Report

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Dist. Amrava - 444 807 M.S.

Extension Activity Report on Training to the Frontline Forest Staff for Grasslands Management in Protected Areas of India

1. Title

Training to the frontline forest staff for grasslands Management in Protected Areas of India (Kawal Tiger Reserve, Tadoba Andhari Tiger Reserve, Satpuda, Kanha Tiger Reserve MP, Keoladev National Park, Bharatpur, Rajasthan State, Pench Tiger reserve, MP, Melghat Tiger reserve, Maharashtra State).

2. Goal

- To train forest department frontline staff for grassland development and management in Protected Areas of India.
- To develop grazing habitat for herbivores in Protected Areas specially in Tiger Reserve, Sanctuary and National park.

Participants in the field workshop

| Sr. No. | Name of Protected Area | Duration | Beneficiaries | Beneficiary Number |
|---------|---|-----------------------------|---|--------------------|
| 1 | Kawal Tiger Reserve Telangana State | 26 – 27 May 2022 | DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve | 45 |
| 2 | Sanjay Gandhi National Park , Borivili (Mumbai) | November 2020 | DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve | 20 |
| 3 | Tadoba Andhari Tiger Reserve MS | September 2021 to June 2022 | DCF, Field Director, RFO, Section officer, | 25 |
| | | (10 months) | Bit guard of tiger reserve | |

| | | | | |
|----|--|---|---|----|
| 4 | Satpuda Tiger Reserve MP | 22 – 24 October 2021 June 2022 | DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve | 40 |
| 5 | Simlipal Tiger reserve , Orisa | 19 -20 March 22 | DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve | 30 |
| 6 | Pench Tiger Reserve MP | 25 September 2021 1–2 November 2021 | DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve | 30 |
| 7 | Melghat Tiger Reserve Maharashtra State | 27/8/ 21 28/10/21 14/11/21 | DCF, RFO, Section officer, Bit guard of tiger reserve | 25 |
| 8 | Telangana State Forest Academy Telangana State | 22/02/ 22 | DCF, RFO | 45 |
| 9 | Achanakmar Tiger Reserve, Chattisgarh State | December 21 | DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve | 30 |
| 10 | Simlipal Achanakmar Tiger Reserve, Oresa | April 2021 | DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve | 30 |

Concept

Forest Ecosystem in Protected Areas shows distribution of grasslands, the % of forest should be 33% and grasslands 7 % ; but recently grasslands areas are decreasing year by year due to invasion of woody species and invasive weeds. Herbivores require grasslands for grazing, breeding, nesting, hiding habitats for wild habitat management.

Grasses are annual, perennial, soft, coarse, palatable and non palatable. Grasslands are of three types smaller, intermediate and taller. Soil present in forest ecosystem determines composition of grasslands. Fodder value of grasses determined by chemicals, nutrients, fiber % before and after flowering. Grasslands development and management in Protected Areas like Tiger reserve, Sanctuary is important work and to train frontline staff is regular work from 2012.

To know the soil characters, profile for grassland development in natural pastures, degraded areas of forest and lantana removed areas for restoration of grasslands. To manage the grazing, browsing, breeding, nesting habitats.

To train the frontline staff for

- Grasses, weeds and wild leguminous plants identification from forest areas.
- Eradication of weeds from grasses for habitat improvement.
- Brushwood management.
- Geo mapping of grasslands.
- Grasses seeds collection, storage and enrichment.
- Restoration of grasslands.
- Enrichment of grasslands.
- Wild legumes seeds addition in grasslands.
- Soft and coarse feeder herbivores habitat management.
- Ecological restoration of degraded areas by grasslands development.

The Context

The Protected Areas includes Tiger Reserves, National Parks, Wildlife Sanctuaries, the wildlife like Herbivores, Omnivores, Carnivores habited in the protected areas. The grasses are the producers, soil binders, provides chemical energy to the wildlife in the form of fodder species. The protected areas forest are with 2-4.5% grasses naturally it should be 6 %- 7%. Now recently natural grasslands and relocated areas of the Protected Areas are developing in to good grasslands for the herbivores. Grasslands are the green ground cover of protected areas in forest. The grasses are useful for grazing habitat of wildlife (Herbivores). The threats to the grasslands are soil degradation, loss of soil moisture, leach out of nutrients of the soil, forests fires, weed infestation, woody species encroachment, and change in grasslands Composition, exotic species and decrease in nutritive value of the fodder grasses. The faculty member of the department of the college has the good expertise in the grasses, weeds and forests flora identification and their nutritive values.

The grassland management practices includes

1. To give the field training to the forests field staff in the natural grasslands and relocated areas of the Protected Areas in each season of the year.
2. To know the exact area of grassland year wise by demarcation of grassland area by GPS.
3. Grasses identification training to field staff by local names and scientific names.
4. Weeds identification with local names and their flowering season.
5. Browsing species identification with local names.
6. Field training to collect the grasses seeds and wild legumes seeds.
7. Weed eradication programme two times in a year
8. Grasslands enrichment by seed broadcasting in May - June season.
9. Grasses biomass management practices in mosaic pattern.
10. Wild fruit trees identification and addition in relocated areas.
11. Complete training programmes are organized by the CCF & Field Director of the respective Tiger Reserves in each season.

The practices in the field

1. Grasses identification – October.
2. Weeds identification – August.
3. Wild leguminous plants identification –September.
4. Weeds uprooting three times in each year.
5. Grasses seeds collection – September to February.
6. Wild legumes seeds collection - November – December.
7. Grasses seeds addition in selected areas for grassland development.
8. Observation of grasslands.
9. To know the composition of grasslands.
10. Brushwood management to reduce woodland.
11. To prepare grassland management register.

The detailed reports of field workshops for frontline staff are attached in the extension activity report with Text, Images with Geo-tag and appreciation letters.

Results of Extension activity

- Capacity building of frontline staff of Protected Areas.
- Field interventions for habitat improvement in Protected Areas.
- E Herbarium of grasses and identification.
- Documentation of bench marks and results.
- Comparative analysis before and after work.
- Ecological restorations of grasslands.
- Improvement in wildlife habitat.
- Frontline staff get trained for grasslands management.
- Forest Department in India actively participating in grasslands management.

Date : 30.04.22

Place : Chikhaldara

MYL
PRINCIPAL
Art, Science & Commerce
College, Chikhaldara



A handwritten signature in blue ink, appearing to read "G. D. Muratkar".

(G. D. Muratkar)

Grass Expert

Assist Prof. & Head

Department of Environmental Science

Arts, Science & Commerce College, Chikhaldara,

Dist. Amravati.

Grassland Management Recommendations Report

Nauradehi Wildlife Sanctuary (M.P. State)

Date of Visit : July 2021 Observations

Nauradehi Wildlife Sanctuary, covering about 1,197 km² (462 sq mi), is the largest wildlife sanctuary of Madhya Pradesh state in India. This wildlife sanctuary is a part of 5500 km² of forested landscape. It is located in the centre of the state covering parts of Sagar, Damoh, Narsinghpur and Raisen Districts. It is about 90 km from Jabalpur and about 56 km from Sagar.

It is a potential site for the Cheetah Reintroduction in India. The cheetah prey density were reasonable and based on current prey density the area could support about 25 cheetahs. 750 km² area was recommended by relocation of 23 villages. After relocating the species, the site could support over 50 cheetahs and Nauradehi could harbour over 70 individuals.

The wildlife refuge is divided into six ranges,

- Mohli Range
- Singpur Range
- Jhapan Range
- Sarra Range
- D'Gaon Range
- Nauradehi Range

The flora consists of central Indian Monsoon forests, which include tropical dry deciduous forest. Major trees found are teak, saja, dhawda, sal, tendu (Coromandel ebony), bhirra (East Indian satinwood) and mahua. In March the deciduous trees begin to shed their leaves for a hot summer season.

The sanctuary exists as fragmented patches of variable density forest. The sanctuary needs more research and study of its habitats, flora, fauna and avi-fauna.

Grasses of Nauradehi WI Sanctuary

The grasslands are annual as well as perennial with taller and intermediate type. The soil type with texture of clay, silt, loam with black and red colour. The grasses distribution : *Themeda quadrivalvis* (BHOND Grass), *Heteropogon contortus* (Sukra Grass) , *Dicanthium annulatum* (Kandi Grass) , *Chloris barbata*, *Chloris Virgata* (Gondali Grass) , *Aristida funiculata* (Khadda Grass), *Cynodon dactylon* (Duba grass), *Apluda mutica*, *Chrysopogon polyphyllus* (Fulera), *Paspaladium flavedium*, *Setaria pumilla*, *Setaria verticellata*, *Setaria intermedia*, *Eragrostis tenella*, *Eragrostis pilosa*, *Eragrostis tenella*, *Ishaemum pilosum*, *Sehima nervosum*, *Themeda triandra*.

The grasses are annual as well perennial, palatable as well as non palatable.

Annual grasses

Themeda quadrivalvis , *Setaria intermedia*, *Setaria verticellata*, *Setaria pumilla*, *Dactyloptium aegypticum*, *Chloris barbata*, *Chloris virgata*, *Aristida funiculata* , *Eragrostis tenella* , *E. uniolooides* etc.

Perennial Grasses

Dicanthium annulatum, *D. caricosum*, *Cynodon dactylon*, *Vitiveria zizanioides* , *Saccharum spontanium* , *Iselima laxum* , *Coix aquatic*.

Palatable Grasses

Dicanthium annulatum, *D. caricosum*, *Cynodon dactylon*, *Vitiveria zizanioides*, *Saccharum spontanium*, *Iselima laxum*, *Themeda quadrivalvis*, *Setaria intermedia*, *Setaria verticellata*, *Setaria pumilla*, *Chloris barbata*, *Chloris virgate*, *Panicum*, *Elusine indica*, *Digitaria bicornis* etc

Non Palatable grasses

Aristida funiculate, *Aristida hystrax*, *Eragrostris tenella*, *E. unioloides* etc.

Weeds present in grasslands

Cassia tora, *Alternanthera sessalis*, *Alternanthera pungens*, *Parthenium hysterophorus*, *Xanthium strumium*, All species of *Sida* – *S. cordata*, *S. acuta*.

Wild Leguminous plants

Wild arhar (*Atylosia cajanoides*), Wild mungo (*Phaseolus radiates*), *Indigofera* all species.

Browsing Species

Bass (*Dendrocalamus strictus*), *Cassia fistula*, *Oojenia* spp., *Bahunia* all species, *Hardwicikia binnata* etc.

Wild fruit trees

Ber, Awala, Behada, Jamun, *Dyospyrus melanoxylon* (Tendu), all *ficus* spp. Mahua.etc

Importance of grasslands

- Grasses are dynamics, energetics.
- Soil moisture conservation.
- Water conservation.
- Energy flow in ecosystem. □ Food chain, food web.
- Ecological pyramids
- Habitat management – grazing, browsing, nesting, hidden etc
- Ecosystem balance.

Grasslands Observations and Recommendations

Recommendations for each grass land of Relocated site A)

PIPLA

1. Weeds eradication in proper period. July, October and December.
2. The weed eradication should be before fruiting stages.

3. To prepare one observation grasses plot in Badas areas by selecting proper area.
4. Soil Moisture conservation work March- April.
5. Grasses seeds collection of palatable grasses..... Nov. - Dec.

B) VIJNI Rehabilitated grassland area

1. PARTHENIUM HYSTEROPHORUS (Congrass Grass) eradication in proper period.
2. To manage the natural grasses areas like Cynodon barberi and Dicanthium caricosum , Dicanthium annulatum by weed uprooting in suitable period.
3. Enrichment of perennial palatable grasses in July - August.
4. Grasses seed collection. next 4 days.
5. Addition of Bamboo rhizomes by proper planning.

C) RAMPURA

1. To maintain the natural grasses areas by uprooting of invasive weeds in proper period.
2. Parthenium and Sida cordata the dominant weeds should eradicate in next 3-5 years.
3. Management of Calotropis procera a woody species.
4. Bamboo rhizomes addition.... July - August.

D) KUSHYARI AREA

1. Weed eradication in proper way by scientific methodology.
2. Enumeration and propagation of browsing and fruit species from the total relocated area.
3. Grasses seeds collection for enrichment of good , palatable grasses as per soil suitability.
4. Parthenium management in proper period but in complete form.

E) NAURADEHI

1. Best grassland for spotted deer's because of plane areas and Cynodon, Dicanthium as dominant grasses on large %.
2. To develop natural water body in grassland in saucer shaped manner.
3. Weeds Management in proper period.
4. Bamboo shoots/ rhizomes addition... July -August.
5. Management of uprooted weeds.
6. To develop one grasses seed / experimental plot.
7. To conserve and manage wild natural grasses

Common recommendations for Nauradehi Wildlife Sanctuary Grasslands Management

- Conserve old grasslands by proper management interventions.
- Weeds eradication before fruiting.
- Uproot weeds along roadside as well as from inside grasslands.
- After weeds eradication – restoration by good grasses with suitable grasses.
- Brushwood management in suitable season.
- Relief enclosures in grassland in rotational manner.
- Concentrate on wild leguminous plants to maintain positive association and composition of grasslands.
- Site specific interventions' required. □ Identify grasses with local names.
- Ecological restoration by grasses seeds.
- Monitoring of grasslands season wise.
- Documentation of management interventions.
- Training for frontline field staff 2 times per year. □ Geo-mapping of each grassland.

Grasslands Management Protocol for Protected Areas

| Sr. No. | Duration | Intervention | Remarks |
|---------|----------|--|---|
| 1 | March | Geo mapping of grasslands with display boards and well maintain mgt intervention Register and map of each grassland of selected sites for grassland management | To know exact area of grassland and invasive spp invasion. brush woods invasion |

| | | | |
|---|-----------|--|--|
| 2 | September | Grasslands types and composition observation by frontline staff for specific interventions | Taller. Smaller & Intermediate grasslands for Habitat Mgt. |
|---|-----------|--|--|

| | | | |
|---|-----------|---|------------------------------|
| 3 | September | Grasses identification with local names in each locality by frontline staff | To know grasses palatability |
|---|-----------|---|------------------------------|

| | | | |
|---|-------------|---|---|
| 4 | June – July | Weeds identification with local names in each locality by frontline staff | To know threats to grasslands in the form of invasion in grasslands of exotic species |
|---|-------------|---|---|

| | | | |
|---|--------|--|--|
| 5 | August | Wild leguminous plants identification with local names in each locality by frontline staff | Biological N- Fixators which increases fodder value of grasses and soil Chemical Composition |
|---|--------|--|--|

| | | | |
|---|---|---|---|
| 6 | <p>July – First Phase</p> <p>August or September – Second Phase</p> | <p>Uprooting /Eradication of weeds from grasslands like Parthenium , Gajar Grass , Cassia tora etc.</p> | <p>To increase utility index of grasslands by uprooting and restoration(Weeds Uprooting before Fruiting of weeds)</p> |
| 7 | July | <p>Ecological Restoration after weeds uprooting</p> | <p>Restoration by: Grasses Seeds-grasses which are palatable and useful for Herbivores</p> <p>Steps of Restoration a) Site Selection</p> <p>b) Uprooting of weeds / Lantana camara</p> <p>c) Soil observation</p> |

| | | | |
|--|--|--|---|
| | | | <p>texture , Colour</p> <p>d) Grasses Seeds selection & broadcasting in June, July n weeds uprooted areas.</p> <p>e) Or grasses slips plantation select taller fodder grasses in July and add in Weeds uprooted or Lantana removed areas.</p> <p>Grasses Selection – Setaria , Dicanthium , Heteropogon , Chloris , Themeda</p> |
|--|--|--|---|

| | | | |
|---|------------|--|---|
| 8 | June -July | Lantana/ weeds uprooted areas (Site Selection): Ecological Restoration by Grasses Bundles or Pulas with grass seeds stage | <ul style="list-style-type: none"> • Selection of grasses • Monitor fruiting Stage • Cutting of grasses just near ti seeds areas. • Tight bundle • Transport • Add in selected sites in February • Observes results just after rains • After 15 days of rains grasses seeds germination • Serious monitoring by staff. |
|---|------------|--|---|

| | | | |
|----|-----------|---|--|
| 9 | | Ecological restoration in weeds / lantana removal areas | 2 Years |
| 10 | September | Browsing species identification by staff | Useful for browsing herbivores like Gaur , Sambars etc |
| 11 | December | Wild fruit trees identification | Supplementary nutrition for Herbivores |

| | | | |
|----|--------------------------|--|---|
| 12 | Complete Year | Habitats Management Interventions as per Wildlife movement Distribution | Site Specific Interventions |
| 13 | August | Inspection Path in Grasslands | Intensive observations and management by staff frontline guards |
| 14 | September to February | Grasses Seeds Collection by Labours under supervision of Guards./ Deputy Rangers | <ul style="list-style-type: none"> • Grasses Seeds collection bags purchasing by RFO • Marker pens • Diary field • GARASSES SEEDS COLLECTION- Setaria , Dicanthium , Chloris , Digitaria , Themeda , Heteropogon , Chrysopogon etc |
| 15 | | Grasses seeds drying | <ul style="list-style-type: none"> • Prepare wholes to seeds collection bags • Dry in direct sunlight for 10 days |

| | | | |
|----|-------------------|--|--|
| | | | <ul style="list-style-type: none"> • Dry seeds in open condition by covering seeds for 4 days • Store with grasses names , GPS , Dates labels. |
| 16 | May 25 to June 15 | Enrichment of grasslands in selected sites with protection and observations | Observe grasses seeds germination after 12 days under observation of guards and its images in Notecam |
| 17 | May-June | Fodder grasses standard grass plot/ Nursery to be prepared by Labours under supervision of RFO | <p>Steps</p> <ol style="list-style-type: none"> 1. Site selection 2. Grasses selection 3. Setaria , Dicanthium , Chloris, Digitaria, Themeda , Heteropogon , Chrysopogon etc 4. Demarcation pf plots with inspection path. 5. May 25th Grasses broadcasting in selected plots 6. Results observations. |

| | | | |
|----|--|------------------------------------|---|
| 18 | | No ploughing in grasslands by RFOs | Weeds % increases in grasslands due to change in soil texture |
|----|--|------------------------------------|---|

Grassland Management Recommendations Report

Satpuda Tiger Reserve

Date of Visit : 11,12 and 13 August 2021

Grasslands of Satpuda Tiger Reserve are with following observations

CHURNA RANGE (Churna, Jhalai, Ratibandar, Podar, Malni, Sakot, Khakrapura, Sakai)

Bori Range (Kakdi , Dhai, Bori , Bhadbhud and Janbh Grasslands)

Pachmarhi Subdivision (Rorighat, Kajari, Ghodanar & Badkachar)

Parsapani Buffer area Grassland Madhai Range Grasslands

All grasslands are of taller and intermediate type with dominance of Themeda (Ghuner) or Bhond and Sukra (Heteropogon), Dicanthium, Digitaria. Soil red, black with clay, loam and sand.

- Grasslands are of three types smaller, intermediate and taller.
- Grasslands with annual and perennial – palatable and non palatable grasses.
- Grasslands shows composition of wild leguminous plants like wild tuwar , wild mungo , wild barbati, wild udad etc.
- Grasslands are invaded by common weeds like *Amaranthus*, *Parthenium*, *Sida cordifolia* , *Ageratum conyzoides* etc.
- Wild fruit trees are present in each grasslands.
- Common palatable grasses observed are- Dicanthium annulatum (Kandi Grass), Dicanthium caricosum (Badi Kandi), Dicanthium strictum (Kandi), Bothrichloa bladhi (Kandi or Marvel), Bothrichloa tuberosa (Kandi), Bothrichloa pertusa (Kandi), Brachiaria mutica, B. ramose (Sama Grass). Ban Bajara or Newari – Setaria pumilla, Themeda (Bhond or Ghuner), Heteropogon (Sukra), Saccharum (Kans grass), Cynodon (Duba), Eragrostris (Bhurbhusi), Iselima (Moshan or Mushel Grass) etc.
- Grasslands invaded by brush woods samples like Tectona, Chloroxylon Phoinix etc.

Grasslands with more utility % - index.

- Grasslands are taller.
- Grasslands are amphi-terrestrial as well as terrestrial.
- Wildlife specially Herbivores with grazing and browsing habitat.

Three days workshop on grasslands management was organized for frontline staff. The objectives of workshop are,

- Grasslands observation and to know its composition.
- Grasses identification with local names , palatable , non palatable , annual , perennial grasses.
- Weeds identification and uprooting techniques.
- Wild leguminous plants identification.
- Grasses , wild leguminous plants seed collection.
- Identification of grazing and browsing species.
- Lantana invasion.
- In situ conservation of leguminous plants present in grasslands.
- Enrichment of grasslands by grasses seed balls or by grasses slips.
- Restoration after removal of Lantana and weeds by suitable grasses.

Churna Range Grasslands : (Churna, Jhalai, Ratibandar, Podar, Malni, Sakot, Khakrapura, Sakai)

Recommendations : Identification of grasses, weeds, wild leguminous plants, browsing plants species with local names by forest guards, deputy rangers and shramik staff in each season.

1. Weeds uprooting two – three times per year before fruiting with soil conservation—July to September.
2. Grasses seeds collection per year in regular manner for enrichment of grasslands with suitable grasses which are palatable.... November to February.
3. Wild leguminous plants identification.. August when flowering or fruiting Field.
4. Grasses seeds collection in suitable time.
5. Seeds Collection --- Nov to Feb .
6. Restoration of grasslands after removal of Lantana or Weeds plants species in rainy season by grasses slips or rhizomes to develop grassy patches with fodder grasses..... July – Aug.
7. Wild leguminous plants in situ conservation for seeds collection and propagation.
8. Management of resting habitats by uprooting weeds below the fruit trees or green shrubs.

Special Remarks

- **Jhalai** : Weeds eradication and management , enrichment of grassland by grasses seeds or grass pulas. Wild fruit trees conservation. Inspection path preparation. After removal of Lantana restoration by good fodder grasses to reduce % of weeds and grasses % increase.
- **Ratibandar** : Weeds uprooting 3 times per year, Grasses seeds collection, wild legumes seeds collection.
- **Malini** : Concentrate on weeds , water bodies , Moist habitat grasses.
- **Kakdi** : Training to new staff for grasslands management.
- **Dhai** : Good water bodies are created , enrich with bothriochloa and saccharum, dicanthium and iselima grasses.
- **Bori** : Staff orientation two times per year. Weeds uprooting 3 times per year, brushwoods management , Saccharum enrichment in progress.
- **Rorighat** : Weeds uprooting 3 times per year. Soil with low water holding capacity and moisture don't burn grassland area in patches. Good increase in grassland area by removal of lantana its appreciable.
- **Kajari** : Newly rehabilitated area. Concentrate on weeds uprooting and lantana eradication and restoration by local fodder grasses.
- **Badkachar** : Good interventions by frontline staff in progressive manner, Weeds uprooting.
- **Parasapan Buffer Area** : Weeds uprooting before fruit formation. After removal of Lantana restoration is essential by local native grasses.

Grasslands Management Plan for Protected Area

- Geo-mapping of grasslands----March or April Soil observation – colour, texture --- March
- Grasslands observation...Aug to October
Grasses identification at flowering stages with local names---Sept or October.
- Weeds identification July
- Wild leguminous plants identification ...August
- Grasses herbarium preparation by frontline staff... Oct. or Nov
- Identification of grazing and browsing species
- Grasses restoration after removal of weeds or Lantana or any invasive spp.
- Grasses seeds collection Nov to Feb
- Grasses seeds drying and storage
- Grasslands enrichment by observing wildlife movements in grasslands

..... May last week or June first week

- Brushwood management to reduce woody species but unwanted with reference to site specific interventions as per suitability except hidden habitat to save.
- Relief enclosures in grasslands.
- Documentation of interventions in each season.

Grassland Management Recommendations Report Pench Tiger Reserve (M.P. State)

Date of Visit : 30 & 31 July 2021

Grasslands of Pench are with following observations

1. Grasslands are of three types smaller , intermediate and taller.
2. Grasslands with annual and perennial – palatable and non palatable grasses.
3. Grasslands shows composition of wild leguminous plants like wild tuwar, wild mungo , wild barbati etc
4. Grasslands are invaded by common weeds like *Cassia tora* , *Parthenium*, *Sida cordifolia* , *Ageratum conyzoides* etc
5. Wild fruit trees are present in each grasslands.
6. Common palatable grasses observed are- *Dicanthium annulatum* (Kandi Grass) , *Dicanthium caricosum* (Badi Kandi), *Dicanthium strictum*
(Kandi), *Bothrichloa bladhi* (Kandi or Marvel), *Bothrichloa tuberosa*

(Kandi), *Bothriochloa pertusa* (Kandi) , *Brachiaria mutica* , *B. ramosa* (Sama Grass). Ban Bajara or Newari – *Setaria pumilla*, Themeda (Bhond or Ghuneri) , *Heteropogon* (Sukra), *Saccharum* (Kans grass), *Vitiveria* (Khus), *Cynodon* (Dubu) , *Eragrostis* (Bhurhusi), Iselima (Moshan or Mushel Grass) etc

7. Grasslands invaded by brush woods samples like *Tectona* , *Chloroxylon* , *Phoenix* etc.
8. Grasslands with more utility % - index
9. Grasslands are amphi-terrestrial as well as terrestrial.
10. Wildlife specially Herbivores with grazing and browsing habitat.

Pench Grassland with more palatable grasses

Two days workshop on grasslands management was organized for frontline staff. The objectives of workshop are,

- Grasslands observation and to know its composition.
- Grasses identification with local names, palatable, non palatable, annual, perennial grasses. Weeds identification and uprooting techniques.
- Wild leguminous plants identification.
- Grasses, wild leguminous plants seed collection.
- Identification of grazing and browsing species.
- Aquatic fodder plant species.
- In situ conservation of leguminous plants present in grasslands.
- Enrichment of grasslands by grasses seed balls or by grasses slips.
- Restoration after removal of *Lantana* and weeds by suitable grasses.

Pench Mogli Wildlife Sanctuary, Karmazari Range Grasslands

Recommendations

1. Identification of grasses, weeds, wild leguminous plants, browsing plants species with local names by forest guards , deputy rangers and shramik staff in each season .
2. Weeds uprooting two – three times per year before fruiting with soil conservation— July to September.
3. Grasses seeds collection per year in regular manner for enrichment of grasslands with suitable grasses which are palatable.... November to February.
4. Wild leguminous plants identification.. August when flowering or fruiting
5. Grasses seeds collection in suitable time.
6. Seeds Collection --- Nov to Feb.

7. Restoration of grasslands after removal of Lantana or Weeds plants species in rainy season by grasses slips or rhizomes to develop grassy patches with fodder grasses..... July- Aug.
8. Wild leguminous plants in situ conservation for seeds collection and propagation.
9. Management of resting habitats by uprooting weeds below the fruit trees or green shrubs.

Relief enclosures management

1. Relief enclosures for rest to soil and grasses flowering and fruiting.
2. After preparation of R. E. Pz select fodder grasses enrichment by seed balls or vegetative propagation in July.
3. Weeds eradication before seed formation.
4. Management season wise up to seed formation and open in December.

Grasslands Management Plan for Protected Area

- Geo-mapping of grasslands---March or April □ Soil observation – colour, texture ---March
- Grasslands observation...Aug to October
- Grasses identification at flowering stages with local names---Sept or October.
- Weeds identification July
- Wild leguminous plants identification ...August
- Grasses herbarium preparation by frontline staff... Oct. or Nov
- Identification of grazing and browsing species
- Grasses restoration after removal of weeds or Lantana or any invasive spp.
- Grasses seeds collectionNov to Feb
- Grasses seeds drying and storage
- Grasslands enrichment by observing wildlife movements in grasslands.....May last week or June first week
- Brushwood management to reduce woody species but unwanted with reference to site specific interventions as per suitability except hidden habitat to save.
- Relief enclosures in grasslands.
- Documentation of interventions in each season.

Grassland Management Recommendations Report

Tadoba Andhari Tiger Reserve

Date of Visit : 1st to 3rd September 2021

Grasslands of Tadoba Andhari Tiger Reserve are of heterogeneous type with three types of grasslands : Smaller, intermediate and taller grasslands with 70% palatable and 30% non palatable grasses. The grasslands possesses 25% perennial palatable grasses and 45% annual fodder grasses with browsing species. The grasslands also comprises few wild leguminous plants. Most of the grasslands invaded by the weeds like Bhutganjya (Hyptis), Tarota (Cassia tora), Congress grass (Parthenium), Sida cordata, Sida acuta, Corchorus etc weeds. Each grassland is with water body. The management practices conducted by the field staff in last two months are,

Moharli, Palasgaon, Nawegaon, Pandharpauni, Jamni, Khatoda, Botezari, karwa range (TATR) all Grassland area :

Observations

- Weeds invasion along roadside area and inside the grasslands on large scale.
- Seeds of *Setaria pumilla* (Wild Bajara) developed in each grassland.
- Weeds like Bhutgangya (Hyptis saveolens) dominant in each grassland.
- *Ageratum conyzoides* weed common in grasslands.
- Palasghaon Grassland : 85 Hect.
- Palasgaon village rehabilitated in 2019, mostly all were paddy fields before rehabilitation , soil fertile, grasses taller, intermediate, *Iselima laxum*, *Digitaria abludens*, *Setaria pumilla*, *Paspaladium*, *Themeda*, *Heteropogon* grasses are distributed in complete grassland, weeds invasion in more % in gaothan and other area of Palasgaon. Wild Leguminous plant Wild Tur (*Atylosia* or *Cajanus*) is dominant. Bhutganjya, Sida weeds common in grassland.

Navegaon Grassland : 274 Hect area.

Observations

1. Largest grassland of TATR with 274 hect area.
2. Taller , intermediate grassland.
3. Grassland invaded by ranbhendi, weeds like Bhutganjya, Sida, Cassia tora etc.
4. Weeds invasion in boundaries of grasslands.
5. Grasses : *Themeda*, *Heteropogon*, *Dicanthium*, *Iselima*, *Ischemum*, *Cynodon* , *Digitaria* ,

Elusine, Chloris , Setaria etc.

6. Wild legumes : Ran Tur, Ran moog , Ran Barbati.
7. Wild fruit trees like Bor.
8. Brush woods invasion of Acacia.
9. Roadside grasses with more weeds.
10. Wild tur dominant in grassland.
11. Dominant grasses are Themeda, Iselima, Heteropogon.

Recommendation's

1. Weeds uprooting two times per year – July, September, before flowering, fruiting weeds to be uprooted.
2. Brush woods management to reduce woody species but conserve fruit trees.
3. Uprooting of Bheni plants from grasslands.
4. Prepare inspection path of standard size in each grassland.
5. To prepare grasses, wild legumes seed plot with demarcation.
6. Management of resting habitat.
7. Uprooting of Beshram plants.
8. After uprooting of unwanted non fodder weeds – Ecological Restoration by gawat pendi with grasses seeds.

Restoration after removal of weeds by fodder grasses seeds

- In next 20 days grass seeds collection is necessary.
- Grasses selection for seed collection are Dicanthium annulatum, D. caricosum, D. tuberosum, Themeda quadrivalvis, Iselima, Setaria.
- Collection of wild leguminous seeds from 2nd December to 28th December.

Jamni Grassland : 47 Hect

Observations

1. Smaller grassland suitable for spotted deers, black bucks .
2. Grasses distribution : Cynodon, Dicanthium, Setaria pumilla, Dicanthium annulatum, Iselima prostratum, I. laxum, Chloris virgate, C. barbata, Elusine indica , Setaria italic, etc.
3. Weeds : Prthenium hysterophorus (Gajar Gawat) dominant weed, Sida , Hyptis , Cassia tora.

4. Ornamental plants sadafuli.
5. Wild fruit trees present.
6. Water body present.

Recommendation's

1. Weeds uprooting two times per year – July , September, before flowering , fruiting weeds to be uprooted.
2. Brush woods management to reduce woody species but conserve fruit trees.
3. Uprooting of ornamental plants from grasslands.
4. Prepare inspection path of standard size in each grassland. 5. To maintain pressure the grasses of Jamni grasses – relief.
6. enclosure of 2 hectares size to be prepared, number two in jamni.

Kosenkar Grassland : 10 Hect

Observations

1. Oldest grassland with smaller and taller grasses.
2. Most of the grasses are palatable,
3. Wild fruit trees present
4. Brushwood infestation on large %
5. Grasses utility index good more than 70%.

Recommendation's

1. Uproot weeds along roadside before fruiting. Weeds like Butganjya, Sida, Cassia tora.
2. Brushwood Management to reduce woody species.

Khatoda Grassland : 10 Hect.- Comp. No. 123

Recommondations

1. Weeds uprooting two times per year

2. Brushwood management

One of the best grassland of TATR, Conserve old grasslands from woody plant species and invasive weeds.

Kolasa Range Grasslands

Roadside Grassland towards Botezari road : 11 Hect.

Observations

1. Roadside taller grassland with dominant grasses like Themeda, Heteropogon , Dicanthium , Setaria.
2. Grassland invaded by exotics like Stylosanthes hammata.
3. Wild legumes in good %
4. Brushwood invasion in grassland.

Recommendation's

1. Weeds uprooting two times per year.
2. Uprooting of exotic species – Stylo
3. Brushwood management
4. Conserve wild leguminous plants.

Botezari Grassland : 37 Hect.

Observations

1. Larger grassland with smaller and taller grasses like Saccharum spontanium(Padyal Gawat)
2. Grasses : Durwa Gawat, Dicanthium, Iselima, Ran bajara, Ghonyad, Kusali
3. Weeds: Bhutganjya, Kena, Adhada, Tarota, Gajargawat in Gawathan area of 4.5 Hectares.
4. Ploughing in 2,5 hect area where Cynodon (Durva) grass was present.
5. Enclosure for spotted deers prepared in which high % of weeds and taller grasses are present.
6. 2, 5 hectares cynodon grass was present but due to ploughing weeds are infested in deers enclosure.

Recommendation's

1. For spotted deer's they require smaller, palatable nutritive grasses with 20% taller grasses and green bushes for resting habitat.
2. Wild fruit trees
3. Browsing bushes wild.
4. There should not be ploughing in Protected Areas.
5. Weeds uprooting and restoration by Cynodon , Dicanthium , Ranbajara , Kodo , Ravi gawat
6. For spotted deers develop suitable grassland in enclosure.
7. Uproot weeds from gaathan area

Common recommendations for TATR Grasslands Management

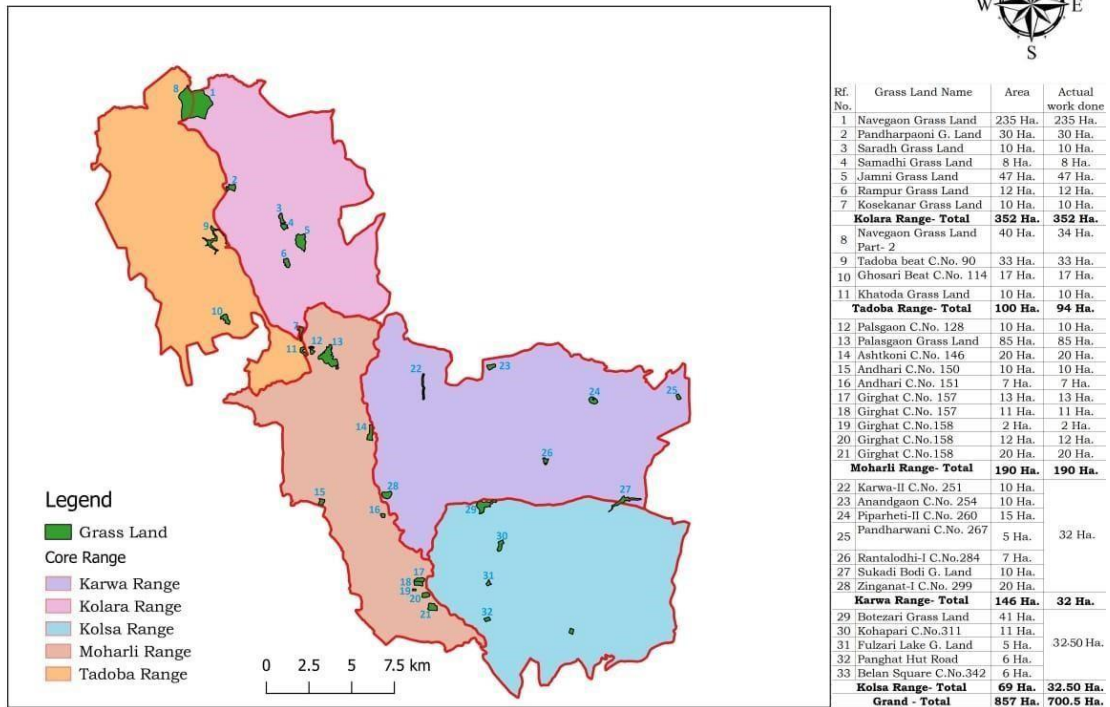
1. Conserve old grasslands by proper management interventions
2. Weeds eradication before fruiting
3. Uproot weeds along roadside as well as from inside grasslands
4. After weeds eradication – restoration by good grasses with suitable grasses.
5. Brushwood management in suitable season
6. Jamani relief enclosures in grassland in rotational manner
7. Concentrate on wild leguminous plants to maintain positive association and composition of grasslands
8. Site specific interventions' required
9. Identify grasses with local names
10. Ecological restoration by grasses seeds
11. Monitoring of grasslands season wise
12. Documentation of management interventions 13. Training for frontline field staff 2 times per year.
14. Palasgaon grassland with proper inputs.
15. Botezari don't plough , select suitable grassland for rescue of spotted deers.
16. Geo-mapping of each grassland

Grasslands Management Protocol in Protected Areas

| Sr No. | Season for management Inputs | Intervention for grassland mgt | Remark |
|--------|------------------------------|---|---------------------------------|
| 1 | April -May | Geo mapping of grassland | To know exact area of grassland |
| 2 | May | Soil texture observation | Soil suitability for Grasses |
| 3 | September | Grasses identification with local names | |
| 4 | August | Weeds identification with local names | |
| 5 | July and September | Weeds uprooting | Weeds uprooting before fruiting |
| 6 | September to February | Grasses seeds collection | Grasslands Enrichment |
| 7 | 25th May to 10 June | Enrichment of grasslands | |
| 8 | June – July | Brushwood management | |

| | | | |
|----|---------------|---|-------------------------------------|
| 9 | June | Lantana uprooting and restorations by seeds or grass rhizomes | |
| 10 | Sept – Oct. | Taller grasses biomass management in mosaic pattern | |
| 11 | September | To know utility index of grasses | |
| 12 | September | Wild leguminous plants identification | N- Fixators |
| 13 | December | Wild legumes seeds collection | Increase good associates of grasses |
| 14 | Complete year | Documentation of inputs Date | |

Map Showing Campa Work Year 2020- 21 in TATR Core area



Grassland Management Recommendations Report

Tadoba Andhari Tiger Reserve

Date of Visit : 7th and 8th May 2022

Grassland Management observations in Tadoba Andhari Tiger Reserve Grasslands of Tadoba Andhari Tiger Reserve are of heterogeneous type with three types of grasslands : Smaller , intermediate and taller grasslands with 70% palatable and 30% non palatable grasses. The grasslands possesses 25% perennial palatable grasses and 45% annual fodder grasses with browsing species. The grasslands also comprises few wild leguminous plants. Most of the grasslands invaded by the weeds like Bhutganjya (Hyptis), Tarota (Cassia tora), Congress grass (Parthenium), Sidacordata , Sidaacuta , Corchorusetc weeds. Each grassland is with water body. The management practices conducted by the field staff in last two months are,

Moharli, Palasgaon, Nawegaon, Pandharpauni, Jamni, Khatoda, Botezari , karwa range (TATR) all Grassland area :

Observations

- Weeds invasion along roadside area and inside the grasslands on large scale.
- Seeds of Setariapumilla (Wild Bajara) developed in each grassland Weeds like Bhutgangya (Hyptissaveolens) dominant in each grassland. • Ageratum conyzoides weed common in grasslands

Palasgaon Grassland : 85 Hect.

Palasgaon village rehabilitated in 2019, mostly all were paddy fields before rehabilitation, soil fertile, grasses taller, intermediate, Iselimalaxum, Digitariaabludens, Setariapumilla, Paspaladium, Themeda, Heteropogon grasses are distributed in complete grassland, weeds invasion in more % in gaothan and other area of Palasgaon. Wild Leguminous plant Wild Tur (Atylosia or Cajanus) is dominant. Bhutganjya, Sida weeds common in grassland.

Recommendations

1. Brushwood management
2. weeds uprooting from gaothan area.
3. Enrichment in next two years continuously.

Navegaon Grassland : 274 Hect area

1. Largest grassland of TATR with 274 hect area.
2. Taller , intermediate grassland
3. Grassland invaded by ranbhendi , weeds like Bhutganjya, Sida , Cassia tora etc.
4. Weeds invasion in boundaries of grasslands
5. Grasses : Themeda, Heteropogon, Dicanthium, Iselima, Ischemum, Cynodon, Digitaria, Elusine, Chloris, Setaria
6. Wild legumes : Ran Tur , Ran moog, Ran Barbati
7. Wild fruit trees like Bor
8. Brush woods invasion of Acacia
9. Roadside grasses with more weeds
10. Wild tur dominant in grassland
11. Dominant grasses are Themeda, Iselima, Heteropogon

Recommendation's

- Weeds uprooting two times per year – July , September, before flowering , fruiting weeds to be uprooted.
- Brush woods management to reduce woody species but conserve fruit trees.
- Prepare inspection path of standard size in each grassland □ To prepare grasses, wild legumes seed plot with demarcation.
- Management of resting habitat

- After uprooting of unwanted non fodder weeds – Ecological Restoration by gawatpendi with grasses seeds.

Restoration after removal of weeds by fodder grasses seeds

- In next 20 days grass seeds collection is necessary.
- Grasses selection for seed collection are *Dicanthium annulatum*, *D. caricosum*, *D. tuberosum*, *Themedaquadrivalvis*, *Iselima*, *Setaria*.
- Collection of wild leguminous seeds from 2nd December to 28th December.

Jamni Grassland : 47Hect Observations

1. Smaller grassland suitable for spotted deers, black bucks
2. Grasses distribution : *Cynodon*, *Dicanthium*, *Setariapumilla*, *Dicanthiumannulatum*, *Iselimaprostratum* . *I. laxum*, *Chloris virgate*, *C. barbata*, *Elusineindica*, *Setaria italic* , etc
3. Weeds : *Parthenium hysterophorus* (Gajar Gawat) dominant weed, *Sida*, *Hyptis*, *Cassia tora* 4. Ornamental plants sadafuli
5. Wild fruit trees present.
6. Water body present.

Recommendation's

- Weeds uprooting two times per year – July , September, before flowering , fruiting weeds to be uprooted
- Brush woods management to reduce woody species but conserve fruit trees
- Uprooting of ornamental plants from grasslands.
- Prepare inspection path of standard size in each grassland
- To maintain pressure the grasses of Jamni grasses – relief enclosure of 2 hectares size to be prepared, number two in jamni.

Kosenkar Grassland : 10Hect Observations

1. Oldest grassland with smaller and taller grasses.
2. Most of the grasses are palatable.
3. Wild fruit trees present

4. Brushwood infestation on large %
5. Grasses utility index good more than 70%.

Recommendation's

1. Uproot weeds along roadside before fruiting. Weeds like Butganjya, Sida, Cassiatora.
2. Brushwood Management to reduce woody species.

Khatoda Grassland : 10 Hect.- ssland towards Botezariroad : 11 Hect.

Observations

1. Roadside taller grassland with dominant grasses like Themeda,
2. Heteropogon, Dicanthium , Setaria
3. Grassland invaded by exotics like Stylosantheshammata.
4. Wild legumes in good %
5. Brushwood invasion in grassland.

Recommendation's

1. Weeds uprooting two times per year.
2. Uprooting of exotic species – Stylo
3. Brushwood management
4. Conserve wild leguminous plants.

Buffer Area grassland Restoration : 10 Hect. Enclosure plot

Observations

1. Grassland with smaller and taller grasses , Weeds , Brushwoods
2. Grasses : Dicanthium , Ran bajara, Ghonyad , Kusali

Recommendation's

1. For spotted deer's they require smaller, palatable nutritive grasses with 20% taller grasses and green bushes for resting habitat.
2. Wild fruit trees

3. Browsing bushes wild.
4. There should not be ploughing in Protected Areas.
5. Weeds uprooting and restoration by Chrysopogon , Dicanthium , Ranbajara , Ravi gawat

Recommendations for grasslands management in weeds infested areas

- Soil parameters observations of each grassland with reference to texture, ph and color.
- Weeds identification : annual or perennial weeds □ Selection of grasslands restoration methods.
- Selection of proper grasses species for restoration of weeds.
- Addition of grasses seedsMay 25th to 10th June
- Addition of grasses bundles with mature grasses seeds.....December – January
- Grasses species selection – Heteropogon , Chrysopogon , Bothriochloa , □Setaria , Dicanhium and wild legume seeds.
- Observations and monitoring of grasses seeds germination.
- Maintance of grasslands management register.

Common recommendations for TATR Grasslands Management

1. Conserve old grasslands by proper management interventions
2. Weeds eradication before fruiting
3. Uproot weeds along roadside as well as from inside grasslands
4. After weeds eradication – restoration by good grasses with suitable grasses.
5. Brushwood management in suitable season
6. Jamani relief enclosures in grassland in rotational manner
7. Concentrate on wild leguminous plants to maintain positive association and composition of grasslands
8. Site specific interventions' required
9. Identify grasses with local names
10. Ecological restoration by grasses seeds
11. Monitoring of grasslands season wise
12. Documentation of management interventions 13. Training for frontline field staff 2 times per year.
14. Palasgaon grassland with proper inputs.

15. Geo-mapping of each grassland.

Grassland Management Recommendations Report

Bharatpur Bird Sanctuary (Rajasthan)

Date of visit : 31st March to 1st April 2022

Grassland Management observations in Keoladeo National Park

Keoladeo National Park, Rajasthan which is named after a Shiva temple located at the center of the Park. It was earlier known as —Ghana||, meaning dense forest. This national park is also popularly known as ‘Bharatpur Bird Sanctuary’. The forest block is named as ‘Ghana Kevladev’ in land records. Keoladeo National Park lies at the confluence of the Gambhiri and Banganga rivers in Bharatpur district of Rajasthan. Its approximate latitudinal and longitudinal extent are - 27° 07' 06" N - 27° 12' 02" N and 77° 29' 05" E - 77° 33' 09" E respectively.

This Protected Area traditionally has been divided into 24 administrative blocks (demarcated by roads and dykes) for administrative convenience. The composite unit is demarcated by a boundary wall on all sides. The entire park of 28.73 km² was divided into various blocks.

Wetland Zone -835 hectare

Grassland zone – 923 hectare

Woodland zone – 1062 hectare

| Sr. No. | Zones | Area (Hectares) | Type |
|---------|------------|-----------------|----------|
| 1 | Zone 1 A-1 | 45.85 | Woodland |
| 2 | A-2 | 12.82 | Wetland |
| 3 | B-1 | 89.68 | Woodland |
| 4 | B-2 | 35.64 | Wetland |

| | | | |
|---|---|--------|----------|
| 5 | C | 38.57 | Woodland |
| 6 | D | 124.56 | Wetland |

| | | | |
|----|--------------------------------|--|---|
| 7 | E-1 | 128.56 | Wetland |
| 8 | E-2 | 31.41 | Woodland |
| 9 | F-1/01 | 43.98 | Wetland |
| 10 | F-1/02 | 95.59 | Woodland |
| 11 | F-2/01 , F-2/02 F3 F4 | 59.97 31.26 51.61 29.31 | Wetland Woodland Grassland Grassland |
| 12 | G1 G2 G3 G4 | 175.39 Grassland 124.65 Grassland 86.07 Grassland 134.84 Grassland | Grassland |
| 13 | H | 58.84 Grassland | |
| 14 | I | 161.85 Woodland | Woodland |
| 15 | J-1 , J-2 K- K-24, 02 | 147.82 Woodland , 61.26 Woodland , 01 120.63 Wetland , 61.42 Woodland | Woodland |
| 16 | K-03 | 22.29 Grassland | |
| 17 | L-1/01 | 31.75 Woodland | |
| 18 | L-1/02 | 238.61 Wetland | |

| | | | |
|----|-----------|--------------------------------------|----------------------|
| 19 | L-1/03 | 24.08 Woodland | |
| 20 | L-2/01 | 96.34 Woodland | |
| 21 | L-2/02 | 36.41 Grassland | |
| 22 | L-2/03 | 24.41 Woodland | |
| 23 | M-1 , M-2 | 141.2 Grassland , 63.34 Grassland | |
| 24 | N-1 | 30.77 Woodland | |
| 25 | N-2 | 42.51 Wetland | |
| 26 | O-1 | 100.97 Woodland | |
| 27 | O-2 | 27.85 Wetland | Total Area - 2832.11 |

Grasslands of are Keoladeo National Park of heterogeneous type with three types of grasslands : Smaller grasslands with wetlands, intermediate grasslands with fodder grasses, weeds and Prosopis, Parthenium, Cassia tora weeds and Woodland grasslands with 70% palatable and 30% non palatable grasses and prosopis invasive wood shrub species. The grasslands possesses 55% perennial palatable grasses and 45% annual fodder grasses with browsing species. The grasslands also comprises few wild leguminous plants. Most of the grasslands invaded by the weeds Tarota (Cassia tora), Congress grass (Parthenium), Sidacordata , Sidaacuta . Each grassland is with water body. The management practices conducted by the field staff regularly are 1) weeds eradication 2) Prosopis removal, 3) Habitat improvement intervention – burning of grasses.

Grassland Zones blocks Current Vegetation Habitat and Wildlife

F-3 : Shrub Savanna with some tree groves like KadamKunj Heavily infested with Prosopisjuliflora

F-4 : Shrub Savanna with some tree groves like KadamKunj.

G-1 : Grass Savanna with mainly Vetiveria and Daab grass , Daab grass is dominating.

G-2 : Grass Savanna with mainly Vetiveria and Daab grass Daab grass is dominating. There are clear signs of ecological succession. Herbivores like spotted deer

G-3 : Shrub Savanna (grasses Start to give to shrubs as we walk towards wetland area) Daab grass is dominating.. There are clear signs of ecological succession.

G-4 : Shrub Savanna Daab grass is dominating. Khus grass has been reduced substantially. There are clear signs of ecological succession.

H Semi : woodland kind of ecosystem. Heavy infestation of

Prosopisjuliflora

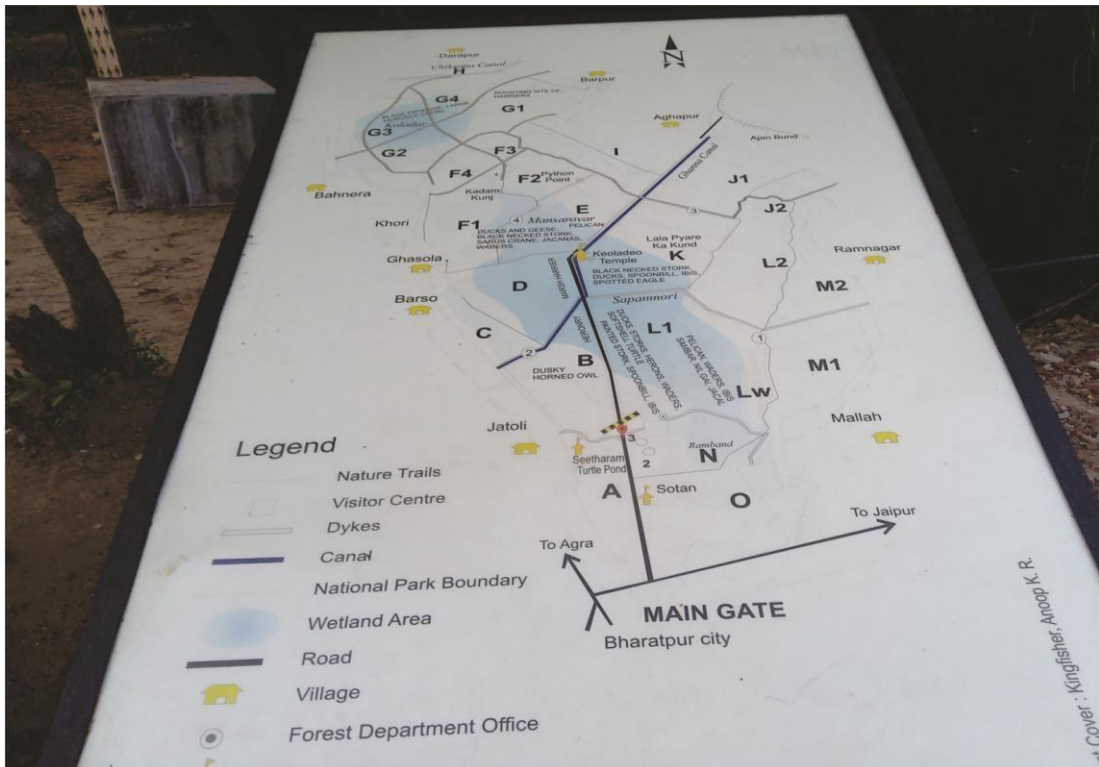
K-3 : Low Grasslands with Scattered Trees and Shrubs Recent removal of Prosopisjuliflora in this block has resulted in return of grasses.

L-2/03 : Low Grasslands with Scattered Trees and Shrubs Heavy infestation of Prosopisjuliflora

M1 : Shrub Savanna and also contains old plantation blocks Heavy infestation of Prosopisjuliflora.

M2 : Shrub Savanna and also contains old plantation blocks Heavy infestation of Prosopisjuliflora
Need mechanical removal.

MAP of KNP



In the field workshop following sites are observed for grasslands management and recommendations.

| Sr. No. | Block /zone | Observations | Recommendations | Remarks |
|---------|-------------|--------------|-----------------|---------|
|---------|-------------|--------------|-----------------|---------|

| | | | | |
|---|----|--|---|---|
| 1 | G2 | <ul style="list-style-type: none"> • 124 Hect. (10 hect.) • Weeds infestation • Brushwoods invasion • Homogenous grasses composition. | <ul style="list-style-type: none"> ➤ Weeds uprooting 2 times per year- July &October. ➤ Taller , perennial palatable grasses needs biomass management in mosaic pattern. ➤ Resting habitat intervention required. ➤ Enrichment of native fodder grasses in MayJune. ➤ Avoid cool burning. ➤ Mapping of grassland every 2 years , polygon. ➤ Fire line preparation ➤ Grasslands management register with all interventions every season of year. | <ul style="list-style-type: none"> ▪ Avoid ploughing in grasslands. ▪ Avoid burning of grasses. ▪ Brushwoods, invasive species management and rastosations by fodder native grasses. |
| 2 | G1 | <ol style="list-style-type: none"> 1) 50 Hectares 2) Weeds infestation 3) Brush woods invasion 4) Taller , perennial grass composition 5) Homogeneous grasses | <ul style="list-style-type: none"> ➤ Weeds uprooting 2 times per year- July &October. ➤ Taller , perennial palatable grasses needs biomass management in mosaic pattern in October.. ➤ Resting habitat intervention required. ➤ Enrichment of native rhizomatous | <ul style="list-style-type: none"> ▪ Needs grasses seeds collection , collect baseline data of 10 years back / old. ▪ Enrichment of grassland is most important |

| | | | | |
|---|----------|---|---|--|
| | | | <p>fodder grasses in May-June..</p> <ul style="list-style-type: none"> ➤ Mapping of grassland every 2 years , polygon. ➤ Grasslands management register with all interventions every season of year | |
| 3 | L2 block | <ul style="list-style-type: none"> ✓ Soil black , fertile , good soil for grasslands restoration. ✓ Weeds invasion ✓ Uprooting of Prosopis completed last year. ✓ Local fodder grasses regeneration observed. | <ol style="list-style-type: none"> 1) Weeds uprooting 2 times per year. 2) Newly coming Prosopis removal. 3) 01 hectare grasses plot development selection of local grasses. 4) Control the growth of Dabb grass by CCT 5) Enrichment of grassland by grasses seeds broadcasting in May - June | <p>Select local grasses- Dicanthium , Chloris , Panicum , Paspalum , Cynodon all grasses are palatable & Native.</p> |

| | | | | |
|---|---|---|--|---|
| 4 | C | <p>1) 44 Hectare area</p> <p>2) Weeds infestation</p> <p>3) Brush woods invasion in grassland block</p> <p>4) Prosopis uprooted</p> | <p>✓ Prosopis removal & restoration by palatable local grasses selection.</p> <p>✓ Enrichment of grassland by grasses seeds broadcasting in May – June</p> <p>✓ Weeds uprooting 2 times per year.</p> <p>✓ Grasslands management register with all interventions</p> | <p>Grasslands management register with all interventions every season of year</p> <p>Select local grasses- Dicanthium ,Chloris , Panicum , Paspalum , Cynodon all grasses are palatable & Native.</p> |
|---|---|---|--|---|

| | | | | |
|---|----------|--|---|--|
| | | | <p>every season of year</p> | |
| 5 | Lw block | <p>1) 24 hectare</p> <p>2) Weeds infestation</p> <p>3) Brush woods</p> | <p>✓ Prosopis removal & restoration by palatable local grasses selection.</p> | |

| | | | | |
|---|---------|--|---|--|
| | | <p>invasion in grassland block</p> <p>4) Prosopis uprooted</p> | <p>✓ Enrichment of grassland by grasses seeds broadcasting in May – June</p> <p>✓ Weeds uprooting 2 times per year.</p> <p>✓ Grasslands management register with all interventions every season of year</p> | |
| 6 | K Block | <p>1) 204 hectare area</p> <p>2) Weeds infestation</p> <p>3) Brush woods invasion in grassland block</p> <p>4) Prosopis uprooted</p> | <p>✓ Prosopis removal & restoration by palatable local grasses selection.</p> <p>✓ Enrichment of grassland by grasses seeds broadcasting in May – June</p> <p>✓ Weeds uprooting 2 times per year.</p> <p>✓ Grasslands management register with all interventions every season of year</p> | <p>✓ Enrichment of grassland by grasses seeds broadcasting in May – June</p> |

Common recommendations for Grasslands Management

1. Conserve old grasslands by proper management interventions.
2. Weeds eradication before fruiting.
3. Uproot weeds along roadside as well as from inside grasslands.
4. After weeds eradication – restoration by good grasses with suitable grasses.
5. Brushwood management in suitable season
6. Concentrate on wild leguminous plants to maintain positive association and composition of grasslands.

7. Site specific interventions' required.
8. Identify grasses with local names.
9. Ecological restoration by grasses seeds.
10. Monitoring of grasslands season wise.
11. Documentation of management interventions .
12. Training for frontline field staff 2 times per year.
13. Geo-mapping of each grassland.

Grassland Management Recommendations Report

Kailadevi Wildlife Sanctuary (Rajasthan State)

Date of Visit : 30 March 2022

Grassland Management observations in Kailadevi Wildlife Sanctuary

Grasslands of Kailadevi Wildlife Sanctuary are of heterogeneous type with two types of grasslands : Smaller , intermediate grasslands with 70% nonpalatable and 30% palatable grasses. The grasslands possess 15% perennial palatable grasses and 45% annual fodder grasses with browsing species Dhok (*Anagoeisis pendula*) and Acacia species. The grasslands comprise very few wild leguminous plants. Most of the grasslands are invaded by the weeds utganjya (*Hyptis*), Tarota (*Cassia tora*), Congress grass (*Parthenium*), weeds. Each grassland is invaded with *Prosopis juliflora* an invasive species.

Landscape and Topography

Soil with red sandy clay and loam, soil with low water holding capacity , undulating part with clay at lower side and rocky strata at upper surface. Rainfall very low in rainy season , humidity percentage low , wind speed moderate to high . **Observed grasslands sites**

1. Marmada Rehabilitated village
2. Retir kurtikarasta
3. Kalakhetamphiterrestrial grassland
4. Natural grassy patches along roadside
5. Maysura fall road- smaller grassy patch of 2-5 hectare
6. Chidki Naroli plantation C And D with area of 100 hectare

Marmada Rehabilitated village

Observations

- Rehabilitated village under process , after rehabilitation the cultivated lands are the good source of grassland development, natural stony or pathhar walls protection are present or each cultivated plot is protected by protection wall prepared from stones.
- *Parthenium* a weed common in grasslands □ Area to develop in grasslands Grassland : 50Hect.
- Water body present.
- Soil red , sandy with 45 % clay.

- Marmada village cultivated lands Grassland :2 74 Hect area
- Largest grassland of anthropogenic grassland (Marmada) of Kailadevi Wildlife Sanctuary.
- Taller , intermediate grassland
- Grasses : Themeda, Heteropogon, Dicanthium, Iselima, Ischemum, Cynodon, Digitaria, Elusine, Chloris, Setaria etc
- Wild fruit trees like Ber
- Browsing species of Acacia
- Roadside grasses
- Wild tur dominant in grassland
- Dominant grasses are Themeda, Ischemum, Dicanthium, cynodon, Apluda, Heteropogon

Recommendation's

- Weeds uprooting two times per year – September and October before flowering , fruiting weeds to be uprooted
- Brush woods management to reduce woody species but conserve fruit trees
- Prepare inspection path of standard size in each grassland
- Management of resting habitat
- After uprooting of unwanted non fodder weeds – Ecological Restoration by grasses seeds Dicanthium , Heteropogon , Cynodon , Digitaria , Apluda.
- 5-7 kg grasses seeds per hectare in first year , 4-5 kg grasses seeds in second year and 2-3 kg grasses seeds in third year.
- Grasses seeds enrichment period may last week to june second week.
- Grasses selection for seed collection are Dicanthium annulatum, D. caricosum, D. tuberosum, Themeda quadrivalvis, Iselima, Setaria.

Area of grassland- 10-25 hectare with good potential of grassland and browsing species.

Observations

- Smaller grassland suitable for spotted deers, black bucks and chinkara
- Grasses distribution: Cynodon, Dicanthium, Setaria pumilla, Dicanthium annulatum, C. barbata, Elusine indica, Setaria italica , etc

Wild fruit trees present. Soil red sandy

Recommendation's

- Weeds uprooting two times per year – July , September, before flowering, fruiting weeds to be uprooted
- Brush woods management to reduce woody species but conserve fruit trees
- Soil erosion control by soil practices
- To maintain domesticities grazing pressure the – relief enclosure of 2 hectares size to be prepared, number two - four.
- Enrichment of grasses every year in month of may – june.
- Observations and monitoring of grasslands.

Chidki Naroli plantation C And D with area of 100 hectare

Observations

1. Grassland in plantation with smaller and taller grasses.
2. Most of the grasses are palatable,
3. Wild fruit trees present
4. Brushwood infestation on large %
5. Grasses utility index good more than 70%.
6. About 10 palatable grasses distribution- Dicanthium ,Themeda , Iselima , Ischemum , Sporobolus , vitiveria , Heteropogon, Chloris , cynodon.
7. 2-3 water bodies (Talai) are present

Recommendation's

Uproot weeds before fruiting. Weeds like Echinopsechinatus spiny weed more in %, Cassia tora. , Brushwood Management to reduce woody species.

1. Weeds uprooting two times per year
2. Brushwood management
3. Enrichment of local /native fodder grasses – 4-8 kg per hectare , season of enrichment may - june.
4. Uprooting of exotic species – Prosopisjuliflora
5. Brushwood management
6. Addition of khus grass and Cynodon grass in July and August

Common recommendations for Kailadevi Wildlife Sanctuary Grasslands Management

- Conserve old grasslands by proper management interventions
- Weeds eradication before fruiting
- Uproot weeds along roadside as well as from inside grasslands
- After weeds eradication – restoration by good grasses with suitable grasses.
- Brushwood management in suitable season
- Site specific interventions' required
- Identify grasses with local names
- Ecological restoration by grasses seeds
- Monitoring of grasslands season wise
- Documentation of management interventions
- Training for frontline field staff 2 times per year. ▪ Geo-mapping of each grassland

Grassland Management Recommendations Report Achanakmar Tiger Reserve (Chatishgarh State)

Date of Visit : December 2021

**Grasslands of ATR : Achanakmar, Jalda, Bahod, Bokrakachar, Samabardasan , Kuba Area
: 50 hectares each**

Observations

- Weeding in July -August completed.
- Weeds - uprooted weeds are managed in proper way.
- Grasses biomass mgt in proper way.
- Grass sample plots are maintained technically.
- Positive grasslands ecological succession in rainy and winter seasons.
- Natural regeneration of grasses by grasses seeds dispersal in summer.
- Brush woods are managed in proper way.

- Field staff taking good interest in grasses and weeds identifications and grasslands management.
- Weeds regeneration rate is faster in grasslands periphery.

Recommendations Achanakmar grassland C. No. 188 , 189

- Chrysopogon polyphyllus (Fulera) grass dominant need to collect the grasses seeds in next 46 days.
- Ageratum conyzoides weed dominant need to eradicate 2-3 times in a year.
- Dicanthium annulatum grasses seeds to be added in next May.

Achanakmar C. No. 121

Area more than 150 hectares

- Brushwood management in this winter and summer season.
- Enrichment of grasses seeds in May- June. **Achanakmar C. No. 149**
- Brush woods management.
- Grasses seeds collection in October - November- Dicanthiumannulatum , D. caricosum , Chloris , Bothrichloa , Themeda.
- Imperatacylindrica grass cutting near water body.

Jalda Relocated Site ; area 50 hectares

- 100 mtr periphery of grasslands weed eradication 2 times in year to stop the invasion of weeds.
- weeds eradication 2 times in year.
- Grasses seeds collection in October - November.
- Deenanath grass eradication in proper way.
- 10 grasses , 05 weeds herbarium preparation by field staff.
- grasses seeds collection - Themeda , Dicanthium , Ber , Chloris.--- 40-50

kg seeds collection in Nov. - Dec.

Bahod , 50 hectares:

- Grasses seeds collection in November- October- Bothrichloa , Dicanthiumannulatum , D. caricosum , Themeda , Ber , Setaria.

- Weeds eradication.
- To prepare 1 hectare grass seed bank by fencing.
- Maintain sample plots in proper way.
- Coixaquatica grass management - cutting.
- Brush woods management.

Bokrakachar , 50 hectares area :

- 100 mtr periphery of grasslands weed eradication 2 times in year to stop the invasion of weeds.
- weeds eradication 2 times in year.
- Grasses seeds collection in October - November
- grasses seeds collection - Themeda , Dicanthium , Ber , Chloris.--- 40-50 kg seeds collection in Nov. - Dec.

Samabrdasan , 50 hectare area-

- 100 mtr periphery of grasslands weed eradication 2 times in year to stop the invasion of weeds.
- weeds eradication Alternantherasessalis 2 times in year. After weeds removal add grass pulas at weed removed areas in November -October ▪ Grasses seeds collection in October - November
Grasses seeds collection - Themeda , Dicanthium , Ber , Chloris.--- 40-50 kg seeds collection in Nov.

Bakhal , 50 hectare area.

- Grasses seeds collection in October - November
Grasses seeds collection - Themeda , Dicanthium , Ber , Chloris.--- 40-50 kg seeds collection in Nov.

Kuba , 40 hectare area :

- 100 mtr periphery of grasslands weed eradication 2 times in year to stop the invasion of weeds.
- weeds eradication Alternantherasessalis 2 times in year. After weeds removal add grass pulas at weed removed areas in November -October ▪ Grasses seeds collection in October - November
Grasses seeds collection - Themeda , Dicanthium , Ber , Chloris.--- 40-50 kg seeds collection in Nov.

Grasslands Development & Management Plan For : Relocated sites of Protected Areas

Grasslands sites of the protected areas (Relocated areas) composed of natural grasses, weeds, small shrubs, woody climbers, parasites and wild leguminous plants. Such area soil is degraded by the grazing pressure of domestic cattle's and anthropogenic factors. The exotic weeds are invaded on large scale.

In protected areas the main objectives are :

- To manage the weed species in limited period.
- To know the natural grass flora distribution.
- To develop good heterogeneous grassland for herbivores.
- To reduce the woodland species.

Management Practices (Plan for the Development of grasslands)

- Collection and burning of weed species. (May)
- Addition of Browsing bamboo species along the boundaries of village area. (June- July)
- Addition of wild fruit trees by grid line randomly. (July)
- Addition of annual / perennial palatable grasses in plough areas by seed broadcasting. (Duration : May – 25th to 30th)
- Management of natural water bodies by de-siltation.
- Weed Eradication programme : 1) June – July for new weed comers.
2) September –October : weed removal before flowering stages.
3) December – January : removal of succulent weeds .
- Seed collection of grasses in October - November and wild legumes.
- Weed removal: for continuous three years in proper period which will be useful for reduction of weed species.
- Prepare the grass seed bank of two hectares by fence to develop the grass seed plot.

After relocation : collect the grass seeds from the different locations in November – December , and broad cast the seeds in next pre monsoon period.

Grassland Management Recommendations Report Similipal Tiger Reserve (Orisa State) Debridarh Wild Life Santuranry, Orisa

Date of visit : 19th to 20th March 2022

Grassland Management observations in Similipal Tiger Reserve

Grasslands of Similipal Tiger Reserve are of heterogeneous type with three types of grasslands : Smaller , intermediate and taller grasslands with 70% palatable and 30% non palatable grasses. The grasslands possesses 45% perennial palatable grasses and 55% annual fodder grasses with browsing species. The grasslands comprises very few wild leguminous plants. Most of the grasslands invaded by the weeds. Each grassland invaded with woody species.

Landscape and topography

Soil with red sandy clay and loam, soil with good water holding capacity , undulating part with clay at lower side Rainfall moderate to high in rainy season, humidity percentage more , wind speed moderate to high . **Observed grasslands sites**

1. Jamuna Rehabilitated village --- 40 hectare
2. Pondabondha
3. Jorandha grassland
4. Kijhari
5. Chahala
6. Jenabil -----132 hectare

Jamuna Rehabilitated village meadow

Observations

- Rehabilitated village in 2021-22, after rehabilitation the cultivated lands are the good source of grassland development, natural.
- Jamuna nala is a source of water – perennial source.

□

Area to develop in grasslands Grassland : 40 Hect.

- Soil red with 65 % clay.
- Cultivated fields – paddy and mustard.
- Local distribution of native fodder grasses.
- Dhabh grasses taller, perennial, coarse grass.
- Low population village with – 29 .
- Cattles – 111.
- Wild fruit trees –Ziziphus , Tamarind , Amala , Amaltash , Terminalia.
- Jamuna village cultivated lands Grassland : 274 Hect area.

Important grassland of Similipal Tiger Reserve

1. Taller, intermediate grassland, with weeds.
2. Grasses : Themeda, Heteropogon, Dicanthium, Iselima, Ischemum, Cynodon, Digitaria, Elusine, Chloris, Setaria etc.
3. Wild fruit trees like Ber.
4. Browsing species Bahunia.
5. Roadside grasses.
6. Wild tur dominant in grassland
7. Dominant grasses are Themeda, Ischemum, Dicanthium, cynodon, Heteropogon.
8. Average Rainfall per year – 1500- 1700 mm.
9. Humidity – 65- 90 %.

Recommendation's

- Weeds uprooting two times per year – September and October before flowering , fruiting weeds to be uprooted.
- Brush woods management to reduce woody species but conserve fruit trees.
- Prepare inspection path of standard size in each grassland.
- Management of resting habitat.

□

- After uprooting of unwanted non fodder weeds – Ecological Restoration by grasses seeds
Dicanthium , Heteropogon , Cynodon , Digitaria.
5-7 kg grasses seeds per hectare in first year , 4-5 kg grasses seeds in second year and 2-3 kg grasses seeds in third year.
- Grasses seeds enrichment period may last week to June second week.
- Grasses selection for seed collection are Dicanthium annulatum, D. caricosum, D. tuberosum, Themeda quadrivalvis, Iselima, Setaria.
- Weeds uprooting should be stated around periphery of Meadow.
- Preparation of fire line and inspection path.
- Observe composition of grassland in October –November.
- Grasses seeds collection in November to February is most important.
- Brushwood management to maintain the area of grassland.
- Proper management of weed after removal.
- Manage resting habitat in meadow.
- Cynodon grass is dominant suitable for spotted deers a soft , perennial , palatable grass.
- Prepare 1-2 hectare grasses nursery model plot near jamuna nala with top 10 grasses plots with display board of each grass.
- Display of board of rehabilitated village with important data.

Grassland / Meadow Development Plan

- Geo-mapping of grasslands---March or April. □ Soil observation – color , texture ---March.
- Grasslands observation...Aug to October.
- Grasses identification at flowering stages with local names---Sept or October.
- Weeds identification July.
- Weeds uprooting and proper managementJuly -- September.
- Wild leguminous plants identification ...September.
- Grasses herbarium preparation by frontline staff... Oct. or Nov.
- Identification of grazing and browsing species.

□

- Grasses restoration after removal of weeds or Lantana ,,,,, June – August.
Grasses seeds collectionNov to Feb. □ Grasses seeds drying and storage.
- Grasslands enrichment by observing wildlife movements in grasslands.....May last week or June first week.
- Brushwood management to reduce woody species but unwanted with reference to site specific interventions as per suitability except hidden habitat to save.
- Documentation of interventions in each season.
- Biomass management in perennial taller grasses in mosaic pattern----season –October.

Chahala Grassland

| | | |
|--------------------------|---|---|
| Area of grassland | : | 4 Hectare |
| Grasslands composition : | | Themeda quadrivalvis : 5-8 % Imperata cylindrica : 90 % Chrysopogon polyphyllus : 1 % |
| Type of grassland | : | Taller |
| Brushwoods | : | 4-5 % |

Management Action Plan Recommendations

1. July – August : Ist weeding
2. October : IInd Weeding
3. December : III rd Weeding : Weeding before fruiting stages of the plants.
4. Imperata grass cutting : two times in year : Season of cutting : 1) JULY – AUGUST 2) Nov. – Dec.
5. Brushwood cutting from the periphery of the grassland : July season. 6. Wild legumes addition.

A) Jenabil Grassland : Area of grassland :110 Hectare Jenabil to Hathighar Roadside Meadow (Left side part) Composition of Grassland

| | | |
|-------------------------|---|---------|
| Imperata cylindrica | : | 60-70 % |
| Themeda quadrivalvis | : | 10 % |
| Bothriochloa bladhi | : | 10-15% |
| Chrysopogon polyphyllus | : | 5 % |
| Setaria pumilla | : | 1-3 % |
| Type | : | Taller |

Management Action Plan Recommendations

1. July – August : Ist weeding
2. October : IInd Weeding
3. December : III rd Weeding : Weeding before fruiting stages of the plants.
4. Imperata grass cutting in mosaic pattern : two times in year : Season of cutting : 1) JULY – AUGUST 2) Nov. –Dec.
5. Brushwood cutting from the periphery of the grassland : July season.
6. Waterlogged area of grassland no intervention.

B) Jenabil to Hathighar Roadside Meadow (Right side part) Composition of Grassland

| | | |
|-------------------------|---|-------------------|
| Imperata cylindrica | : | less than 5 % |
| Digitaria abludens | : | 1-2 % |
| Bothriochloa bladhi | : | 10-15% |
| Chrysopogon polyphyllus | : | 5 % |
| Setaria pumilla | : | 1-3 % Paspaladium |
| flavedium | : | 1% |
| Type | : | Taller |

Management Action Plan Recommendations

1. Seed collection of Bothriochloa : November December 2.
- Brushwood cutting from the periphery of the grassland : July season.

C) Jenabil to Hathighar Roadside Meadow (Towards stream Left part of the grassland) Composition of Grassland

| | | |
|-------------------------|---|---------------|
| Imperata cylindrica | : | less than 5 % |
| Bothriochloa bladhi | : | 10-15% |
| Chrysopogon polyphyllus | : | 5 % |
| Setaria pumilla | : | 1-3 % |

| | | |
|--|---|---------------------------------------|
| Paspala scorbioides (Kodo) | : | 5-7% |
| Cyperus dominant | | |
| Arachene racemosa | : | 1% |
| Eragrostellia biferia (Non palatatable with silica) | : | 60-80 % |
| Eragrostis verticellata | : | 1% |
| Sacciolepis intermedia | : | 2% |
| Smithia conferata | : | Dominant in marshy places |
| Saccharum spontanium | : | Dominant towards upper part of stream |

Type : Taller

Management Action Plan Recommendations

1. July – August :Cutting of taller grtaases
2. Imperata grass cutting in mosaic pattern : two times in year : Season of cutting : 1) JULY – AUGUST 2) Nov. –Dec.
3. Brushwood cutting from the periphery of the grassland : July season.
4. Waterlogged area conservation of smithia
5. Cutting of Saccharum spontanium : Dominent towards upper part of stream

D) Jenabil to Hathighar Roadside Meadow (Towards stream RIGHT part of the grassland) Composition of Grassland

| | | |
|--|---|---------------------------|
| Imperata cylindrica | : | 70-80 % |
| Cyperus | : | 10 % |
| Paspalum (Kodo) | : | 5 % |
| Arachene racemosa | : | 1% |
| Eragrostellia biferia (Non palatatable with silica) | : | 2-5 % |
| Sacciolepis intermedia | : | 2% |
| Smithia conferata | : | Dominant in marshy places |
| Bothriochloa bladhi | : | 10-15% |
| Chrysopogon polyphyllus | : | 5 % |
| Setaria pumilla | : | 1-3 % Paspaladium |
| flavedium | : | 1% |
| Type | : | Taller |

Management Action Plan Recommendations

1. Grassland cutting in mosaic pattern : Season 3 times in year.

Hathighar Meadow : 2.5 Hectare area.

Composition of Grassland

| | | |
|-------------------------|---|---------|
| Imperata cylindrica | : | 70-80 % |
| Paspalum (Kodo) | : | 5 % |
| Saccharum spontanium | : | 1% |
| Eragrostis gigantea | : | 0.5 % |
| Sacciolepis intermedia | : | 1- 2% |
| Themeda | : | 1% |
| Chrysopogon polyphyllus | : | 1-2 % |
| Setaria pumilla | : | 1-3 % |
| Paspaladium flavedium | : | 1% |

Management Action Plan Recommendations

1. July – August :Cutting of taller grasses
2. Imperata grass cutting in mosaic pattern : two times in year : Season of cutting : 1) JULY – AUGUST 2) Nov. –Dec.
3. Brushwood cutting from the periphery of the grassland : July season.
4. Cutting of Saccharum spontanium : Dominant towards upper part of stream
5. After cutting of taller grasses : weeding is necessary.

Watch tower Meadow Composition of Grassland

| | | |
|-------------------------|---|-------------|
| Imperata cylindrica | : | 70-80 % |
| Paspalum (Kodo) | : | 5 % |
| Saccharum spontanium | : | 1% |
| Themeda | : | 1% |
| Chrysopogon polyphyllus | : | 1-2 % |
| Paspaladium flavedium | : | 1% |
| Coix aquatica | : | near stream |

Management Action Plan Recommendations

1. July – August : Ist weeding
2. October : IInd Weeding
3. December : IIIrd Weeding : Weeding before fruiting stages of the plants.

4. Imperata grass cutting in mosaic pattern : two times in year : Season of cutting : 1) JULY – AUGUST 2) Nov. –Dec.
5. Brushwood cutting from the periphery of the grassland : July season.
6. Waterlogged area of grassland no intervention.

Jenabil Grassland Mgt General Guidelines

1. Cutting of taller grasses : July , October and January
2. Weeding after cutting of grasses. Bothriochloa seed collection.
3. Paspalum (Kodo) Grass seed collection.
4. Setaria pumilla seed collection.
5. Digitaria abludens grass seed collection.

Jamuna Garh Relocated Village Guidelines for good grassland Development

1. Enlist of grasses .
2. Weeds enlist.
3. Weeding in proper periods.
4. 3-4 times weeding in a year.: July , October and December.

UBK Grasslands Kankadajodi grasaslands : 06 Hectares area Composition of Grassland

| | | |
|-------------------------|---|--------|
| Imperata cylindrica | : | 10 % |
| Paspalum (Kodo) | : | 1 % |
| Saccharum spontanium | : | 80-85% |
| Themeda laxa | : | 5% |
| Chrysopogon polyphyllus | : | 1-2 % |
| Apluda mutica | : | 1% |
| Setaria pumilla | : | 1-2 % |

Management Action Plan Recommendations

1. July – August : Ist weeding
2. October : IInd Weeding
3. Imperata and Saccharum grass cutting in mosaic pattern : two times in year : Season of cutting : 1) JULY –AUGUST 2) Nov. –Dec.
4. Brushwood cutting from the periphery of the grassland : July season.
5. Bamboo 15-20 plants addition in August.

6. Wild fruit trees Aegle and Sygizium plants addition.

MATUGHAR GRASSLAND Area: 14 hectre Composition of Grassland

| | | |
|-------------------------|---|---------|
| Imperata cylindrica | : | 25-40 % |
| Paspalum (Kodo) | : | 1 % |
| Saccharum spontanium | : | 2-5% |
| Themeda laxa | : | 25% |
| Themeda quadrivalvis | : | 1% |
| Chrysopogon polyphyllus | : | 1-2 % |
| Apluda mutica | : | 1-5% |
| Setaria pumilla | : | 1-2 % |

Management Action Plan Recommendations

1. July – August : Ist weeding
2. October : IInd Weeding
3. Half area of the grassland from TOONA CILIATA TREE Imperata and Saccharum grass cutting in mosaic pattern : two times in year : Season of cutting : 1) JULY –AUGUST 2) Nov. –Dec.
4. Brushwood cutting from the periphery of the grassland : July season.
5. Bamboo , 100 plants addition in August.

DEOSTHALI GRASSLAND AREA : 25 Hectare Composition of Grassland

| | | |
|-------------------------|---|--------------------------|
| Imperata cylindrica | : | 2-7 % |
| Paspalum (Kodo) | : | 1 % |
| Saccharum spontanium | : | 20% |
| Themeda laxa | : | 15% |
| Themeda quadrivalvis | : | 10% |
| Chrysopogon polyphyllus | : | 1-2 % |
| Setaria pumilla | : | 1-2 % |
| Cynodon barbei | : | 5-7 % |
| Weeds dominant | : | Scoparia near Beat house |

Management Action Plan Recommendations

1. July – August : Ist weeding
2. October : IInd Weeding

3. IIIrd Weeding : December
4. Saccharum grass cutting in mosaic pattern : two times in year : Season of cutting : 1) JULY – AUGUST 2) Nov. –Dec.
5. Brushwood cutting from the periphery of the grassland : July season.
6. Bamboo , Bahunia bushes , 100 plants addition in August.
7. Themeda , Heteropogon grasses rhizomes addition.

UBK Grasslands : 13 Hectare area

Type of grassland : smaller and intermediate.

Composition of Grassland

| | | |
|-------------------------|---|-------|
| Imperata cylindrica | : | 1-2 % |
| Paspalum (Kodo) | : | 1 % |
| Saccharum spontanium | : | 2% |
| Themeda laxa | : | 1% |
| Themeda quadrivalvis | : | 1% |
| Chrysopogon polyphyllus | : | 2-6 % |
| Setaria pumilla | : | 1 % |
| Cynodon barberi | : | 5-8% |
| Sporobolus dinder | : | 0.5 % |
| Paspaladium flavedium | : | 5% |

Management Action Plan Recommendations

1. July – August : Ist weeding
2. October : IIInd Weeding
3. IIIrd Weeding : December
4. Brushwood cutting from the periphery of the grassland : July season.
5. Bamboo, 100 plants addition in August.
6. Cynodon enrichment in weed uprooted areas.
7. Soil Moisture Conservation near Gully road side areas.

TARINIVILLA GRASSLAND

1. Woody species like Vitex , Casearia , play vital role in hidden habitat of wildlife management practices.
2. Uprooting of Plectranthus . Andropogon citrates from the grasslands .

3. 1-2 grasses cutting in proper periods.

4. Critical wildlife habitat of STR.

North Similipal Grasslands Management Recommendations

- Observe the composition of natural grassland.
- Soil texture , color , water holding capacity
- Identify the local fodder grasses
- Grasses seeds collection ---- November to February ☐ Enrichment of shade tolerant palatable grasses
- Grasses enrichment by seeds or grasses rhizomes.
- Demarcation and polygon of each grassland.
- Brushwood management every year after winter season.
- Kijhari 39 hectare grassland or meadow rehabilitated area in 2016 :1) More grasses diversity 2) 80% grasses perennial palatable 3) dominant grasses are – *Dichanthium annualatum* , *Dicanthium caricosum* , *Dicanthium persutum* , *Choris barbata* , *Cholris virgate* , *Iselima laxum* , *Bothriochloa persutum* , *B. tuberosum* , *Cynodon barberi* 4) seeds collection in more % in November to February 5) prepare grasses nursery for seeds collection.
- Arrange workshop on meadow development 2 times per year ☐ Maintain grasslands management register in every season

Common recommendations Meadow / Grasslands Management

- Conserve old grasslands by proper management interventions
- Weeds eradication before fruiting
- Uproot weeds along roadside as well as from inside grasslands
- After weeds eradication – restoration by good grasses with suitable grasses.
- Brushwood management in suitable season
- Site specific interventions' required
- Identify grasses with local names
- Ecological restoration by grasses seeds
- Monitoring of grasslands season wise
- Documentation of management interventions
- Training for frontline field staff 2 times per year.
- Geo-mapping of each grassland
- Biomass management in mosaic pattern.

Govt. of Madhya Pradesh



मध्य प्रदेश शासन

Office of the Field Director

Panna Tiger Reserve

Panna, Madhya Pradesh, (India)

Phone No. +917732-252135 (O) Fax, +917732-252120

E-mail: fdnp.pna@mp.gov.in, Website: www.pannatigerreserve.in

Panna Tiger Reserve



पन्ना टाइगर रिजर्व

Sub.- Appreciation letter.

No./Sr.PA/2021/ 257

Panna Dated 15.02.2021

To,

Prof. G.D. Muratkar
Head Department of Environment Science,
Arts, Science & Commerce College,
Chikhaldara, Distt. Amravati (Maharashtra)

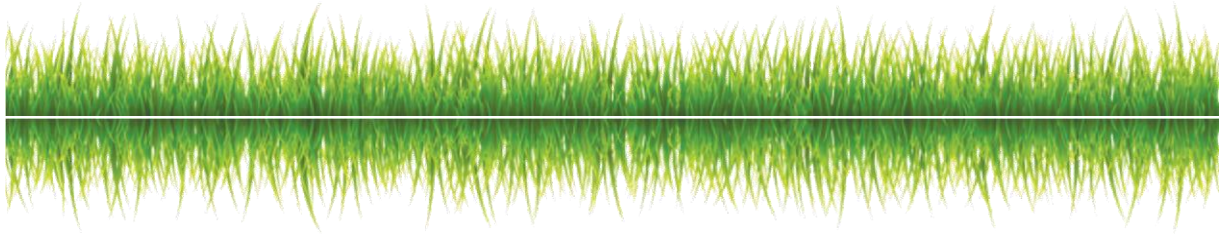
Dear Dr. Muratkar,

Directorate of Panna Tiger Reserve acknowledges and appreciate your efforts made and cooperation extended to develop the new grassland and improve the existing ones in Panna Tiger Reserve . You have been associated with Panna Tiger Reserve for a long time and your contribution in building and enhancing the capability of the field staff is praise worthy. The field workshop arranged and organized by Panna Tiger Reserve and guided by you in management of grasslands, identification and removal of weed and collection grass seeds, wild legume have helped in improving the existing grassland habitats for the wild herbivores. The services given by you for Panna Tiger Reserve are excellent and it is a great contribution for the cause of tiger conservation in particular and wildlife conservation in general. We convey our sincere thanks and gratitude to you by issuing this appreciation letter.

(Uttam Kumar Sharma)

Chief Conservator of Forests and Field Director,
Panna Tiger Reserve Panna

E:\Steno 1\PTR_all\Letter_G.D. Muratkar_Grass expert.docx





MAHARASHTRA STATE
FOREST DEPARTMENT



**OFFICE OF THE CONSERVATOR OF FORESTS & FIELD DIRECTOR,
TADOBA-ANDHARI TIGER RESERVE, CHANDRAPUR**

Mul Road, Chandrapur 442401

Phone No. (07172) 251414

E-Mail ccffdtadoba2@mahaforest.gov.in

By Email

Desk no - 4/Steno/2022-23/ 549

Chandrapur, Date 30/05/2022

Sir,

Subject :- Letter of appreciation

On behalf of Tadoba-Andhari Tiger Reserve, Chandrapur, I place on record our sincere appreciation towards Prof. G. D. Muratkar, for his invaluable contribution towards improvement of grassland management practices in Tadoba-Andhari Tiger Reserve. He has conducted field visits and conducted on field training and workshops involving Forest officials from the cadre of Forest Beat Guards to Field Director on the grassland management, Wild legume identification, grass seed collection and weed eradication on dated 07/05/2022 and 08/05/2022.

This has resulted in visible change in different grasslands spread over this Tiger Reserve and we express our gratitude and acknowledge the services rendered by him, and hope for his continuing technical support and guidance.

(Dr. Jitendra S. Ramgaokar, IFS)
Conservator of Forests & Field Director,
Tadoba-Andhari Tiger Reserve, Chandrapur

To,

The Principal,
Arts Science and Commerce College,
Chikhaldara, Amravati District,
Maharashtra State-444 807



उपवनसंरक्षक, मेळघाट व्याघ्र प्रकल्प, आकोट वन्यजीव विभाग, आकोट यांचे कार्यालय,
कार्यालय- पोपटखेड रोड, आकोट, जि.अकोला, पिन को.नं. 444101
ई-मेल dcf.akot@yahoo.com ; dycfwlakot@mahaforest.gov.in

पत्र

विषय:- धारगड येथे कुरण विकास व गवत प्रजातीचे ओळख
याबाबत कार्यशाळा आयोजित करणेबाबत.

क्रमांक:- शि.ली.1/1266A /2021-22

आकोट, दिनांक:- 12/11/21

प्रति,

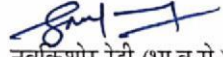
डॉ. गजानन डी. मुरतकर, प्राध्यापक,
सिपना महाविद्यालय,
चिखलदरा.

संदर्भ:- या कार्यालयाचे पत्र क्र.शि.ली.1/808/दिनांक 26/08/2021 अन्वये

उपरोक्त संदर्भिय पत्राचे अनुषंगाने कुरण विकास व गवत प्रजातीची ओळख या विषयावर आपले मार्गदर्शनाखाली
धारगड परिक्षेत्रांतर्गत धारगड सभागृह येथे दिनांक 30/08/2021 रोजी कार्यशाळा आयोजित करण्यात आलेली होती.

तसेच आज्ञादी का अमृत महोत्सव व पक्षी सप्ताह निमित्त क्षेत्रीय कर्मचारी यांना गवत प्रजातीची ओळख व गवत वि
संकलन करणे या विषयावर धारगड परिक्षेत्रांतर्गत धारगड सभागृह येथे दिनांक 14/11/2021 रोजी कार्यशाळा आयोजित
केलेली आहे.

तरी सदर कार्यशाळेस आपण उपस्थित राहून क्षेत्रीय कर्मचारी यांना मार्गदर्शन करावे हि विनंती.


एस. नवकिशोर रेड्डी (भा.व.से.)
उपवनसंरक्षक,
मेळघाट व्याघ्र प्रकल्प,
आकोट वन्यजीव विभाग, आकोट

प्रतिलिपी:- मा.मुख्य वनसंरक्षक तथा क्षेत्रसंचालक मेळघाट, अमरावती यांना महितीस सविनय सादर.

gY'mZnì



Government of Maharashtra
Forest Department

**Office of Conservator of Forests & Field Director, Tadoba
Andhari Tiger Reserve, Chandrapur**

Tel No. (07172) 251414, 277116

Mul Road, Chandrapur-442401

E-mail- ccffdtadoba2@mahaforest.gov.in/ ccf.fdtatr@rediffmail.com

No: Desk-4/Steno/2021-22 2612

Chandrapur Dt. 31/1/2022

To,

Dr. G.D. Muratkar
Head,
Department of Environmental Sciences
Art, Science & Commerce College.
Chikhaldara.

Subject :- Conducting ecological study of grasses of Tadoba Andhari Tiger Reserve
Regarding.

Reference :- Deputy Director (Core), TATR Letter No. 984/2021-22 dated 31/01/2022.

Respected Sir,

As you are aware, we at Tadoba Andhari Tiger Reserve Chandrapur, are working extensively to make Tadoba Tiger Reserve free from invasive weeds and also to restore degraded grasslands by promoting native species of grasses. We have received valuable guidance from you from time to time to carry out this important work by following sound scientific practices. We are also working on developing degraded areas vacated by villages that have been relocated outside the park. We want to document this work and also conduct study on the grass species available in Tadoba Andhari Tiger Reserve and its ecological aspects.

Considering your technical expertise in the field of grasses and your continuous guidance to field staff and officers of Tadoba Andhari Tiger Reserve, we would like to request you to take up a separate study on ecology of grasses in Tadoba Andhari Tiger Reserve Chandrapur.

This will help the management take informed habitat management decisions in future and restore all degraded areas of the park and outside to their full ecological potential as habitat for wildlife.


(Dr. Jitendra Ramgaokar)

Conservator of Forests & Field Director,
Tadoba Andhari Tiger Reserve,
Chandrapur

Copy to : Deputy Director (Core), TATR Chandrapur for information with regards to letter under reference.

gY'mZnì

P.V. RAJA RAO, IFS
Director /CCF &
Secretary, CEFNARM



Telangana State Forest Academy
Government of Telangana,
Dulapally, Hyderabad – 500 100
Land Line (O) : 040 – 29 70 48 96
Mob : + 91 94 40 81 01 66
e-mail : tsfa.hyd@gmail.com
peshi.tsfa@gmail.com

LETTER OF APPRECIATION

The Telangana State Forest Academy, sincerely appreciates Prof. Gajanan Dadaraoji Muratkar of Maharashtra for the vast & exhausting knowledge on Grasslands.


Prof. Muratkar delivered very information & exhaustive lecture on Zoom webinar as a part of online lectures to the Forest Range Officer trainees VIII Batch (batch comprises trainees of Uttar Pradesh, West Bengal & Karnataka) on 22nd February 2022.

It was a splendid presentation besides interaction with the Forest Range Officer trainees exposing them to various kinds of Grass species coupled with identification tips for identification in the field.

Your eloquent sharing on “Grassland Development and Management” was fully appreciated and the trainees got benefited from your views and vast experiences in the field of Grassland Management.

Looking forward to your cooperation for promotion and imparting further professional expertise in future as well.

with best regards

Yours sincerely

(SRI P. V. RAJA RAO, IFS)
Director/CCF

To
Prof. Gajanan Dadaraoji Muratkar
Head, The Botany and Environmental Science Department of the Arts,
Science and Commerce College at Chikhaldara, Maharashtra State



GOVERNMENT OF TELANGANA
T.S. FOREST DEPARTMENT
Telangana State Forest Academy
Dulapally, Hyderabad - 500 100



From Sri P.V. Raja Rao, IFS.,
Director / Chief Conservator of Forests,
T.S. Forest Academy,
Dulapally, Hyderabad - 500 100

To Dr. G.D. Muratkar, Prof.,
Chilkadara
Maharashtra.

RC.No.729/2021/E2, Dt.28.05.2021

Sir,

Sub: TSFA, Dulapally - 2020-22 (7th Batch) - 18 Months induction training to "Forest Range Officer Trainees" at T.S. Forest Academy, Dulapally, Hyderabad - Proposed study tour to **West-Central India Tour on virtual mode** w.e.f 21.06.2021 to 07.07.2021 (15 days) -Approval - Requested - Regarding.

I submit to state that the Telangana State Forest Academy, Dulapally, Hyderabad has planned to conduct **Virtual West Central India Study Tour for 2020-22 (7th Batch) of Forest Range Officer trainees** (63 trainees including 17 lady officer trainees) from 21.06.2021 to 07.07.2021 (15 days). Due to the escalation of the COVID cases and Pandemicity throughout the country and as discussed with Directorate of Forest Education, it is decided to conduct the proposed West Central India Study tour **through Virtual Mode**. In this regard a Virtual Mode tour schedule has been prepared and enclosed in the annexure for information and further action.

Virtual tour will be conducted in **Zoom platform**. The link will be shared in advance and will be hosted by Telangana State Forest Academy, Dulapally, Hyderabad on the following topic.

| Date | Time | Proposed activity |
|-------------------------|---------------|---|
| 29.06.2021 (Tuesday) | 03.00 - 04.30 | Grass Land Management - Interaction with Dr. Murathkar, Prof. |

In order to coordinate with the Officers concerned the following officers is nominated as **Nodal Officer** at T.S. Forest Academy, Dulapally, Hyderabad.

| Sl. No. | Name of the Officer | Designation | Contact No. | Email ID |
|---------|---------------------|--|-------------|----------------------------|
| 1. | Sri V. Anjaneyulu | Dy. Director / Course Director, 7 th Batch (2020-22) FRO - ITP TSFA, Dulapally. | 9440815595 | vanjaneyulu.tsfa@gmail.com |

DEPARTMENT OF CHEMISTRY
SANT GADGE BABA AMRAVATI UNIVERSITY
(Reaccredited with 'A'Grade by NAAC)

Dr. A. S. Aswar
Senior Professor & Head
Coordinator, Avishkar Cell
Ex-Scientistn –Charge
Industrial & Applied Chemistry



Phone : 0721-2662279 Ext 262
: 0721-2553016
Mobile: 09421790860/9637650791
Fax: 0721-2662135, 2660949
E-mail: aswaranand@gmail.com
Amravati-444602(M.S.), India

Date : 5/03/2022

Ref.No.:Chem/5/2022

To,
Dr.G.D.Muratkar
Arts ,Science and Commerce College, Chkhaldara

Subject: Regarding Invited talk in the **NWNSDT-2022** during **March 12-13, 2022**

Dear Madam,

Greetings from SGB Amravati University, Amravati!

It is my pleasure to inform you that the Department of Chemistry, Sant Gadge Baba Amravati University, Amravati in collaboration with NASI, Prayagraj and Arts ,Science and Commerce College, Chkhaldara is organizing a “National Workshop on “Nature & Science for Socioeconomic Development of Tribal Regions” (NWNSDT-2022) during March 12-13, 2022 at Muthawa Community Resource and Research Centre, Kotha Tq. Dharni ; Dist. Amravati. The scope of the workshop has been kept broad based with the intention to include young research scholars and PG students can get exposed to the contemporary topics of research like **Phytochemistry**, **Biodiversity** and **Conservation of Medicinal Plants** **general and Traditional use of herbal medicines /Propagation and Management of plants** in particular.

In view of your wide experiences and valuable contributions in the field of **phytochemicals analysis** and allied areas, I, on behalf of the organizing committee and on my own, invite you to kindly deliver an Invited Talk of 45 minutes on **Biodiversity, local medicinal plants and their traditional uses** or **on the topic of your interest relevant to the theme of the workshop**. Your talk will certainly help our students to widen the horizon of their knowledge in the area of **phytochemistry** **chemical biology**; **extraction methodologies**, **characterization techniques**, and **therapeutical potentials** **medicinal plants and boost their confidence towards improving their economic empowerment.**

Hoping, for your active participation at **NWNSDT-2022** and make the program a grand success. The organizing committee is delighted to provide your local hospitality.

Looking forward to listen to you at **NWNSDT-2022** & a line of confirmation shall be highly appreciated.

With best Regards
Sincerely Yours,

(A.S.Aswar)
Convener **NWNSDT-2022**



महाराष्ट्र शासन
वन विभाग

मुख्य वनसंरक्षक, चंद्रपूर वनवृत्त, चंद्रपूर यांचे कार्यालय

सिव्हील लाईन नागपूर रोड, चंद्रपूर - 442401 (म.रा.)

दुरध्वनी नं. 07172-256279 फॅक्स नं. 07172-252232

E-mail: ccfcchandrapur@gmail.com

E-mail द्वारे

क्रमांक कक्ष -2(1)/योजना/2022-23/ 1136

चंद्रपूर दिनांक : 4 /07/2022

विषय- वनक्षेत्रात कुरण विकास कार्यशाळा आयोजित करणे बाबत.

उपवनसंरक्षक, मध्य चांदा वनविभाग यांना कळविण्यात येते की, चंद्रपूर जिल्हयात मानव - वन्यजीव संघर्षाचे तिव्र स्वरूप लक्षात घेता तृणभक्षी जनवरांसाठी खादयाची कमतरता लक्षात घेता कुरण विकास प्रकल्प राबविणे आवश्यक आहे. याबाबत मा.प्रधान सचिव (वने) मंत्रालय, मुंबई यांनी सभेत निर्देश दिले आहेत. या प्रकल्पात चारा निर्माती करून तृणभक्षी प्राण्यांना खादय पुरविणे तसेच सभोवतिलच्या गावातील लोकांच्या जनावरांसाठी चारा पुरवठा करणे हे उद्देश अभिप्रेत आहे. या दृष्टिकोनातून चंद्रपूर जिल्हयांसाठी एकात्मिक विकास प्रकल्प (Perspective plan) राबविण्याबाबत मा.मुराटकर,सर (गवत तज्ञ) यांना सप्टेंबर/2022 मध्ये कार्यशाळा आयोजित करण्याबाबत दिनांक कळविण्यांत यावे,

तसेच मा.मुराटकर, सर गवत तज्ञ यांचा मोबाईल नंबर 8975750202/9423426805 व ई.मेल आयडी (gmuratkar@gmail.com/ Gmuratkar@gmail.com) यांचेशी संपर्क साधावा.

(प्र. ज. लोणकर)
मुख्य वनसंरक्षक,
चंद्रपूर वनवृत्त, चंद्रपूर

प्रति,

उपवनसंरक्षक,
मध्य चांदा वनविभाग

प्रतिलिपी :- श्री. मुराटकर, सर गवत तज्ञ यांना माहिती व आवश्यक कार्यवाहीस अग्रेषित.

**OFFICE OF THE DEPUTY DIRECTOR,
SIMILIPAL SOUTH WILDLIFE DIVISION, BARIPADA**
PHONE:06792-259126, FAX:06792-256705, e-mail: ddsimilipal.od@gov.in

Letter No. 658 /4F

Dated, Baripada the 11th March,2022

To

Prof. Dr. G.D. Muratkar
Grass Expert,
Head Department of Environment Science
Arts Science and Comm. College,
Chikhaldara, Amravati
Maharashtra. PIN- 444807

E-mail : gmuratkar@gmail.com.


Sub: Training to the frontline staff of Similipal Tiger Reserve, Odisha, on
"Meadow Development & Management"

Sir,

In inviting a reference to the above noted subject, it is decided to organize a capacity building training programme for Field Staff of Similipal Tiger Reserve, Odisha on "Meadow Development and Management" on 19.03.2022 and 20.03.2022. Hence, you are requested to impart training to the frontline staff as Expert Trainer in the above event. Your boarding and lodging will be borne by Forest, Environment & Climate Change Department, Govt. of Odisha.

An early confirmation is requested.

Yours faithfully


Deputy Director
Similipal South WL Division, Baripada

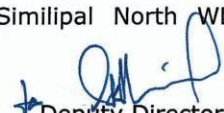
Memo No. 659 / Dt. 11.03.2022

Copy forwarded to the Field Director, Similipal Tiger Reserve-Cum-Regional CCF, Baripada for favour of information.


Deputy Director
Similipal South WL Division, Baripada

Memo No. 660 / Dt. 11.03.2022

Copy forwarded to the Deputy Director, Similipal North WL Division, Jashipur for information and necessary action.


Deputy Director
Similipal South WL Division, Baripada



महाराष्ट्र शासन

महसूल व वन विभाग

प्रधान मुख्य वनसंरक्षक, महाराष्ट्र राज्य, नागपूर यांचे कार्यालय.

O/o Principal Chief Conservator of Forests (HoFF), Maharashtra State

प्रधान मुख्य वनसंरक्षक (वन्यजीव) महाराष्ट्र राज्य

Principal Chief Conservator of Forests (Wildlife), Maharashtra State

"Van Bhavan" 3rd Floor, Rangiri Road, Civil Lines, Nagpur 440 001

Phone - 0712-2549563

E-mail - pccf@mgp@mahaforest.gov.in

Website - www.mahaforest.gov.in

पत्र-संमेल

क्रमांक:- कक्ष-२३(२)/वजी/सर्व्/प्र.क्र.५२/CMO/९६९/२०२१-२२, दिनांक:- ०३/०८/२०२१

प्रति,

- १) प्रधान मुख्य वनसंरक्षक (उत्पादन व व्यवस्थापन), म.रा.
- २) प्रधान मुख्य वनसंरक्षक तथा मुख्य कार्यकारी अधिकारी (महा कम्पा), म.रा.
- ३) श्री. एस.बी. चडवे, वनसंरक्षक (सेवानिवृत्त), पुणे.
- ४) श्रीमती केतकी घाटे, (OIKOS), पुणे.
- ५) डॉ. गजानन मुरतकर, चिखलदग.
- ६) श्री. मिहोर गोडबोले, (Grassland Trust), पुणे.
- ७) श्री. कौस्तुभ पंढरीपांडे, चर्चा.

विषय :- राज्यातील शुष्क प्रदेशातील गवताळ प्रदेश/कुरण अधिवासाचे आणि जैवविविधतेचे संवर्धन करण्याबाबत आभासो कार्यशाळा व चर्चा.

संदर्भ:- १) या कार्यालयाचे पत्र क्र. कक्ष-२३(२)/वजी/सर्व्/प्र.क्र.८१७, दि. २०/०७/२०२१.

२) या कार्यालयाचे पत्र क्र. कक्ष-२३(२)/वजी/सर्व्/प्र.क्र.८३१, दि. २०/०७/२०२१.

राज्यातील विविध क्षेत्रात उत्तम गवताळ क्षेत्र/कुरणे नैसर्गिकरित्या आढळून येतात. अशा क्षेत्रातील अधिवासात एक विशिष्ट प्रकारचो जैवविविधता दिसून येते. ह्या गवताळ प्रदेशाचे व कुरणांचे संवर्धन करणे हे अत्यंत महत्वाचे आहे. त्यांचे जतन करणे व संवर्धन करणे ह्यासाठी कशा प्रकारे नियोजन करावे ? या करीता संदर्भिय पत्र-१ अन्वये आभासो कार्यशाळा व चर्चा आयोजित करण्यात आली होती. तथापि काही अपरिहार्य कारणास्तव सदर कार्यशाळा संदर्भिय पत्र-२ अन्वये पुढे ढकलण्यात आलेली होती.

आता आपणांस याद्वारे कळविण्यात येते की, दिनांक ११ ऑगस्ट २०२१ रोजी संध्याकाळी ४.०० वाजता आभासो कार्यशाळा व चर्चा आयोजित करण्यात आली आहे. करीता उपरोक्त चर्चेकरीता सहभागी व्हावे व आपले मौलिक विचार मांडावे, हि विनंती.

या कार्यशाळेची लिंक वेगळ्याने पाठविण्यात येईल.

(Handwritten signature)
8/20
3
2

(सुनील लिमये)

प्रधान मुख्य वनसंरक्षक (वन्यजीव).

महाराष्ट्र राज्य

प्रतिलिपी :- प्रधान मुख्य वनसंरक्षक (माहिती तंत्रज्ञान व धोरण), म.रा. यांना माहिती व उच्योत कार्यवाहीस सन्नेह अग्रणीत. सदर कार्यशाळेकरीता आपले स्तरावरून लिंक तयार करून देण्यात यावे, हि विनंती.

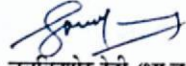
पत्र

विषय:- धारगड येथे कुरण विकास व गवत प्रजातीचे ओळख
याबाबत कार्यशाळा आयोजित करणेबाबत.
क्रमांक:- शि.ली.1/ 757 /2021-22
आकोट, दिनांक:- 20/08/2021

सन 2021-22 मध्ये कुरण विकास व गवत प्रजातीची ओळख या विषयावर डॉ. गजानन डी. मुरतकर, प्राध्यापक यांचे मार्गदर्शनाखाली धारगड परिक्षेत्रातील धारगड सभागृह येथे दिनांक 27/08/2021 रोजी कार्यशाळा आयोजित करण्यात आलेली आहे.

तरी वनपरिक्षेत्र अधिकारी सर्व यांनी आपले अधिनस्त ज्या टिकाणी कुरण विकासाची कामे घेणार आहेत किंवा सुरु आहेत अशा क्षेत्रातील 02 वनरक्षक व 01 वनपाल यांना उपरोक्त कार्यशाळेकरीता उपस्थित राहणे बाबत सुचना देण्यात याव्या तसेच आपण सुध्दा सदर कार्यशाळेकरीता उपस्थित राहावे.

तसेच वनपरिक्षेत्र अधिकारी, धारगड यांनी धारगड सभागृह येथे दिनांक 27/08/2021 रोजी कार्यशाळेचे सर्व आयोजन करावे.


एस. नवकिशोर रेड्डी (भा.व.से.)
उपवनसंरक्षक,
मेळघाट व्याघ्र प्रकल्प,
आकोट वन्यजीव विभाग, आकोट

प्रति,

वनपरिक्षेत्र अधिकारी,
वान/सोनाळा/सोमटाणा/नरनाळा व धारगड.

प्रतिलिपी:- डॉ. गजानन डी. मुरतकर, प्राध्यापक, चिखलदरा यांना माहितीस अग्रेषित. त्यांनी उपरोक्त कालावधीत आयोजित कार्यशाळेकरीता उपस्थित राहून मार्गदर्शन करावे ही विनंती.

प्रतिलिपी:- सहायक वनसंरक्षक, वन्यजीव विभाग, आकोट यांना माहितीस व योग्य कार्यवाहीस अग्रेषित.



OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS (WILDLIFE & BIO-DIVERSITY CONSERVATION) CUM-CHIEF WILDLIFE WARDEN CHHATTISGARH

Aranaya Bhawan, First Floor (FR) Sector 19, North Block, Capital Complex Atal Nagar, Nava Raipur

✉ cwlwcg@gmail.com

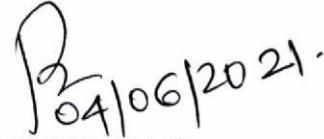
(☎ 0771-2512880, 📠 0771-2512881)

No./WL /Coord./.....

Nava Raipur, Dated : 04/06/2021

Prof. Gajanan Dadaraoji Muratkar delivered a virtual lecture captioned "Grassland management Techniques for the Protected Areas of Chhattisgarh" on 4th June 2021 to the Officers and field staff working in the Protected Areas of Chhattisgarh.

The inputs in the session gave an insight into the timelines in which different activities from seed collection, treatment, pre-sowing and post sowing operations need to be carried out to develop grassland in order to increase the herbivores population. The department is thankful to him and looks forward to having many more such fruitful training sessions in the future also.


04/06/2021

(P.V.NARSINGA RAO)

Principal Chief Conservator of Forest (Wildlife) and
Chief Wildlife Warden, Chhattisgarh State

GOVERNMENT OF KARNATAKA

**S. R. NATESHA, IFS.,
CONSERVATOR OF FORESTS &
FIELD DIRECTOR**



FOREST DEPARTMENT



No. A4/BUD/CR 17/Grassland/2020-21

Date: 25-01-2021

To,
Dr. Gajanan Muratkar,
Grass Expert and
Head of the Department Environment Science,
Arts, Science and Commerce College,
Chikaldara, Amaravati,
Maharashtra - 444807

Sub: *Appreciation of Services rendered in Grassland Management in Bandipur Tiger Reserve, Karnataka – reg.*

*_*_*_*_*

This is with great pleasure that, I acknowledge and immensely appreciate your technical guidance for the development of grasslands in Bandipur Tiger Reserve and the contribution towards the capacity building of our field and supervisory staff.

Your recent visit on 26th December 2020 to Bandipur and your inputs given in the workshop with the management of Bandipur Tiger Reserve have considerably added to our understanding of the improvement and management of grassland. I hope that in future also you will lend us your tremendous support for the cause of conservation of grassland in Bandipur Tiger Reserve.

A handwritten signature in blue ink, appearing to read 'S. R. Natesha'.

(S. R. Natesha, IFS.,)
Conservator of Forests & Field Director,
Project Tiger, Bandipur



**Office of the Dy Conservator of Forests, Melghat Tiger Reserve,
Akot Wildlife Division Akot**

Office- Popatkhed Road Akot, Pin Code No. 444101

E-mail- dcf.akot@yahoo.com

Desk No. GC/826/2021-22

Akot Date :- 15/9/21

Sir,

Subject :- Letter of appreciation.

On behalf of Akot Wildlife Division , Melghat Tiger Reserve, I place on record our sincere appreciation towards Prof. G. D. Muratkar, for his invaluable contribution towards improvement of grassland management practices in Melghat Tiger Reserve. He has conducted field visits and conducted on field training and workshops involving forest officials from the cadre of forest Beat Guards to Deputy Conservator of Forests on the grassland management, wild legume identification, grass seed collection and weed eradication. This has resulted in visible change in our grassland management approach and we express our gratitude and acknowledge the services rendered by him, and hope for his continuing technical support and guidance.

S. Navakishore Reddy (I.F.S.)
Dy. Conservator of Forests,
Melghat Tiger Reserve
Akot Wildlife Division, Akot

To,

The Principal,
Arts Science and commerce College
Chikhaldara, Amravati District,
Maharashtra State 444807

OFFICE OF FIELD DIRECTOR, SATPURA TIGER RESERVE

Narmadapuram, (MP) 461 001

Email: fdsatnp.hbd@mp.gov.in Ph: 07574-254394 & Fax: 07574-252133



No. /Management/...5318

Narmadapuram, Date: ...16.6.22

To,

Prof. G. D. Muratkar
Department of Environmental Science
Arts, Science & Commerce College
Amaravati, Maharashtra

Sub: Request for visit in recent relocation sites for grassland management in Satpura Tiger Reserve


Dear Prof Muratkar,

As you know that Satpura Tiger Reserve recently relocated Khamda & Suplai villages from the tiger reserve. During our past observations we found that this area has a potential site to become a good prey base for the carnivores. So Satpura Tiger Reserve planning to develop this area as a grassland site. So we need some baseline information regarding the grasses in that relocation site. So that we can practice the grassland management into the relocation site in near future.

You are requested to visit those relocation sites on 20 to 23 of June 2022.

Thanking you.

Sincerely,


(L. Krishnamoorthy, IFS)
Field Director, Satpura Tiger Reserve
Narmadapuram (MP)



Memorandum of Understanding

Memorandum of Understanding in Between Field Director and Chief Conservator of Forests Melghat Tiger Reserve , Amravati And Principal Arts , Science & Commerce College , Chikhaldara Talq. Chikhaldara , Dist Amravati 444807

Being Party of the First Part : Field Director and Chief Conservator of Forests Melghat Tiger Reserve , Amravati

Being Party of the Second Part : Principal Arts , Science & Commerce College , Chikhaldara Talq. Chikhaldara , Dist Amravati Where as Sipna Shikshan Prasarak Mandal , a public trust duly registered under the provision of Bombay Public Trust Act , 1950 , is running the Arts , Science and Comm. College Chikhaldara offers various courses in Arts , Commerce and Science streams for the students and also has expert faculties working in the college for imparting education to the students. And Where AS Chikhaldara comes under the Melghat tribal region , which is mainly a forest area having rich biodiversity. The Party of the First Part requires the Honorary Consultation Services and Scientific , Technical support from the Department of Environmental Science and Botany in the field of 1) identification of Grasses of Melghat Tiger Reserve , 2) Classification of grasses in to Palatable and Non Palatable ,3) Weeds identification ,4) Wild leguminous plants identification 5) Grasses Seeds Collection ,6) Grassland Management Practices for the herbivores 7) Preparation of Action Plan for Grassland Management. And Where As Prof. G. D. Muratkar , Head Dept. of Environmental Science of the college offered his selfless valuable consultation services and technical support in grassland management practices for the relocated sites of the Melghat Tiger Reserve from the year 2012-13 to current period of the year 2016-17. The Field Director and Chief Conservator of the Melghat Tiger Reserve , Amravati requested to provide the expertise services of Prof. G. D. Muratkar on honoray baisis. And Where As looking to the nature of work and its benefit to the forest and grassland ecosystem , food chain for herbivores and carnivores in general the Principal , Arts , Science & Commerce College , Chikhaldara accepted the request of the Hon,ble Field Director and Chief Conservator of Melghat Tiger Reserve.

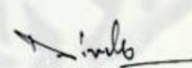
Prof. G. D. Muratkar and his team will carry out the following training programmes for the field staff of the Melghat Tiger Reserve in the suitable season specially in Sunday , Holidays and vacations without any remuneration.

1) Grasses identification. 2) Weeds identification 3) Wild Leguminous plants identification 4) Seeds collection , storage and broadcasting 5) Enrichment of grasslands 6) Field workshop for field staff 7) Ecological Impact Assessment of Relocated Villages sites of MTR.

Date: 28/12/2016

Principal
Arts , Science and Commerce College
Chikhaldara




Field Director and Chief Conservator of Forests
MELGHAT TIGER RESERVE
Amravati.

Memorandum of Understanding

Memorandum of Understanding in Between Field Director and Chief Conservator of Forests Melghat Tiger Reserve , Amravati And Principal Arts , Science & Commerce College , Chikhaldara Talq. Chikhaldara , Dist Amravati 444807

Being Party of the First Part : Field Director and Chief Conservator of Forests Melghat Tiger Reserve , Amravati

Being Party of the Second Part : Principal Arts , Science & Commerce College , Chikhaldara Talq. Chikhaldara , Dist Amravati Where as Sipna Shikshan Prasarak Mandal , a public trust duly registered under the provision of Bombay Public Trust Act , 1950 , is running the Arts , Science and Comm. College Chikhaldara offers various courses in Arts , Commerce and Science streams for the students and also has expert faculties working in the college for imparting education to the students. And Where AS Chikhaldara comes under the Melghat tribal region , which is mainly a forest area having rich biodiversity. The Party of the First Part requires the Honorary Consultation Services and Scientific , Technical support from the Department of Environmental Science and Botany in the field of 1) identification of Grasses of Melghat Tiger Reserve , 2) Classification of grasses in to Palatable and Non Palatable ,3) Weeds identification ,4) Wild leguminous plants identification 5) Grasses Seeds Collection ,6) Grassland Management Practices for the herbivores 7) Preparation of Action Plan for Grassland Management. And Where As Prof. G. D. Muratkar , Head Dept. of Environmental Science of the college offered his selfless valuable consultation services and technical support in grassland management practices for the relocated sites of the Melghat Tiger Reserve from the year 2012-13 to current period of the year 2016-17. The Field Director and Chief Conservator of the Melghat Tiger Reserve , Amravati requested to provide the expertise services of Prof. G. D. Muratkar on honoray baisis. And Where As looking to the nature of work and its benefit to the forest and grassland ecosystem , food chain for herbivores and carnivores in general the Principal , Arts , Science & Commerce College , Chikhaldara accepted the request of the Hon,ble Field Director and Chief Conservator of Melghat Tiger Reserve.

Prof. G. D. Muratkar and his team will carry out the following training programmes for the field staff of the Melghat Tiger Reserve in the suitable season specially in Sunday , Holidays and vacations without any remuneration.

1) Grasses identification. 2) Weeds identification 3) Wild Leguminous plants identification 4) Seeds collection , storage and broadcasting 5) Enrichment of grasslands 6) Field workshop for field staff 7) Ecological Impact Assessment of Relocated Villages sites of MTR.

Date: 28/12/2016

Principal
Arts , Science and Commerce College
Chikhaldara




Field Director and Chief Conservator of Forests
MELGHAT TIGER RESERVE
Amravati.



MAHARASHTRA STATE
FOREST DEPARTMENT



**OFFICE OF THE CONSERVATOR OF FORESTS & FIELD DIRECTOR,
TADoba-ANDHARI TIGER RESERVE, CHANDRAPUR**

Mul Road, Chandrapur 442401

Phone No. (07172) 251414

E-Mail ccffdtadoba2@mahaforest.gov.in

By Email

Desk no - 4/Steno/2022-23/ 549

Chandrapur, Date 30 /05/2022

Sir,

Subject :- Letter of appreciation

On behalf of Tadoba-Andhari Tiger Reserve, Chandrapur, I place on record our sincere appreciation towards Prof. G. D. Muratkar, for his invaluable contribution towards improvement of grassland management practices in Tadoba-Andhari Tiger Reserve. He has conducted field visits and conducted on field training and workshops involving Forest officials from the cadre of Forest Beat Guards to Field Director on the grassland management, Wild legume identification, grass seed collection and weed eradication on dated 07/05/2022 and 08/05/2022.

This has resulted in visible change in different grasslands spread over this Tiger Reserve and we express our gratitude and acknowledge the services rendered by him, and hope for his continuing technical support and guidance.

(Dr. Jitendra S. Ramgaokar, IFS)
Conservator of Forests & Field Director,
Tadoba-Andhari Tiger Reserve, Chandrapur

To,

The Principal,
Arts Science and Commerce College,
Chikhaldara, Amravati District,
Maharashtra State-444 807

FOREST DEPARTMENT
GOVERNMENT OF TELANGANA

Sri C.P. VINODKUMAR, I.F.S.,
Chief Conservator of Forests &
Field Director Project Tiger,
Kawal Tiger Reserve, Nirmal.



Forest Complex
Nirmal – 504 106
Telangana
e-mail : fdptkawal@gmail.com


File No.4258/2017/D1 Dated: 26.5.2022

Sir,

On behalf of Kawal Tiger Reserve, Nirmal, I place on record our sincere appreciation towards Prof. G.D. Muratkar, for his invaluable contribution towards improvement of grassland management practices in Kawal Tiger Reserve, Nirmal. He has conducted field visits and conducted on field training and workshops involving Forest officials from to cadre of Forest Beat Officer to Field Director Project Tiger on the grassland management, Wild legume identification, grass seed collection and weed eradication. This has resulted in visible change in different grasslands spread over this Tiger Reserve and we express our gratitude and acknowledge the services rendered by him, and hope for his continuing technical support and guidance.

With Regards,

Yours Sincerely,


(C.P. Vinod Kumar, I.F.S.,) 26.5.22
Chief Conservator of Forests &
Field Director Project Tiger,
Kawal Tiger Reserve, Nirmal.

To:
The Principal,
Arts Science and Commerce College,
Chilkhaldara, Amaravati District,
Maharashtra State – 444 807

Ashok Kumar Mishra
Chief Conservator of Forests & Field Director



PENCH TIGER RESERVE

Seoni (M.P.) 480661

Ph.: (07692) : 223794

Fax : (07692) : 223204

M.: +91 9424794106

E-mail : fdpennp.sni@mp.gov.in

Website : www.penchtiger.co.in

Facebook: @penchtrmp Instagram: @penchmp

TO,

✓ **Prof. GD Muratkar**

Head of the Department, Environment Science
Arts, Science and Commerce College, Chikaldhara
Amravati (Maharashtra)- 444807

Sub: Appreciation of Services Rendered in Grassland Management in the Pench TR.

This is with great pleasure that I acknowledge and immensely appreciate your technical guidance for the development of grasslands in the Pench Tiger Reserve. An eminent agrostologist of central India, you have been visiting Pench Tiger Reserve to share your experience of grassland management with officers' staff of the tiger reserve, and to train them in the recovery and improvement of this important habitat type upon which depends a huge population of ungulates of different species.

Your recent visits in to the protected area and interaction with Pench management have considerably added to our understanding of the management of grassland habitat. I hope that in future also you will lend us this tremendous support for the cause of wildlife conservation in the tiger reserve.



Ashok Kumar Mishra
25-9-21
(Ashok Kumar Mishra)
I.F.S.
CCF & Field Director
Pench Tiger Reserve, Seoni



MAHARASHTRA STATE
FOREST DEPARTMENT

OFFICE OF THE CONSERVATOR OF FORESTS & FIELD DIRECTOR,
TADOBA-ANDHARI TIGER RESERVE, CHANDRAPUR

Phone No. (07172) 251414

Mul Road, Chandrapur 442401

E-Mail ccffdtadoba2@mahaforest.gov.in

Desk no - 4/Steno/2021-22/ 22cc

Chandrapur, Date 20/12/2021

CERTIFICATE

TO WHOM IT MAY CONCERN

Professor G. D. Muratkar, (Head of the Department of Environmental Science, Arts, Science & Commerce College Chikhaldara, District- Amravati) has written a book "**Tadoba : Grasses species (Important)**" in academic year **2021-22**.

This book has been published on **18/12/2021** by Shri. R. M. Ramanujam (IFS), Conservator of Forests & Field Director, Navegaon-Nagzira Tiger Reserve, in presence of Dr. Jitendra S. Ramgoakar (IFS), Conservator of Forests & Field Director, Tadoba-Andhari Tiger Reserve, Chandrapur.

This book is very important for frontline staff and officers of Tadoba-Andhari Tiger Reserve in identification of grasses and wildlife habitat management.


(Dr. Jitendra S. Ramgoakar, IFS)
Conservator of Forests & Field Director
Tadoba-Andhari Tiger Reserve, Chandrapur

P.V. RAJA RAO, IFS
Director /CCF &
Secretary, CEFNARM



Telangana State Forest Academy
Government of Telangana,
Dulapally, Hyderabad – 500 100
Land Line (O) : 040 – 29 70 48 96
Mob : + 91 94 40 81 01 66
e-mail : tsfa.hyd@gmail.com
peshi.tsfa@gmail.com

LETTER OF APPRECIATION

The Telangana State Forest Academy, sincerely appreciates Prof. Gajanan Dadaraoji Muratkar of Maharashtra for the vast & exhausting knowledge on Grasslands.

Prof. Muratkar delivered very information & exhaustive lecture on Zoom webinar as a part of online lectures to the Forest Range Officer trainees VIII Batch (batch comprises trainees of Uttar Pradesh, West Bengal & Karnataka) on 22nd February 2022.

It was a splendid presentation besides interaction with the Forest Range Officer trainees exposing them to various kinds of Grass species coupled with identification tips for identification in the field.

Your eloquent sharing on “Grassland Development and Management” was fully appreciated and the trainees got benefited from your views and vast experiences in the field of Grassland Management.

Looking forward to your cooperation for promotion and imparting further professional expertise in future as well.

with best regards

Yours sincerely
P.V. Raja Rao
4/3
(SRI P. V. RAJA RAO, IFS)
Director/CCF

To
Prof. Gajanan Dadaraoji Muratkar
Head, The Botany and Environmental Science Department of the Arts,
Science and Commerce College at Chikhaldara, Maharashtra State

Ashok Kumar Mishra
Chief Conservator of Forests & Field Director



PENCH TIGER RESERVE

Seoni (M.P.) 480661
Ph.: (07692) : 223794
Fax : (07692) : 223204
M.: +91 9424794106
E-mail : fdpennp.sni@mp.gov.in
Website : www.penchtiger.co.in
@penchtrmp @penchmp

TO,

✓ **Prof. GD Muratkar**
Head of the Department, Environment Science
Arts, Science and Commerce College, Chikaldhara
Amravati (Maharashtra)- 444807

Sub: Appreciation of Services Rendered in Grassland Management in the Pench TR.

This is with great pleasure that I acknowledge and immensely appreciate your technical guidance for the development of grasslands in the Pench Tiger Reserve. An eminent agrostologist of central India, you have been visiting Pench Tiger Reserve to share your experience of grassland management with officers' staff of the tiger reserve, and to train them in the recovery and improvement of this important habitat type upon which depends a huge population of ungulates of different species.

Your recent visits in to the protected area and interaction with Pench management have considerably added to our understanding of the management of grassland habitat. I hope that in future also you will lend us this tremendous support for the cause of wildlife conservation in the tiger reserve.



Ashok Kumar Mishra
25-9-21
(Ashok Kumar Mishra)
I.F.S.
CCF & Field Director
Pench Tiger Reserve, Seoni



MAHARASHTRA STATE
FOREST DEPARTMENT



**OFFICE OF THE CONSERVATOR OF FORESTS & FIELD DIRECTOR,
TADOBA-ANDHARI TIGER RESERVE, CHANDRAPUR**

Phone No. (07172) 251414

E-Mail ccffdtadoba2@mahaforest.gov.in

Mul Road, Chandrapur 442401

Desk no - 4/Steno/2021-22/ 162B

Chandrapur, Date 14/10/2021

To,

Prof. G. D. Muratkar,
Head of the Department, Environment Science
Arts, Science & commerce College, Chikahldhara
Amravati (Maharashtra)-44807

Subject :- Appreciation of Services Rendered in Grassland Management in the Tadoba-Andhari Tiger Reserve, Chandrapur.

This is with great pleasure that I acknowledge and immensely appreciate your technical guidance for the development of grasslands and control of invasive weeds in the Tadoba-Andhari Tiger Reserve. An eminent agrostologist of central India, you have been visiting Tadoba-Andhari Tiger Reserve to share your experience of grassland management with officers / staff of the tiger reserve, and to train them in the recovery and improvement of this important habitat type upon which depends a huge population of ungulates of different species.

Your many visits since September 2020 including the recent 3 days workshop on meadow management at Tadoba-Andhari Tiger Reserve and interaction with Tadoba-Andhari Tiger Reserve management have considerably added to our understanding of the management of grassland habitat. Your special efforts in documenting the works at different stages will help in long term evaluation of the efforts that are being taken under your guidance. I hope that in future also you will lend us this tremendous technical support for the cause of wildlife conservation in the tiger reserve.


(Dr. Jitendra S. Ramgaokar, IFS)

Conservator of Forests & Field Director
Tadoba-Andhari Tiger Reserve, Chandrapur



Latitude: 22.234411
Longitude: 79.311344
Elevation: 268.8146 m
Accuracy: 0.7 m
Time: 07-05-2022 14:08
Note: Full sun, medium shade



Latitude: 21.336477
Longitude: 79.310475
Elevation: 281.84413 m
Accuracy: 9.2 m
Time: 07-05-2022 14:08
Note: Full sun, medium shade



Latitude: 22.234411
Longitude: 79.311344
Elevation: 268.8146 m
Accuracy: 0.7 m
Time: 07-05-2022 14:08
Note: Full sun, medium shade



Latitude: 22.234411
Longitude: 79.311344
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Latitude: 22.234411
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Elevation: 268.8146 m
Accuracy: 0.7 m
Time: 07-05-2022 14:08
Note: Full sun, medium shade





MAHARASHTRA FOREST DEPARTMENT
(Grassland Management)

Division : Dy. Director (Core), TATH
Range : Kolara Round : Kolara Beat : Navgaon Camp No. : 50

IN-SITU CONSERVATION PLOT - WILD LEGUMINOUS PLOT

| | | | | | |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| Digitaria purpurea शुद्धी त्र्य | Digitaria purpurea शुद्धी त्र्य | Digitaria purpurea शुद्धी त्र्य | Digitaria purpurea शुद्धी त्र्य | Digitaria purpurea शुद्धी त्र्य | Digitaria purpurea शुद्धी त्र्य |



डॉ. गजानन मुरतकर का एसएलटीपी संरक्षण हीरो पुरस्कार के लिए चयन

अमरावती चिखलदरा के सिपना एजुकेशन सोसाइटी के कला, विज्ञान व वाणिज्य महाविद्यालय के प्रोफेसर डॉ. गजानन मुरतकर का एसएलटीपी कन्जर्वेशन पुरस्कार-2022 के लिए चयन हुआ है। विश्व पृथ्वी दिवस पर उक्त पुरस्कार की घोषणा की गई है। बता दे कि डॉ. गजानन मुरतकर चिखलदरा के कला, विज्ञान व वाणिज्य महाविद्यालय में एक वनस्पतिशास्त्र और विश्वविद्यालय के प्रोफेसर के रूप में कार्यरत है। उन्हें ग्रास मैन ऑफ इंडिया के नाम से भी जाना जाता है। एक घास का मैदान (चारागाह) विकास तकनीक का बीड़ा उठाया है। जिसमें उन्होंने स्थानीय घास की पहचान करने, बीज बैंक तैयार करने, मटर बेड बनाने और स्थानीय घास पेश करने के लिए क्षेत्र स्तर के वन कर्मचारियों को शामिल किया है। व्यवस्थित रूप से घास के मैदान बनाने के लिए इस तकनीक को उन्होंने 2012 में अमरावती जिले के मेलघाट टाइगर रिजर्व में भारत के सबसे पुराने बाघ अभयारण्यों में से एक में विकसित किया था। अमरावती जिले के मेलघाट टाइगर रिजर्व में तथा अन्य टाइगर रिजर्व में चारागाह संरक्षण हेतु प्रयास किए हैं।

Sat, 23 April 2022
<https://epaper.bhaskar.com>

'GRASS IS ARCHITECT OF OUR FOREST ECOSYSTEM'

Vijay Pinjarkar@timesgroup.com

Gajanan D Muratkar (53), a botanist and professor with Sipna Education Society's Arts, Science, and Commerce College at Chikhaldara (Amravati), has been selected for the Satpada Landscape Tiger Partnership (SLTP) Conservation Hero Award 2022 for his invaluable grassland conservation efforts in the Central Indian Landscape. The award was announced on World Earth Day. Known as the 'Grass Man of India', he has pioneered a meadow development technique in which field staff are involved in identifying the local grasses. In 2012, this technique was developed by him in Melghat, the country's oldest tiger reserve. Muratkar is also a recipient of the Sanctuary Green Teacher Award 2013. TOI talked to him about his feats.



Where was your model implemented in the country?
 In the past 10 years, my technique to eradicate weeds and create such meadows has been implemented in tiger reserves and protected areas of Maharashtra, Madhya Pradesh, Rajasthan, Karnataka, Andhra Pradesh, Telangana, Chhattisgarh, Jharkhand, Tamil Nadu, Uttarakhand, and Kerala. I also started a meadow development programme in Kuno National Park, MP. The lack of scientific meadow management activities has caused degradation of forests. Several meadow development workshops were organized in the states producing good results. In Kuno, the frontline staff converted a 2 hectare patch into a 30-hectare grass meadow at another rehabilitated site. This has helped bring cheetah to Kuno. Besides, Sewal Mathopur, Bharatpur, Jim Corbett, and Mukundara Hills tiger reserves are also anxious for my support. Satpada Tiger Reserve, MP, too achieved huge success through scientific strategies under my guidance in the last decade. This also helped MP successfully introduce swamp deer in Bori in Satpura. Changes in Kawal Tiger Reserve (Telangana) are working wonders. For the last 3 years, I started grass meadow management interventions in Palasapali in Tadoba. The enrichment of palatable grasses and wild legume seeds in the meadow resulted in the deer grazing on the field grasses and this reversed the movement of nearly 2,000 spotted deer. These are some examples.

SUNDAY INTERVIEW Gajanan D Muratkar

Q. What inspired you to specialise in meadow development?
 A. As I'm working as a professor in environmental and life sciences, I always focused on the field and result-oriented research in Melghat Tiger Reserve (MTR). I started the ecological and environmental study of grasses in MTR. During the same period, I was invited by the forest secretary Pravin Pardeshi, Satpada Foundation's Kishor Rithe, and eminent botanist CR Babu for a workshop on the reclamation of invasive species. This was the turning point as the field director KP Singh invited me to restore wildlife habitats by removing invasive species.

Q. Tell us about your success stories from the field?
 A. In 2012, the forest department rehabilitated 9 villages from the core area of MTR. Post rehabilitation of Churni, Valrat, Dhargad, Amona, Gullarghat, Sonthana, Kelpani, Nagartas, and Bhurkhalda the cultivated lands were full of invasive species like Lantana Camara, wild tulsi, and other invasive plant species. We developed grass nurseries (seed plots) right in the midst of meadows and also carried out important grassland management interventions like studying soil parameters, identification of grasses, weeds, wild leguminous plants, collecting grasses seeds, drying,

Grasses grown in the forest are wild with good resistance power and adaptations. Wild grasses are adaptive with good flowering, fruiting and dispersal rate.

Q. How do you double up as a professor and a grass man in the field?
 A. As I am an academician, my primary duty is to carry out teaching, learning, evaluation, and research work at my institute, but grasslands or meadow development work is my passion. I spend my Diwali and summer vacations, and weekly holidays conducting field visits, workshops, and training for the field staff on meadow development and management.

Q. Grasses are common but why are these ecologically important?
 A. Grasses are the monocot plants with more adaptive characteristics—morphological, ecological, and anatomical adaptations. The grasses are ecologically important because they develop root systems to control soil erosion, and maintain and conserve soil moisture and soil microclimate. Grasses also check runoff and maintain herbivore and carnivore habitats, besides bird nesting habits.

Q. Not much is talked about research on grasses in India.
 A. Yes, it's true, but now research is happening. Research on grass requires taxonomical specialisation in the identification, classification, and phytochemical analysis and phenology of grasses.

Q. How and what should be done to conserve grasses?
 A. I suggest a four-pronged strategy for the conservation of grasses. It includes identification during flowering and fruiting season, identification of native and invasive grasses, in-situ conservation of grasses by preparing the calendar for grass seed collection, development of grass seed plot as per the soil suitability, and lastly protection of such meadows from fires.

Q. What is the present status of grasslands in Central India?
 A. Grasslands occupy nearly 24% of the geographical area in India. Grasslands of India have been classified into five broad cover types. With the advancement of ecological studies on grassland vegetation, grasslands are highly dynamic ecosystems.

Q. What is the role of grasses in wildlife conservation?
 A. Grasses are of two types—soft and coarse. Soft grasses are useful for feeding and coarse grasses are useful for other coarse feeder herbivores. Grasslands are of three types—smaller, intermediate, and taller. Each grassland has ecological significance. Smaller grasslands are used by wild animals like spotted deer, blackbucks, and chinkara. Intermediate grasslands are used by large herbivores and taller grasslands are preferred for hiding, resting, and breeding by wild animals. Wildlife and grasslands are directly associated with each other and hence grasses are the engineers and architects of our forest ecosystem.

Q. What is the difference between the grasses grown in forests and forests?
 A. Grasses grown in the forest are wild with good resistance power and adaptations. Wild grasses are adaptive with good flowering, fruiting, and dispersal rate. Lower grasses are rhizomatous and hybridized. Lower grasses are rhizomatous while wild grasses are non-cultivated and non-hybridized.

Full interview on www.toi.in



'Grass is engineer and architect of our forest ecosystem'

CITY / Vijay Pinjarkar / May 1, 2022, 04:38 IST



Gajanan D Muratkar (53), a botanist and professor with Sipna Education Society's Arts, Science, and Commerce College at Chikhaldara (Amravati) has been selected

Grassland management training begins

STATE BUREAU
Kurnam Bheem Asifabad

A week-long grassland management training began in Kaghaznagar Forest division on Monday. Renowned grasslands expert Dr GD Muratkar of Maharashtra is training forest officials in raising the grasslands and thus to protect herbivores that give rise to population of tigers.



Dr Muratkar explains tips to manage grasslands to forest officials in Kaghaznagar Forest division on Monday

Renowned grasslands expert Dr Muratkar of Maharashtra is training forest officials in raising the grasslands

During the event, Muratkar explained insights and techniques to improve existing grassland habitat by enriching them with grass seeds. He trained the foresters in creating grasslands in solar-powered percolation tanks.

He visited compartment

number 246 in Bejjur Forest block under the Kaghaznagar division. He opined that Kaghaznagar Forest Division, being the gateway of Telangana for tigers inhabiting in Tadoba-Andheri Tiger Reserve of Maharashtra, had the rich scope to become an important tiger

habitat. He is scheduled to conduct a training session on the grassland management slated to be held in Jannaram forest division on Tuesday.

Field Director to Project Tiger, Kawal Tiger Reserve, and Conservator of Forests CP Vinod Kumar and Dis-

trict Forest Officials of Kurnam Bheem Asifabad, Mancherial, Nirmal and Adilabad district, L Ranjith Naik, Shivani Dongre, Prasad, Dr B Prabhakar, respectively, took part in the event. Kaghaznagar Forest Divisional Officer Rajarama Reddy also present.

लोकमत

मेळघाटच्या 'ग्रास मॅन' ने १२ राज्यातील ३० व्याघ्र प्रकल्पात फुलविले कुरण

आंतरराष्ट्रीय व्याघ्र दिन : 'गवत असेल तरच वाघ वाचेल'ची संकल्पना

स्पेशल रिपोर्ट

नरेंद्र जावरे
लोकमत न्यूज नेटवर्क
चिखलदरा (अमरावती) : जंगल असेल तर वाघ दिसले, वाघासाठी आवश्यक असलेले तुणभक्षी प्राणी आणि त्या प्राण्यांसाठी अति आवश्यक असलेले गवती कुरण अशा या अन्नसाखळीला तयार करण्यासाठी चिखलदरा येथील एका महाविद्यालयाच्या प्राध्यापकाने एक दान नहे, तबल देशातील १२ राज्यातील ३० पेक्षा अधिक व्याघ्र प्रकल्पात तुणभक्षी प्राण्यांसाठी कुरणक्षेत्र तयार केले आहे. त्यामुळे



व्याघ्र प्रकल्पात झालेले कार्य दाखविताना प्रा. गजानन मुतकर.

पर्यावरणासह व्याघ्र संवर्धनात मोठी मदत झाली आहे. चिखलदरा येथील कला, वाणिज्य महाविद्यालयात पर्यावरणशास्त्राचे विभागप्रमुख प्रा. गजानन मुतकर असे

तुणभक्षी प्राण्यांत गवताच्या आवडीनिवडी

मानवांमधे जेवणाच्या आवडीनिवडी आहेत त्याचप्रमाणे चितक, गवा, सांबर, अशा विविध तुणभक्षी प्राण्यांच्या आवडीनिवडी आहेत. काहीना मुलायम व कडक गवत आवडते. त्यानुसार चितक मार्दल गवत हे रसगुलाप्रमाणे आवडते. तर गवा कुसळी व गौधळी, सांबर गवत कमी व झाडांची पाने, फुले, फळे जास्त खातो. तुणभक्षी प्राण्यांसाठी दुर्गा, पपण्या, रानतूर, रानमूग, रानसोयबीन, बांबू, अशा विविध प्रजातीचे गवत आहे.

या प्राध्यापकाचे नाव आहे. गवती कुरण्यामुळे जमिनीची धूप, तापमान थोडेप्यासह पाण्याचा निचरा, कीटक, सरपटणाऱ्या प्राण्यांना नैसर्गिकरीत्या आश्रयस्थान, तुणभक्षी प्राण्यांना

आवडते खाद्य व वाघ, बिबट्यासारख्या मांसभक्षी प्राण्यांना जंगलातच शिकार मिळत असल्याने शहरात जाऊन मानव-वन्यजीव संघर्ष बांधण्यास मदत झाली आहे.

या राज्यात गवती कुरण

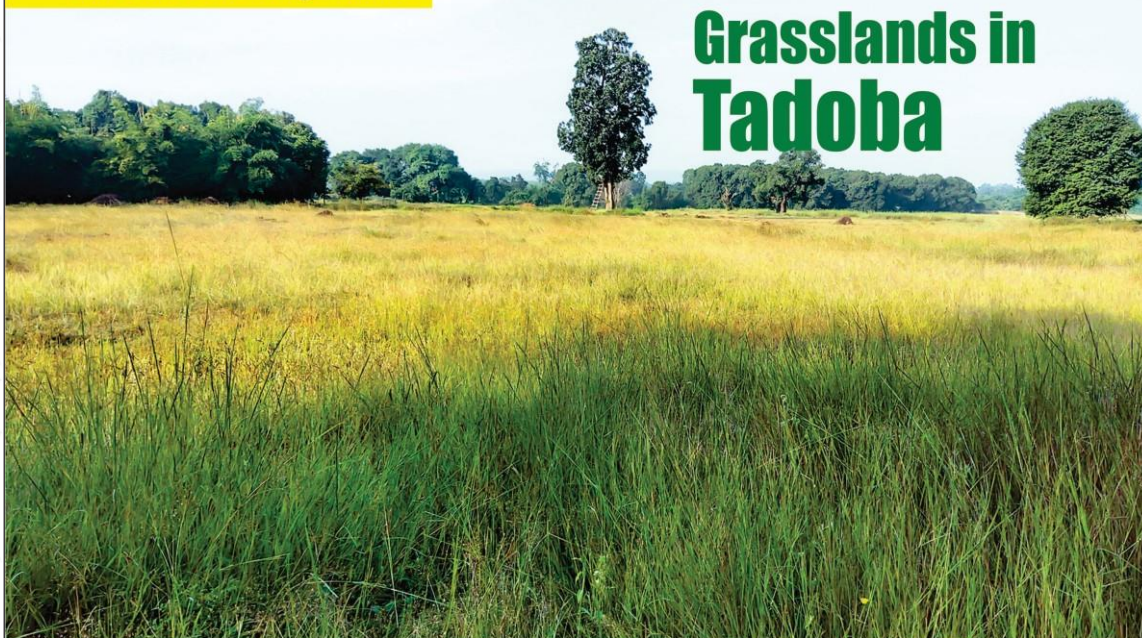
- मध्यप्रदेश : कान्हा, सातपुडा, पन्ना, पेंच, बांधगड.
- महाराष्ट्र : मेळघाट, सद्दादी, पेंच, ताडोबा, नवेगाव, टिपेवर, नानज, भीमशंकर, रडेपुरी.
- छत्तीसगड : अचानकभार व इतर ४ अभयारण्ये.
- राजस्थान : रणथंबोर, मुकुंद-राहिलस.

- कर्नाटक : बंदीपूर नगरहोले काली भद्र वीरारती.
- तामिळनाडू : के एम टी आर.
- ओडिशा : सिमलीपाल सातखोरिया.
- तेलंगणा : कवल अमराबाद.
- बिहार : वाल्मीकी टायगर रिझर्व्ह.

लोकमत Feedback
एकंदर मुंगी ते हत्तीपर्यंत गवत अन्नसाखळीचा दुवा ठरले आहे. मेळघाट व्याघ्र प्रकल्पात इतर व्याघ्र प्रकल्पांपेक्षा ११६ पेक्षा अधिक गवताच्या प्रजाती आहेत.

Habitat Management

Grasslands in Tadoba



Grasslands are critical to the health of any ecosystem as they provide the necessary grazing, resting, hiding, and breeding ground for all kinds of predator and prey species dwelling in an area. They are typically the area in which the vegetation is dominated by continuous cover of grasses and some herbs, shrubs, and wild leguminous plants. The roots of the grass and the plants maintain the soil water / moisture and prevent it from evaporation during the summer season thus helping conserve the quality of the soil.

Grasslands in Central India are of taller and intermediate type, but the annual form of grasslands are adapted for different climatic conditions. Total 24% of the geographical area of India is covered with grasslands which are decreasing at a fast pace due to the invasion of woody species and weeds. Grasslands are heterogeneous in composition. Grasslands are mainly found in Gujrat , Maharashtra , Madhya Pradesh , and Uttar Pradesh. Banni grassland from Kutch, Gujarat is the largest grassland in India.

Incidentally there are no natural pastures within Tadoba-Andhari Tiger Reserve area. However after the rehabilitation of villages like Navegaon, Jamni, Pandharpauni, and Palasgaon new grasslands are being developed and managed in a scientific manner. The roadside grasslands and internal grassland patches play vital role in interconnection of grasslands of TATR. Around 885 hectares of grassland amounts to 7-9 % of the total Tadoba landscape.

All three types of grass varieties – smaller, intermediate, and taller – can be found here. The most noteworthy among them is Vetiver grass (scientific name - *VitiveriaZizanioides*), also called Khus and is found in Vidarbha region of Maharashtra. This grass is native of India and tropical Asia. Predators like tigers and leopards have been observed to use the four to five feet Khus grass clumps to make ambush attacks on deer or wild boars around Tadoba, Telia and Jammilake. Another predominant local grass variety is *Cynodondactylon*, commonly known as Harali grass. It's a perennial, palatable grass used by spotted deer in grazing habitat.

The rich diversity in the TATR also offers almost 6 to 7 different wild leguminous plants in the grasslands here. *Hyptissaveolens* (Bhutganjya) is a dominant weed in grassland. Amphiterrestrial grasses are distributed in the water bodies in the grasslands. The most challenging work is removal of *Zadugawat* and its restoration.

Management of these grasslands is a challenging process. Weeds and other unwanted woody species have to be identified in time for removal and have to be uprooted before fruiting, Ecological restoration processes have to be undertaken in the prescribed scientific way, and the grassland has to be enriched / restored by selected and suitable grasses. It is a process which goes on throughout the year.

The frontline staff in each range of TATR are trained for grasslands management. They prepare maps of each

... continue on page 11

डॉ. गजानन मुरतकर यांना कन्झर्व्हेशन हिरो पुरस्कार

म.टा. प्रतिनिधी, नागपूर



चिखलदरा येथील वनस्पतिशास्त्रज्ञ आणि गवताळ भूभाग या विषयातील तज्ञ

डॉ. गजानन मुरतकर यांना कन्झर्व्हेशन हिरो पुरस्कार जाहीर झाला आहे. सातपुडा लॅण्डस्केप टायगर पार्टनरशिपच्यावतीने २०२२ सालासाठी या पुरस्काराची घोषणा करण्यात आली. मध्य भारतातील गवताळ प्रदेशांच्या संवर्धनासाठी त्यांना हा पुरस्कार देण्यात आला. २५ हजार रुपये रोख आणि

प्रमाणपत्र असे पुरस्काराचे स्वरूप आहे. डॉ. मुरतकर हे सिपना शिक्षणसंस्थेच्या चिखलदरा येथील कला, विज्ञान आणि वाणिज्य महाविद्यालयात कार्यरत आहेत. ते भारताचे गवतपुरुष म्हणून ओळखले जातात. त्यांनी गवताळ प्रदेश विकासाची तंत्रे शोधून काढली आहेत. या विषयात त्यांनी वनविभागाच्या कर्मचाऱ्यांनाही प्रशिक्षण दिले आहे. स्थानिक गवत ओळखणे, तिची योग्य लागवड करणे, बीजबँक तयार करणे याबाबतची तंत्रे त्यांनी मेळघाट व्याघ्रप्रकल्पातील प्रयोगांमधून शोधून काढली आहेत. ती त्यांनी देशभरातील दहा राज्यांमधील संरक्षित वनक्षेत्रांमध्ये राबविली आहेत.

लोकमत

आज आंतरराष्ट्रीय जैवविविधता दिन



मेळघाट व्याघ्र प्रकल्पात कुरणांची विविधता

भारतातील ग्रासमॅन डॉ. गजानन मुरतकर यांचे संशोधन, मध्य भारतातील एकमेव टायगर रिझर्व्ह

मेळघाटत १९ गवती कुरणे

आमोना, बाकरोडा, चुर्नी, बागना, सोमनाथ, कुंद, कोह, बोरी, गुलबघाट, चिरी, अंबावनाथ, गारनाथ, वाडवनी, फेरनाली, नरनाथ, सोनगाडा १ व २, मोसल, सैदट अशा १९ गवती प्रजातींचे कुरणे पाहणी अध्यात्म आढाव्याचे गजानन मुरतकर यांनी सांगितले.

कुरणांचे हे फायदे

वन्यजीव अधिवास व्यावस्थान गवताळचे चालवण्याकरिता हे प्रजनन आणि हिंस प्रजातीची निवडणूक रोखण्यासाठी वापण्यास मदत करतो. अन्नसखळीला पुरवठा आहे. गवताळचे गवतीची घुस कमी होते व मातीमधून पाणी रोखण्यास मदत होते.



कुरणांची ही वैशिष्ट्ये

अकोट वन्यजीव विभागामध्ये सर्वाधिक अजारी घुस, रानघुस, रानडोई, रान बबली, अजारी सोबली आणि प्रजातीमध्ये आढळते. सर्वाधिक गवत प्रजाती देवे आहे. सिपना वन्यजीव विभागामध्ये रुक्मिणी, रावपूर, सेनाघाट भागातही विविधप्रकारांचे वन्यजीव विविधता संवर्धनात आहे. त्यामध्ये वन्यजीव विविधता प्रत्येक ऋतूमध्ये आढळत देते.

अंभगातील अन्नाखळी

सुरक्षीत वातावरणातील अन्नरसक असलेले घटक मेळघाटात तर आहार्य, परंतु गवताच्या अजारी संवर्धनात प्रत्येक अन्नरसक देतात.

- डॉ. गजानन मुरतकर, जैवविविधता कुरण अध्यात्म, विजयलगत

वनपर्यटन नरेंद्र जावरे

मेळघाट व्याघ्र प्रकल्प हा मध्य भारतातील एकमेव टायगर रिझर्व्ह आहे. ज्यामध्ये गुणमत्त, अकोट, सिपना, अंबावनाथ वन्यजीव विभागातील २० पेक्षा जास्त गावचे पर्यटन १९९५ ते २०२२ पर्यंत झाले आहे. भौगोलिकदृष्ट्या मेळघाट व्याघ्र प्रकल्प विविधतेने नटला आहे. प्रत्यक्ष गवताचा जन्म मेळघाटातून झालेला आहे. पर्यावरणीय विविधता या विविधतेला आधारीत आहे. अजारी, घुस, बबली, पंढ, पंढ, अशा एवढेच नव्हे तर चिके व संरक्षित विविधता मेळघाटमध्ये दृष्टीस पडते. अशी माहिती भरताच प्रामाणिक वन्यजीव विभाग डॉ. गजानन मुरतकर यांनी आंतरराष्ट्रीय जैवविविधता दिनाभिनित लोकमतची संवाचना दिली. मेळघाट व्याघ्र प्रकल्प अकोट वना जवळ फिका, गुणमत्त वन्यजीव विभाग, सिपना वन्यजीव विभाग अशा तीन भागातही विस्तारित आहे. मेळघाटमध्ये १२२ पेक्षा जास्त गवताच्या प्रजाती आढळतात. काही प्रजाती कुरणमध्ये, गवताच्या, रसाच्या दुर्गंध श्रावणाच्या बाबतीमध्ये आढळतात. ज्या गवत प्रजाती सावलीमध्ये घाबरेले, दुर्गंध सावलीतून गवत प्रजाती असे संशोधन आहे. ज्या गवत प्रजाती अन्नरसक उन्हात वाढतात. त्यांना उन्हात गवत असे संशोधन आहे. जैविक-वैज्ञानिक, शास्त्र-अन्नरस संशोधन-काण्ठर आकाराने गवत प्रजाती अजारी, लोहना, चिखल, भेयूर, रावपूर हे मुख्यतः तर प्रशियन गौर, नीलगाई या काण्ठर गवत प्रजाती.

FOREST DEPARTMENT
GOVERNMENT OF TELANGANA

Sri C.P. VINODKUMAR.I.F.S.,
Chief Conservator of Forests &
Field Director Project Tiger,
Kawal Tiger Reserve, Nirmal.



Forest Complex
Nirmal - 504 106
Telangana
e-mail : fdptkawal@gmail.com


File No.4258/2017/D1 Dated: 26.5.2022

Sir,

On behalf of Kawal Tiger Reserve, Nirmal, I place on record our sincere appreciation towards Prof. G.D. Muratkar, for his invaluable contribution towards improvement of grassland management practices in Kawal Tiger Reserve, Nirmal. He has conducted field visits and conducted on field training and workshops involving Forest officials from to cadre of Forest Beat Officer to Field Director Project Tiger on the grassland management, Wild legume identification, grass seed collection and weed eradication. This has resulted in visible change in different grasslands spread over this Tiger Reserve and we express our gratitude and acknowledge the services rendered by him, and hope for his continuing technical support and guidance.

With Regards,

Yours Sincerely,


(C.P. Vinod Kumar, I.F.S.,) 26.5.22
Chief Conservator of Forests &
Field Director Project Tiger,
Kawal Tiger Reserve, Nirmal.

To:
The Principal,
Arts Science and Commerce College,
Chilkhaldara, Amaravati District,
Maharashtra State - 444 807



Government of Maharashtra
Forest Department

**Office of Conservator of Forests & Field Director, Tadoba
Andhari Tiger Reserve, Chandrapur**

Tel No. (07172) 251414, 277116

Mul Road, Chandrapur-442401

E-mail: ccfdtdadoba2@mahaforest.gov.in/ ccfdtdatr@rediffmail.com

No: Desk-4/Steno/2021-22 2612

Chandrapur Dt. 31/1/2022

To,

Dr. G.D. Muratkar
Head,
Department of Environmental Sciences
Art, Science & Commerce College,
Chikhaldara.

Subject :- Conducting ecological study of grasses of Tadoba Andhari Tiger Reserve
Regarding.

Reference :- Deputy Director (Core), TATR Letter No. 984/2021-22 dated 31/01/2022.

Respected Sir,

As you are aware we at Tadoba Andhari Tiger Reserve Chandrapur, are working extensively to make Tadoba Tiger Reserve free from invasive weeds and also to restore degraded grasslands by promoting native species of grasses. We have received valuable guidance from you from time to time to carry out this important work by following sound scientific practices. We are also working on developing degraded areas vacated by villages that have been relocated outside the park. We want to document this work and also conduct study on the grass species available in Tadoba Andhari Tiger Reserve and its ecological aspects.

Considering your technical expertise in the field of grasses and your continuous guidance to field staff and officers of Tadoba Andhari Tiger Reserve, we would like to request you to take up a separate study on ecology of grasses in Tadoba Andhari Tiger Reserve Chandrapur.

This will help the management take informed habitat management decisions in future and restore all degraded areas of the park and outside to their full ecological potential as habitat for wildlife.

(Dr. Jitendra Ramgaokar)
Conservator of Forests & Field Director,
Tadoba Andhari Tiger Reserve,
Chandrapur

Copy to : Deputy Director (Core), TATR Chandrapur for information with regards to letter under reference.

Department of Environmental Science
Arts, Science and Commerce College Chikhaldara

Extension Activity

Title of activity : Training to the frontline staff for grassland Management in Protected Areas

Feedback form

Academic Year 2021-22

Name of frontline staff / officer: Dr. P. D. Patil, Asst. Prof.

Designation : Asst. Prof.

Name of Tiger Reserve : Melghat Tiger Reserve (Akot Wildlife Division)

Date of visit : 14/11/2021

Grassland management training to frontline staff by – Prof. G D. Muratkar ,(Grasses Expert)

Head Department of Environmental Science and his team.

Objectives : 1) Grasslands observations 2) Habitat improvements training 3) Grasses , weeds , wild legumes identification 4) Grasses seeds collection 5) Enrichment of grasslands by palatable grasses seeds.6) Brush woods management 6) Ecological Restoration practices.

Feedback :

आज दि. 14/11/2021 रोजी धारगाड परिसरात रावत प्रजाती
ओव्या व रावत वी गोळा करणे कायशा करता येऊ शकते याबद्दल
वेगवेगळ्या प्रकारात रावत प्रजाती, आज रावत प्रजाती वी गोळा
करणे साठी वी ओव्या व त्यामध्ये येणाऱ्या प्रजाती इत्यादी
साहित्य तयार करणे गोळा करणाऱ्या काळावधी इत्यादी साहित्य
प्रत्यक्ष कुत्रा विकास क्षेत्रात जाऊन त्यासाठी विना समजापून
शांभवात आली.

सदर साहित्याच्या उपरोक्त आवाका रावत प्रजातीचे निर्मूलन
करणे याका प्रजातीचे रावत सांगवड करणाऱ्या वी रावत वी गोळा
करणे उत्तम वृत्तासाठी प्राधान्यही आधीचाले वीसाठी देईल!

धन्यवाद!!!

Date : 14/11/2021.

Dr.
Signature

Dr. P. D. Patil
Asst. Prof.

Pench Tiger Reserve Simi (M.P.)
workshop on Grassland Management

Date:- 01.11.2021

Resource Person:- Prof. G. D. Muratkar
Head, Dept. of Env. Sci.

Game Range - Guntara

- Objectives:-
- ① Grasslands observation
 - ② Grasses, weeds identification.
 - ③ Wild legumes id.
 - ④ Grasses seeds collection
 - ⑤ Enrichment of grasslands
 - ⑥ Habitat (wildlife) management

Feed back / Remarks:-

गणतंत्र दिनांक 01/11/2021 को गेम रेंज गुन्तारा
अंतर्गत धारा मैदानों का रखरखाव एवं
सुधार कार्य विषय पर कार्यशाला का आयोजन
सुनार बरी धारा मैदान, कौस बरी धारा मैदान
एवं होड़िया धारा मैदान पर किया गया जिसमें
शैक्षणिक अमले को विभिन्न धारा प्रजातियों
की पहचान, धारा बीज संरक्षण का समय,
वशावृत्त उन्मूलन, खरपतवार उन्मूलन आदि
से संबंधित जानकारी विस्तृत रूप में
डॉ. जी.डी. मुरतकर द्वारा प्रदान की गई
। जो धारा मैदानों के सुधार कार्य हेतु
अत्यंत उपयोगी सिद्ध होगी।

01/11/2021
सहायक वन संरक्षक
किन्चवाड़ा क्षेत्र



Latitude: 20.336671
Longitude: 79.31048
Elevation: 284.36±6 m
Accuracy: 13.7 m
Time: 07-05-2022 14:58
Note: hill top madow, tadoba and hill tiger reserve



Latitude: 20.336677
Longitude: 79.310475
Elevation: 281.84±12 m
Accuracy: 9.2 m
Time: 07-05-2022 14:58
Note: hill top madow tadoba and hill tiger reserve



Latitude: 20.37922
Longitude: 79.294844
Elevation: 296.93±4 m
Accuracy: 7.1 m
Time: 07-05-2022 17:07
Note: c.no.81 IGCi project we get madow patch tadoba and hill tiger reserve



Latitude: 20.274744
Longitude: 79.346663
Elevation: 211.57±32 m
Accuracy: 18.3 m
Time: 08-05-2022 07:00
Note: Devdoh 5 hectare meadow patch, tadoba and hill tiger reserve



Latitude: 20.33906
Longitude: 79.338355
Elevation: 246.89±8 m
Accuracy: 7.7 m
Time: 09-05-2022 09:44
Note: jamni 47 hectare
85 hectare meadow patch, tadoba and hill tiger reserve



MAHARASHTRA FOREST DEPARTMENT 
(Grassland Management)

Division : Dy. Director (Core), TATR
Range : Kolara Round : Kolara Beat : Navegaon Camp No. : 50

IN-SITU CONSERVATION PLOT - WILD LEGUMINOUS PLOT

| | | | | | |
|---|---|---|---|--|---|
|  |  |  |  |  |  |
| Cajanus cajanoides जंगली चूरु | Desmodium triflorum रान भेरी | Vigna radiata रानचूरु | Dolichos sinensis L. रान बरबटी | Vigna mungo रान जडीद | Crotalaria juncea रान सुकलुका |





Latitude: 19.131065
Longitude: 78.85174
Elevation: 242.99112 m
Accuracy: 53.2 m
Time: 25-05-2022 16:21
Note: Akondapet grass plot, ktr



Latitude: 19.282394
Longitude: 78.782538
Altitude: 294.2834 m
Accuracy: 16.0 m
Time: 25-05-2022 10:40
Note: birsapeth grasslands
Nagar parishad office
shad_chikhalda



Latitude: 19.193849
Longitude: 78.838947
Elevation: 265.3488 m
Accuracy: 5.5 m
Time: 25-05-2022 13:52
Note: Maisampet 05 hectare
ktr



Latitude: 19.179637
Longitude: 78.862906
Elevation: 241.7186 m
Accuracy: 11.0 m
Time: 25-05-2022 13:23
Note: watchtowershivhar 05 hectare grass land 52 hectare
ktr



Latitude: 19.191066
Longitude: 78.83963
Elevation: 262.4288 m
Accuracy: 7.3 m
Time: 25-05-2022 14:14
Note: Maisampet new grass land 5.5 ha in
ktr



Latitude: 19.282596
Longitude: 78.782017
Elevation: 345.19216 m
Accuracy: 9.0 m
Time: 25-05-2022 10:47
Note: birsapeth grass land 50 hectare
ktr

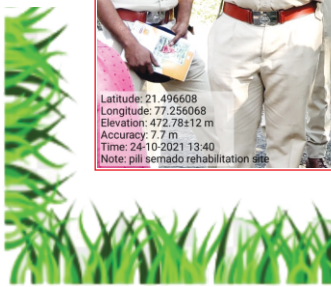
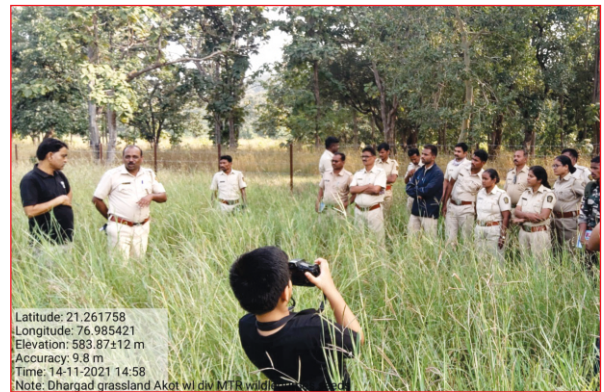


Latitude: 19.283146
Longitude: 78.781779
Elevation: 349.89812 m
Accuracy: 8.9 m
Time: 25-05-2022 11:07
Note: birsapeth grass land 52 hectare
ktr



Latitude: 19.283058
Longitude: 78.780924
Elevation: 387.6588 m
Accuracy: 37.2 m
Time: 25-05-2022 11:21
Note: birsapeth grass land 52 hectare
ktr











altitude: 21°29'47"
longitude: 77°15'18"
elevation: 464.93±7 m
accuracy: 6.0 m
azimuth: 90° (E)
pitch: -90.0°
time: 08-06-2022 11:26
note: pilli meadow



altitude: 21°29'34"
longitude: 77°16'8"
elevation: 539.38±3 m
accuracy: 1.2 m
time: 06-05-2022 18:50
note: bhurka baba meadow pic



altitude: 21°50'25.52"
longitude: 77°31'9.08"
elevation: 516.6±5 m
accuracy: 52.4 m
azimuth: 325° (NW)
pitch: -2.2° (S 3°)
time: 23-06-2022 10:01
note: bhurka



altitude: 21°29'47"
longitude: 77°15'21"
elevation: 549.88±4 m
accuracy: 2.8 m
time: 07-01-2022 18:09
note: medo pilli (grass land)



altitude: 21°29'33"
longitude: 77°16'7"
elevation: 489.37±8 m
accuracy: 6.2 m
azimuth: 289° (W)
pitch: 8.3° (1.4°)
time: 04-07-2022 17:41
note: पिंरी कृष्ण शिकार रोप लागत



altitude: 21°29'33"
longitude: 77°16'10"
elevation: 544.78±4 m
accuracy: 1.2 m
time: 06-05-2022 18:35
note: bhurka baba meadow sample pic



Extension Activity Report

"Training to the Frontline staff of Forest Department for Grasslands Management in Protected Areas"



Training by

Prof. G. D. Muratkar

Assist. Prof. & Head Dept. of Environmental Science
Arts, Science & Commerce College, Chikhaldara
Dist. Amravati - 444 807 M.S.

Duration of Activity

2020 - 2021

Department of Environmental Science
Arts, Science & Commerce College, Chikhaldara
Dist. Amravati - 444 807 M.S.

Extension Activity
Report on
Training to the frontline forest staff for grasslands Management in
Protected Areas of India
By
Department of Environmental Science
Academic Year 2020-21

Title

Training to the frontline forest staff for grasslands Management in Protected Areas of India (Kawal Tiger Reserve, Tadoba Andhari Tiger Reserve, Bandipur Tiger Reserve, Panna Tiger Reserve, Satpuda, Kanha Tiger Reserve MP).

Goal

To develop grazing habitat for herbivores in Protected Areas specially in Tiger Reserve, Sanctuary and National park.

Participants in the field workshop

| Sr. No. | Name of Protected Area | Duration | Beneficiaries | Beneficiary Number |
|----------------|--|---------------------------|---|---------------------------|
| 1 | Kawal Tiger Reserve Telangana State | 27 – 30 August 2020 | DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve | 50 |
| 2 | Sahyandri Tiger Reserve MS | November 2020 | DCF, Field Director, RFO, | 25 |

| | | | | |
|---|-------------------------------------|---------------------------|---|----|
| | | | Section officer, Bit guard of tiger reserve | |
| 3 | Tadoba Andhari Tiger Reserve MS | August 2020 | DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve | 25 |
| 4 | Satpuda Tiger Reserve MP | 10 – 11 August 2020 | DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve | 30 |
| 5 | Bandipur Tiger Reserve Karnataka | 26 November | DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve | 25 |
| 6 | Kanha Tiger Reserve MP | July 2020 | DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve | 50 |
| 7 | Panna Tiger Reserve MP | February 21 | DCF, Field Director, RFO, Section officer, | 20 |

| | | | | |
|---|---------------------------------------|-------------------|---|----|
| | | | Bit guard of tiger reserve | |
| 8 | Amrabad Tiger Reserve Telangana State | 27, 28 January 21 | DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve | 25 |

Concept

To know the soil characters, profile for grassland development in natural pastures, degraded areas of forest and lantana removed areas for restoration of grasslands. To manage the grazing, browsing, breeding, nesting habitats.

To train the frontline staff for

- Grasses, weeds and wild leguminous plants identification from forest areas.
- Enrichment of grasslands
- Eradication of weeds from grasses for habitat improvement
- Brushwood management
- Geo mapping of grasslands
- Restoration of grasslands
- Grasses seeds collection, storage and enrichment.

The Context

The Protected Areas includes Tiger Reserves, National Parks, Wildlife Sanctuaries, the wildlife like Herbivores, Omnivores, Carnivores habited in the protected areas. The grasses are the producers, soil binders, provides chemical energy to the wildlife in the form of fodder species. The

protected areas forest are with 2-4.5% grasses naturally it should be 6.5 %-7.9%. Now recently natural grasslands and relocated areas of the Protected Areas are developing into good grasslands for the herbivores. Grasslands are the green ground cover of protected areas in forest. The grasses are useful for grazing habitat of wildlife (Herbivores). The threats to the grasslands are soil degradation, loss of soil moisture, leach out of nutrients of the soil, forest fires, weed infestation, woody species encroachment, and change in grasslands Composition, exotic species and decrease in nutritive value of the fodder grasses. The faculty member of the department of the college has the good expertise in the grasses, weeds and forest flora identification and their nutritive values.

The grassland management practices include


1. To give the field training to the forest field staff in the natural grasslands and relocated areas of the Protected Areas in each season of the year.
2. To know the exact area of grassland year wise by demarcation of grassland area by GPS.
3. Grasses identification training to field staff by local names and scientific names.
4. Weeds identification with local names and their flowering season.
5. Browsing species identification with local names.
6. Field training to collect the grasses seeds and wild legumes seeds.
7. Weed eradication programme two times in a year
8. Grasslands enrichment by seed broadcasting in May - June season.
9. Grasses biomass management practices in mosaic pattern.
10. Wild fruit trees identification and addition in relocated areas.
11. Complete training programmes are organized by the CCF & Field Director of the respective Tiger Reserves in each season.

The practices in the field

The detailed reports of field workshops for frontline staff are attached in the extension activity report with Text, Images and Appreciation letters.

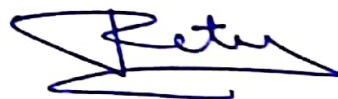
Results of Extension activity

- Capacity building of frontline staff of Protected Areas.
- Field interventions for habitat improvement in P. A.
- E Herbarium of grasses and identification
- Documentation of bench marks and results
- Comparative analysis before and after work



Prof. G. D. Muratkar

Asst. Professor & H.O.D.
Dept. of Environmental Science
Head Department of Environmental Science
Arts, Science & Commerce College,
Chikhaldara.



Acting Principal
Art, Science & Commerce College,
Chikhaldara, Dist. Amravati

Tadoba Andhari Tiger Reserve (M. S.)

Grasslands Management Observations & Recommendation's Report



Date of visit

01st to 03rd September 2020

Grassland Management observations in Tadoba Andhari Tiger Reserve

Grasslands of Tadoba Andhari Tiger Reserve are of heterogeneous type with three types of grasslands : Smaller , intermediate and taller grasslands with 70% palatable and 30% non palatable grasses. The grasslands possesses 25% perennial palatable grasses and 45% annual fodder grasses with browsing species. The grasslands also comprises few wild leguminous plants. Most of the grasslands invaded by the weeds like Bhutganjya(Hyptis), Tarota (Cassia tora), Congress grass (Parthenium), Sidacordata , Sidaacuta , Corchorusetc weeds. Each grassland is with water body. The management practices conducted by the field staff in last two months are.....

Moharli ,Palasgaon , Nawegaon, Pandharpauni, Jamni, Khatoda, Botezari , karwa range (TATR) all Grassland area :

Observations

- Weeds invasion along roadside area and inside the grasslands on large scale.
- Seeds of *Setariapumilla* (Wild Bajara) developed in each grassland
- Weeds like Bhutgangya (*Hyptissaveolens*) dominant in each grassland.
- *Ageratum conyzoides* weed common in grasslands
- Palasghaon Grassland : 85 Hect.



- Palasgaon village rehabilitated in 2019, mostly all were paddy fields before rehabilitation, soil fertile, grasses taller, intermediate, *Iselimalaxum*, *Digitariaabludens*, *Setariapumilla*, *Paspaladium*, *Themeda*, *Heteropogon* grasses are distributed in complete grassland, weeds invasion in more % in gaothan and other area of Palasgaon. Wild Leguminous plant Wild Tur (*Atylosia* or *Cajanus*) is dominant. *Bhutganjya*, *Sida* weeds common in grassland
- Navegaon Grassland : 274 Hect area



1. Largest grassland of TATR with 274 hect area.
2. Taller , intermediate grassland
3. Grassland invaded by ranbhendi , weeds like Bhutganjya, Sida , Cassia toraetc
4. Weeds invasion in boundaries of grasslands
5. Grasses : Themeda, Heteropogon, Dicanthium, Iselima, Ischemum, Cynodon, Digitaria, Elusine, Chloris, Setariaetc
6. Wild legumes : Ran Tur , Ran moog, Ran Barbati
7. Wild fruit trees like Bor
8. Brush woods invasion of Acacia
9. Roadside grasses with more weeds
10. Wild tur dominant in grassland
11. Dominant grasses are Themeda, Iselima, Heteropogon

Recommendation's

- Weeds uprooting two times per year – July , September, before flowering , fruiting weeds to be uprooted
- Brush woods management to reduce woody species but conserve fruit trees
- Uprooting of Bhendi plants from grasslands.
- Prepare inspection path of standard size in each grassland
- To prepare grasses, wild legumes seed plot with demarcation.
- Management of resting habitat
- Uprooting of Beshram plants
- After uprooting of unwanted non fodder weeds – Ecological Restoration by gawatpendi with grasses seeds.



Restoration after removal of weeds by fodder grasses seeds

- In next 20 days grass seeds collection is necessary.
- Grasses selection for seed collection are *Dicanthiumannulatum*, *D. caricosum*, *D. tuberosum*, *Themedaquadrivalvis*, *Iselima*, *Setaria*.
- Collection of wild leguminous seeds from 2nd December to 28th December.

Jamni Grassland : 47Hect



Observations

1. Smaller grassland suitable for spotted deers, black bucks
2. Grasses distribution: *Cynodon*, *Dicanthium*, *Setariapumilla*, *Dicanthiumannulatum*, *Iselimaprostratum* . *I. laxum*, *Chloris virgate*, *C. barbata*, *Elusineindica*, *Setaria italic* , etc

3. Weeds : Prtheniumhysterophorus (GajarGawat) dominant weed, Sida, Hyptis, Cassia tora
4. Ornamental plants sadafuli
5. Wild fruit trees present.
6. Water body present.

Recommendation's

- Weeds uprooting two times per year – July , September, before flowering , fruiting weeds to be uprooted
- Brush woods management to reduce woody species but conserve fruit trees
- Uprooting of ornamental plants from grasslands.
- Prepare inspection path of standard size in each grassland
- To maintain pressure the grasses of Jamni grasses – relief enclosure of 2 hectares size to be prepared, number two in jamni.

KosenkarGrassland : 10Hect

Observations

1. Oldest grassland with smaller and taller grasses.
2. Most of the grasses are palatable,
3. Wild fruit trees present
4. Brushwood infestation on large %
5. Grasses utility index good more than 70%.

Recommendation's

1. Uproot weeds along roadside before fruiting. Weeds like Butganjya, Sida, Cassia tora.
2. Brushwood Management to reduce woody species.



Weeds uprooting along roadside before Fruiting

Khatoda Grassland : 10 Hect.- Comp. No. 123

Recommondations

1. Weeds uprooting two times per year
2. Brushwood management

One of the best grassland of TATR, Conserve old grasslands from woody plant species and invasive weeds.

Roadside Grassland towards Botezariroad : 11 Hect.

Observations

1. Roadside taller grassland with dominant grasses like Themeda, Heteropogon, Dicanthium , Setaria
2. Grassland invaded by exotics like Stylosanthesammata.
3. Wild legumes in good %
4. Brushwood invasion in grassland.

Recommendation's

1. Weeds uprooting two times per year.

2. Uprooting of exotic species – Stylo
3. Brushwood management
4. Conserve wild leguminous plants.

Botezari Grassland : 37 Hect.

Observations

- Larger grassland with smaller and taller grasses like Saccharumspontanium(PadyalGawat)
- Grasses : DurwaGawat , Dicanthium , Iselima , Ran bajara, Ghonyad , Kusali
- Weeds: Bhutganjya ,Kena , Adhada , Tarota, Gajargawat in Gawathan area of 4.5 Hectares.
- Ploughing in 2,5hect area where Cynodon (Durva) grass was present.
- Enclosure for spotted deers prepared in which high % of weeds and taller grasses are present.
- 2,5 hectares cynodon grass was present but due to ploughing weeds are infested in deers enclosure.



Enclosure for spotted deers with weeds invasion not suitable habitat

Recommendation's

1. For spotted deer's they require smaller, palatable nutritive grasses with 20% taller grasses and green bushes for resting habitat.
2. Wild fruit trees
3. Browsing bushes wild.
4. There should not be ploughing in Protected Areas.
5. Weeds uprooting and restoration by Cynodon , Dicanthium , Ranbajara , Kodo , Ravi gawat
6. For spotted deers develop suitable grassland in enclosure.
7. Uproot weeds from gaothan area



Suitable grasses in Enclosure of Spotted Deers

Common recommendations for TATR Grasslands Management

1. Conserve old grasslands by proper management interventions
2. Weeds eradication before fruiting
3. Uproot weeds along roadside as well as from inside grasslands
4. After weeds eradication – restoration by good grasses with suitable grasses.
5. Brushwood management in suitable season
6. Jamani relief enclosures in grassland in rotational manner

7. Concentrate on wild leguminous plants to maintain positive association and composition of grasslands
8. Site specific interventions' required
9. Identify grasses with local names
10. Ecological restoration by grasses seeds
11. Monitoring of grasslands season wise
12. Documentation of management interventions
13. Training for frontline field staff 2 times per year.
14. Palasgaon grassland with proper inputs.
15. Botezari don't plough, select suitable grassland for rescue of spotted deers.
16. Geo-mapping of each grassland

Grasses of Tadoba-Andhari Tiger Reserve, Chandrapur

| Sr. No. | Name of grass | Annual / perennial | Palatable /Non palatable |
|---------|-------------------------------------|--------------------|--------------------------|
| 1 | <i>Aristida funiculata</i> | Annual | Non Palatable |
| 2 | <i>Aristida reducta</i> | Annual | Non Palatable |
| 3 | <i>Apluda mutica</i> | Annual | Non Palatable |
| 4 | <i>Bothriochloa tuberosa</i> | Perennial | Palatable |
| 5 | <i>Bothriochloa pertusa</i> | Perennial | Palatable |
| 6 | <i>Brachiaria mutica</i> | Annual | Palatable |
| 7 | <i>Chloris barbata</i> | Annual | Palatable |
| 8 | <i>Chloris virgata</i> | Annual | Palatable |
| 9 | <i>Chloris gyana</i> | Annual | Palatable |
| 10 | <i>Chloris dolichostachya</i> | Annual | Palatable |
| 11 | <i>Dactyleptium aegypticum</i> | Annual | Palatable |
| 12 | <i>Digitaria stricta</i> | Annual | Non Palatable |
| 13 | <i>Digitaria bicornis</i> | Annual | Palatable |
| 14 | <i>Dicanthium annulatum</i> | Perennial | Palatable |
| 15 | <i>Dicanthium caricosum</i> | Perennial | Palatable |
| 16 | <i>Dicanthium persutum</i> | Perennial | Palatable |
| 17 | <i>Elusine indica</i> | Annual | Palatable |
| 18 | <i>Eragrostis viscosa</i> | Annual | Non Palatable |
| 19 | <i>E. gigantea</i> | Annual | Non Palatable |
| 20 | <i>E. unioiloides</i> | Annual | Non Palatable |
| 21 | <i>Eragrostellia biferia</i> | Annual | Non Palatable |
| 22 | <i>Heteropogon contortuds</i> | Annual | Palatable |
| 23 | <i>Iselima laxum</i> | Perennial | Palatable |
| 24 | <i>Iselima prostratum</i> | Perennial | Palatable |
| 25 | <i>Melanocenchrus jacequemontii</i> | Annual | Non Palatable |
| 26 | <i>Oplismenis compositus</i> | Annual | Non Palatable |
| 27 | <i>Rottbolia cochinchinensis</i> | Annual | Non Palatable |
| 28 | <i>Sporobolus paniculatus</i> | Annual | Non Palatable |
| 29 | <i>S. indica</i> | Annual | Non Palatable |
| 30 | <i>S. gigantea</i> | Annual | Non Palatable |
| 31 | <i>Eragrostis minor</i> | Annual | Non Palatable |
| 32 | <i>E. major</i> | Annual | Non Palatable |
| 33 | <i>Sacciolepis indica</i> | Annual | Palatable |
| 34 | <i>Setaris pumilla</i> | Annual | Palatable |
| 35 | <i>S. italica</i> | Annual | Palatable |
| 36 | <i>S. verticellata</i> | Annual | Palatable |
| 37 | <i>S. intermedia</i> | Annual | Palatable |

| | | | |
|----|--|-----------|----------------------|
| 38 | <i>Panicum antidotale</i> | Annual | Palatable |
| 39 | <i>Coix aquatic</i> | Annual | Palatable |
| 40 | <i>Paspalum scrobiculatum</i> | Annual | Palatable |
| 41 | <i>Themeda laxa</i> | Annual | Palatable |
| 42 | <i>Themeda quadrivalvis</i> | Annual | Palatable |
| 43 | <i>Themeda triandra</i> | Annual | Palatable |
| 44 | <i>Vitiveria zizanioides</i> | Perennial | Palatable |
| 45 | <i>Saccharum spontanium</i> | Perennial | Palatable |
| 46 | Wild leguminous plants; <i>Cajanus cajanoides</i> | Annual | |
| 47 | <i>Spodiopogon rhizophorus</i> | Annual | Non palatable |
| 48 | <i>Dimeria blatteri</i> | Annual | Non palatable |
| 49 | <i>Panicum 4 species</i> | Annual | Palatable |
| 50 | <i>Elusine eruciformis</i> | Annual | Palatable |

ताडोबा - अंधारी
व्याघ्र प्रकल्पातील प्रजाती

रानमुग



फुलांचा कालावधी : सप्टेंबर - ऑक्टोबर

बियांचा कालावधी : नोव्हेंबर - जानेवारी

बीज गोळा करण्याचा कालावधी : नोव्हेंबर

उपयोगिता : नायट्रोजन फिक्सेशन इन सॉईल, मातीची सुपिकता वाढवणे, गवत पोषक बनविणे.

जंगली तूर

Cajanus cajanoides



फुलांचा कालावधी : सप्टेंबर - ऑक्टोबर

बियांचा कालावधी : नोव्हेंबर

बीज गोळा करण्याचा कालावधी : नोव्हेंबर - फेब्रुवारी

उपयोगिता : नायट्रोजन फिक्सेशन इन सॉईल, मातीची सुपिकता वाढवणे, गवत पोषक बनविणे.

रान बरबटी

Dolichos sinensis L.



फुलांचा कालावधी : सप्टेंबर - ऑक्टोबर

बियांचा कालावधी : नोव्हेंबर

बीज गोळा करण्याचा कालावधी : नोव्हेंबर - फेब्रुवारी

उपयोगिता : नायट्रोजन फिक्सेशन इन सॉईल, मातीची सुपिकता वाढवणे, गवत पोषक बनविणे.

रान उडीद
Vigna mungo



फुलांचा कालावधी : सप्टेंबर - ऑक्टोबर

बियांचा कालावधी : नोव्हेंबर - जानेवारी

बीज गोळा करण्याचा कालावधी : नोव्हेंबर

उपयोगिता : नायट्रोजन फिक्सेशन इन साईल, मातीची सुपिकता वाढवणे, गवत पोषक बनविणे.

रान खुळखुळा
Crotalaria juncea



फुलांचा कालावधी : सप्टेंबर - ऑक्टोबर

बियांचा कालावधी : नोव्हेंबर - जानेवारी

बीज गोळा करण्याचा कालावधी : नोव्हेंबर

उपयोगिता : नायट्रोजन फिक्सेशन इन सॉईल, मातीची सुपिकता वाढवणे, गवत पोषक बनविणे.



Ecological Resttoration of Platable Grasses in Pandharpauni (TATR)



Appreciation



महाराष्ट्र शासन
वन विभाग

वनसंरक्षक तथा क्षेत्र संचालक, तादोबा-अंधारी व्याघ्र प्रकल्प, चंद्रपूर यांचे कार्यालय

दुरधनी क्रमांक (07172) 251414

ई-मेल ccff@tadoba2@mahaforest.gov.in

मुंब रोड, चंद्रपूर-442401

Desk No-4/Steno/20-21/1733

Chandrapur, Date : 20/10/2020

Sir,

Subject :- Letter of appreciation

On behalf of Tadoba-Andhari Tiger Reserve, Chandrapur, I place on record our sincere appreciation towards Prof. G. D. Muratkar, for his invaluable contribution towards improvement of grassland management practices in Tadoba-Andhari Tiger Reserve. He has conducted field visits and conducted on field training and workshops involving Forest officials from the cadre of Forest Beat Guards to Field Director on the grassland management, Wild legume identification, grass seed collection and weed eradication. This has resulted in visible change in different grasslands spread over this Tiger Reserve and we express our gratitude and acknowledge the services rendered by him, and hope for his continuing technical support and guidance.

(Dr. Jitendra S. Ramgaokar, IFS)
Conservator of Forests & Field Director,
Tadoba-Andhari Tiger Reserve, Chandrapur

To,
The Principal,
Arts Science and Commerce College,
Chikhaldara, Amravati District,
Maharashtra State-444 807

साडेबा भंडारी राष्ट्रीय स्तरावर, चंद्रपूर

पुरण व्यवस्थापन

अभिधाय पत्र

इस्तेमाल के जागेचे निर्धारक - साडेबा भंडारी राष्ट्रीय स्तरावरील
संरक्षित क्षेत्रातील पुरण
व्यवस्थापन

कालावधी : 2019-2020

अनुषंग :- पावसाळा आणि विनाळा

पुरण व्यवस्थापन कार्यातील मार्गदर्शन प्रारंभिक जी.डी.

मुरतकर, गवत तज्ञ, विखतवरा:

मार्गदर्शन केलेले कार्य (Interventions) :- गवत उत्पन्न,
अखाद्य प्रजाती आणि अन्य जैववैविध्य वनस्पती, बीज
संकलन, पुरण विकास, पुरणतील गवत वाढीसाठी कुण,
व्यवस्थापन

कार्यक्षेत्रातील निरीक्षण आणि अभिधाय

सा. प्रा. श्री. जी.डी. मुरतकर, गवत तज्ञ यांनी सप्टेंबर

मार्च एन.बी. कळेसर, Deputy Director, TATR (CORE) Chandrapur

यांनी झालेली येथे दि. 01-09-2020 ते 03-09-2020 यांच्यात

पुरण विकास व व्यवस्थापन या विषयावर आयोजित केलेल्या

कार्यशाळेत भाग घेतून मार्गदर्शन केले.

कार्यशाळेत गवत प्रजातींची ओळख प्रत्यक्ष

कार्य क्षेत्रात फील्ड करवून दिली. तसेच गवत मीठा,

अखाद्य वनस्पतींची प्रजाती, तण प्रजाती इ. ची ओळख

यांनी आम्हा वनकर्मचाऱ्यांना करवून दिली. ओळख

झाल्या नंतर आम्ही गवतमधील क्वीआइली प्रत्यक्ष

कर्मचारी गवत प्रजाती मध्ये रस घेऊ लागला. प्रत्यक्ष गवता

ची खास ओळख झाली. यात श्री. मुरतकर, सर यांचा भिडता

बघा आहे.

सरांनी पुरवामध्ये तसेच रसनाच्या दुतर्फा अखाद्य

अपडल काढण्याच्या विषयांनी गवताच्या पंढ्या तसेच गवत

ची व्यवस्थापन सांघीयता, तसेच नवे नवे कार्यक्षेत्रात जाऊन

त्याचे

दि. 18-08-2021


Director's Office
Karnal (Uttar Pradesh)

Tadoba Andhari Tiger Reserve, Chandrapur
Grasslands Management
Feedback form

Title of intervention: Grasslands Management in Protected Areas of Tadoba Andhari Tiger Reserve

Duration: 2019-20

Season: Rainy season and Winter season

Intervention's guideline: by Prof. G. D. Mhatrekar, Grasses Expert, Chikhalda

Intervention: Grasses identification, seeds and seed leguminous plants, seed collection, establishment of grasslands, soil enrichment, biomass management.


Field observations and opinion of field

officers:

मा. काळे सर उपमेन्तारक, तडोबा-अंधारी व्याघ्र प्रकल्प (कोर) संरक्षक संचालक मार्गदर्शिकासाठी त्यांच्या अनुभवातून मा. मुस्ताकर सर प्राध्यापक यांना प्रकल्पातील भवतालीकडे व्याघ्र व अद्याय अनातंयक तथा सफळ भवतालीकडे उज्याल करणे आणी व्याघ्र अनातंयक संरक्षण करणाऱ्या अद्यायानातून मोरती (वन्यजीव) वनपरिक्षेत्र कोठ्या ताठका वनपरिक्षेत्रीक अरिक्ती - कर्णवारी संपी कर्णशाळा होउन प्रत्यक्ष करणे संप्य अरी देत रावतालीकडे सजली व्याघ्र - अद्याय अनातंयक प्रतक्षालिसाज वजीकरा त्यांती वी मोहन करणे, प्रक्रिया करणे सफळकर, वी परते रजारी वकी ज्या ती वनपरिक्षेत्री - कर्णवारी संपी प्रत्यक्षत अनुभवात नसतेत्या नव नातिल्य पारिती करणे अेमान्ती निव्वट सजोपन व सुचिपुन फक्त (विडनिहाय) अशा नातिल्यी संपुन संपीली फिक्त सुकात जरी व्याघ्रसजोभा भाकतीतरी मोवसकर प्रालक्षीक सारे सुतगत करन दिते, त्यामुसार प्रत्यक्षत कुजलक्षणात विप्रिक्त भवतालीकडे व्याघ्र अद्याय अनातंयक प्रणी (व्यय) सुकात सज्जन अनातंयक प्रत्यक्षरती व कॅमेरात आढळतात, मांडवशी प्राळांसाही त्यांती (कुल) शिक्तप सारा उज्याल्य होन आहे.

ह्या सर्व तारी प्रा मुस्ताकर संपुने शिक्त कर्णवारी करू करणे. परत कुससेमाय अरी देतून वनपरिक्षेत्रीक सजोपन तपडविखाय विनंती. फार फार अद्यायरी अद्यायत.

दिनांक: 19/08/2021


(वी. के. जोसवार)
शेव सजोपन सजोली सजोपन
अद्यायरी (वनपरिक्षेत्र) वनपरिक्षेत्र

Tadoba Andhari Tiger Reserve , Chandrapur
Grasslands Management
Feedback form

Title of intervention: Grasslands Management in Protected Areas of Tadoba
Andhari Tiger Reserve

Duration: 2019-20

Season: Rainy season and Winter season

Interventions guidance by Prof. G. D. Muratkar , Grasses Expert , Chikhaidara

Interventions : Grasses identification , weeds and wild leguminous plants , seed

collection , enrichment of grasslands , relief enclosures , biomass management.


Field observations and opinion of field

officers:

प्रा. श्री जी डी मुरतकर अरु यांच्या मार्गदर्शना अखरी
ताडोबा परिशेतात अद्याप काढण्याचे काम करण्यात आले.
विशेषता ताडोबा तलाव परिसरात उडवले क्षेत्रातील
अद्याप काढण्यात आले. त्यानंतर अरुया मार्गदर्शना अखरी
अखरी क्षेत्रात आद्या अखरीच्या कामा केलेल्या वेळा
आकारात आल्या

त्यानंतर मोठे जल उडव महो क्षेत्रात आलेल्या
कवशाक्षेत्र क्षेत्रीय क्षेत्रात अखरी क्षेत्रात आलेल्या
आद्या अखरी मोठ्या प्रमाणात उडविले आकारले. इतर
प्रकारच्या क्षेत्रात आलेल्या फुल आकाराच्या मुळे ताडोबा
तलावच्या वाज्या अखरी, यितळ अखरीचे योना योना
अखरी उपलब्ध आले. श्री श्री मुरतकर अरुया मार्गदर्शना
मुळे ताडोबा परिशेतात लगेला अद्याप काढण्याचे काम
सुरु आहे. तलावच्या आकाराच्या फुल आकाराच्या योना योना
फार महत्व अखरी प्रा. श्री मुरतकर अरु यांच्या मार्गदर्शनामुळे
फुल क्षेत्राच्या योना योना अखरी आकारले. आकारले श्री
यांच्या आकारा आहे

Date: 19/08/2021

Name  Signature with
Stamp
वनपरिक्षेत्र अधिकारी
(वनजीव) ताडोबा

**ताडोबा-अंधारी व्याघ्रप्रकल्प, चंद्रपूर
कुरण व्यवस्थापन
अभिप्राय प्रपत्र**

विषय - ताडोबा-अंधारी व्याघ्र प्रकल्पातील राखीव वनात गवती कुरण व्यास्थापन

सत्र :- २०१९-२०२०

हंगाम - पावसाळी हंगाम व हिवाळी हंगाम

मार्गदर्शक - प्रा. जि. डी. मुरतकर गवत तज्ञ, विसलदरा

मार्गदर्शन विषय - गवतांची ओळख, असादय व शेंगवर्गीय वनस्पती, गवती बीयाणे संकलन, गवतीकुरणाचे संवर्धन, बंदिस्त कुरण व्यवस्थापन, गवतीपट्टे व्यवस्थापन, क्षेत्रनिरिक्षण व कुरण विकास कामाविषयी मतप्रदर्शन करणे

वनाधिकारी- मा. काळे सर उपखंडालाड (कोर) चंद्रपूर येथे मार्गदर्शनाबाबची त्यांच्या अनुभवानुसार प्रा. जि. डी. मुरतकर सर गवतानुसार निष्पत्ती करून घ्यावी. निवड करून गवती कुरण व्यवस्थापनाची प्रथम कामे सप्टेंबर/२०१९ पासून सुरु व्हावीत त्यात घाबरा व अंधारी वनस्पती गवत, मीठ यांची प्रेरिते व त्यांच्या माध्यमातून सामजाडून स्थागितले त्यांच्या प्रत्येक कामातून जाऊन ओळख करून घ्यावी. कुरणातील प्रतीक गवतांचे स्थानिक तज्ञ, राखीव तज्ञ व त्या गवतांचे उपनिवेश करणारे प्रत्येक तज्ञ ही अन्वया साखणीत वाढवून गवत प्रजाती, रोगात असलेली वाढत्या गवत प्रजाती पल्लवलेल्या क्षेत्रात वाढत्या गवत प्रजातीची ओळख करून घ्यावी. त्यांच्या प्रत्येक गवतांच्या विषयाने संपल्या कालावधी क विंगाले जमा करणे व सुकवणे याची मान्य व्याख्याणा करणे कुरणाचे मान्य सविस्तर मार्गदर्शन घ्यायला त्यातून पाठलागात जमा केली गवती विषयाने कामे घेतात कोरी पुरवणी आणि मान्यसहित मर्यादित मीठाले. प्रा. मुरतकर सरांनी मार्गदर्शन केल्याप्रमाणे आधी कार्ये घ्यावीत. अंधारी व अंधारी केली जमा करून अन्वय उरकून गवती कुरण तज्ञांद्वारे झालेल्या हंगामेच्या तज्ञांमार्फत प्रकल्पातील कुरण क्षेत्रातील राखीव वाढ घालनी जाई.

त्यांच्या बाबती प्रा. मुरतकर सरांमार्फत देखील मार्गदर्शक करणे करावे. कुरणाचे प्रोटोकॉल आणि बांधिलेले वाढविषयक हंगामेच्या अंधारी अन्वय. स्वाक्षरी

दिनांक - 19/08/2019

नाम प्रा. डी. काळे
शिक्षणतज्ञ
ठर. शिंदेवाडी-1

ताडोबा-अंधारी व्याघ्रप्रकल्प, चंद्रपूर
 कुरण व्यवस्थापन
 अभिप्राय प्रपत्र

विषय - ताडोबा-अंधारी व्याघ्र प्रकल्पातील राखीव वनात गवती कुरण व्यवस्थापन

सत्र :- २०१९-२०२०

हंगाम - पावसाळी हंगाम व हिवाळी हंगाम

मार्गदर्शक - प्रा. नि. डी. मुरतकर गवत तज्ञ, विसातवरा

मार्गदर्शन विषय - गवतांची ओळख, असापय व शेंगवर्गीय वनस्पती, गवती बीयांचे संकलन, गवतीकुरणाचे संवर्धन, बंदिस्त कुरण व्यवस्थापन, गवतीपट्टे व्यवस्थापन, क्षेत्रनिरिक्षण व कुरण विकास कामाविषयी मतप्रदर्शन करणे

वनाधिकारी - श्री श्री एस. आर. शोभर नियत वनरक्षक
 कावडवार / रानतक्षेत्री - १ (अती) उपक्षेत्र
 रानतक्षेत्री, वनपरीक्षेत्र कारवा (वजी) येथे
 कार्यवाही आहे.

मा. श्री एन. डी. काळे सारेव उपसंचालक (कुरण)
 ताडोबा अंधारी व्याघ्र प्रकल्प, चंद्रपूर जिल्हा, शाबरीनावाली
 मा. प्रा. श्री. ना. डी. मुरतकर सर यांचे मादली येथे
 १ सप्टेंबर २०२० ना कुरण विकास कार्यक्रमा सुरुवात
 कापसाळा घेऊन मुळातील शालेय गवत, अशाभूत
 गवत, गवत मित्र, गवत शत्रू, शाखाबत प्राचीन दिली.
 त्यातील प्रत्येक गवती कुरणात भेरी रक्त प्राप्त आसा. अशा
 गवतमित्र गवतशत्रू गवतांची ओळख करून दिली. शिवतज्ञ
 कुडव्या उल्लेखीत गवत मित्र ओळख करायचे आणी त्याने
 ओळख व्यवस्थापन करून घेण्यात आली. अशा
 कुरणाची शाखाबत प्राचीन दिली. या सार गोष्टींचे
 मा. श्री. प्रा. नि. डी. मुरतकर सर यांच्यामुळे स्वतंत्रित क्षेत्रीय
 कुरणाच्या गवतांवाबत वरचे प्राचीन प्राप्त आसा. अशा
 मुळावरी प्रणाली भागात रक्त प्राप्त होईल. व त्याची वाढ होईल.
 निवृत्त होवून स्थानिक कुरणारी शाखा प्रचलनात
 वाढ होण्यास मदत मिळाली. शाखाबत आली

दिनांक - १६/०९/२०१९ यांचे फार फार आभारी आहोत. श्री एस. आर. शोभर वनरक्षक
 वनाधिकारी, कावडवार / रानतक्षेत्री

Tadoba
Grasslands Management



Appreciation

R. SOBHA, IFS

Principal Chief Conservator Of Forests
(Head Of Forest Force)



Aranya Bhavan, Saifabad,
Hyderabad - 500 004 T.S

Office : 040 23231404

Fax : 040 23231851

Mob : 94 91 05 3220

pcctftelangana@gmail.com

LETTER OF APPRECIATION

DATED:29.08.2020

My sincere appreciation to Prof. Gajanan Dadaraoji Muratkar of Maharashtra.

Thank you very much for delivering on informative and thought provoking session through Zoom Webinar on "**Grassland Development and Management – Challenges & Solutions**" held on 29th August, 2020 facilitated by Telangana State Forest Academy, Dulapally, Hyderabad.

It was a splendid detailed presentation and interaction with Forest Department officials of Telangana State with good field practices.

Your passionate sharing on Grassland Development and Management is always an inspiration to us. All the department officers have appreciated and got benefitted from your views and vast experiences in the field of Grassland Management.

Looking forward for your cooperation for the promotion and imparting professional expertise in future as well.

With best wishes
R. Sobha
(R. SOBHA)

Appreciation

Dr G. Chandrashekar Reddy, I.F.S.
Addl.PCCF & Director (FAC)



Telangana State Forest Academy
Government of Telangana,
Dulapally, Hyderabad – 500 100
Mob : +91- 9948919666
Land Line (O) : 040 - 29704896
e-mail : tsfa.hyd@gmail.com

Date: 29.08.2020

Letter of Appreciation

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Looking forward for your cooperation for the promotion and imparting professional expertise in future as well.


(Dr G. Chandrashekar Reddy, IFS)
APCCF/Director

Appreciation

Sri C.P. VINOD KUMAR, I.F.S.,
Field Director Project Tiger,
Kawal Tiger Reserve



Forest Complex
Nirmal – 504 106
Telangana
e-mail : fdptkawal@gmail.com

Date: 01.10.2020

To,

Dr. G.D. Muratkar
Grassland Ecologist
Chilkhaldara, Amaravati District,
Maharashtra State – 444 807

Dear Sir,

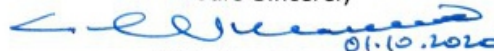
Thank You for taking time and visiting the Kawal Tiger Reserve, Telangana during 27.09.2020 to 30.09.2020. I sincerely appreciate the time you spent in training the staff and field visits to grasslands developed in Kawal Tiger Reserve. Your visit has given lot of practical field guidance to all the staff up to Forest Beat Officer level and also Protection watchers.

Your visit has given guidance to all of us in further improving, developing and maintaining grasslands in Kawal Tiger Reserve.

Under your guidance our team will definitely increase the grasslands for improving the prey population in the Kawal Tiger Reserve. We all look forward for your further visit to Kawal Tiger Reserve.

With Regards,

Yours Sincerely


(C.P. Vinod Kumar)
01.10.2020

Appreciation



OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS (WILDLIFE & BIO-DIVERSITY CONSERVATION) CUM-CHIEF WILDLIFE WARDEN CHHATTISGARH

Aranaya Bhawan, First Floor (FR) Sector 19, North Block, Capital Complex Atal Nagar, Nava Raipur

✉ cwlwgc@gmail.com

(☎ 0771-2512880, 📠 0771-2512881)

No./WL/Coord./...1.....

Nava Raipur, Dated : 04/06/2021

Prof. Gajanan Dadaraoji Muratkar delivered a virtual lecture captioned "Grassland management Techniques for the Protected Areas of Chhattisgarh" on 4th June 2021 to the Officers and field staff working in the Protected Areas of Chhattisgarh.

The inputs in the session gave an insight into the timelines in which different activities from seed collection, treatment, pre-sowing and post sowing operations need to be carried out to develop grassland in order to increase the herbivores population. The department is thankful to him and looks forward to having many more such fruitful training sessions in the future also.

P.V. Narsinga Rao
04/06/2021

(P.V.NARSINGA RAO)

Principal Chief Conservator of Forest (Wildlife) and
Chief Wildlife Warden, Chhattisgarh State

Appreciation

S. R. NATESHA, IFS.,
CONSERVATOR OF FORESTS &
FIELD DIRECTOR

GOVERNMENT OF KARNATAKA



FOREST DEPARTMENT



No. A4/BUD/CR 17/Grassland/2020-21

Date: 25-01-2021

To,
Dr. Gajanan Muratkar,
Grass Expert and
Head of the Department Environment Science,
Arts, Science and Commerce College,
Chikaldara, Amaravati,
Maharashtra - 444807

Sub: Appreciation of Services rendered in Grassland Management in Bandipur Tiger Reserve, Karnataka - reg.

*_*_*_*

This is with great pleasure that, I acknowledge and immensely appreciate your technical guidance for the development of grasslands in Bandipur Tiger Reserve and the contribution towards the capacity building of our field and supervisory staff.

Your recent visit on 26th December 2020 to Bandipur and your inputs given in the workshop with the management of Bandipur Tiger Reserve have considerably added to our understanding of the improvement and management of grassland. I hope that in future also you will lend us your tremendous support for the cause of conservation of grassland in Bandipur Tiger Reserve.

(S. R. Natesha, IFS.,)
Conservator of Forests & Field Director,
Project Tiger, Bandipur

Appreciation

P.V. RAJA RAO, IFS

Director /CCF &
Secretary, CEFNARM



Telangana State Forest Academy
Government of Telangana,
Dulapally, Hyderabad – 500 100
Land Line (O) : 040 – 29 70 48 96
Mob : + 91 94 40 81 01 66
e-mail : tsfa.hyd@gmail.com
email: peshi.tsfa@gmail.com

D.O.Lr.No: 729/2021/E2, Dt 19.07.2021

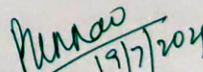
Dear Dr. Gajanan Murathkar garu

Sub: 7th batch FRO ITP – West Central India Study Tour -
Appreciation of Services rendered in Grassland Management as
a part of Virtual Study Tour - Reg.

This is with great pleasure that, I acknowledge and immensely appreciate your technical guidance for the development of grasslands in protected areas towards the capacity building of 7th batch Forest Range Officer trainees.

On 29, July, 2021 as a part of Virtual tour on Grassland management, your inputs on Virtual mode added to our Forest Range Officer trainees understanding and updates knowledge on improvement of Grasslands. I hope that in future also you will extend your unstinted support for the cause of conservation of Grasslands.

With Warm regards, Sir,


(Sri P.V. Raja Rao, IFS.,)
Director /CCF

To

Dr. Gajanan Murathkar,
Grass Expert and
Head of the Department Environment Science,
Arts, Science and Commerce College,
Chikaldara, Amaravati,
Maharashtra - 444807

Appreciation

Sri A.K. SINHA, IFS.,
Chief Conservator of Forests /
Field Director,
Amrabad Tiger Reserve,
Achampet.



Field Director,
Amrabad Tiger Reserve,
Forest Complex,
Achampet - 509375
Cell : 9440810115
E-Mail : atrcircle@gmail.com

Ref No 711/2020/PT4 Dated 28/01/2021

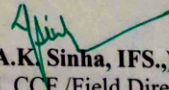
To
Dr. Gajanan Muratkar,
Grass Expert and
Head of the Department Environment Science,
Arts, Science and Commerce College,
Chikaldara, Amaravati,
Maharashtra – 444807

Sub:- Appreciation of Services rendered in Grassland Management in
Amrabad Tiger Reserve, Achampet – Reg.,



This is with great pleasure that, I acknowledge and immensely appreciate your technical guidance for the Development of Grasslands in Amrabad Tiger Reserve and the contribution towards the capacity building of our field and supervisory staff.

Your recent visit on 27th and 28th January 2021 to Amrabad Tiger Reserve and your inputs given in the workshop with the management of Amrabad Tiger Reserve have considerably added to our understanding of the improvement and management of grassland. I hope that in future also you will lend us your tremendous support for the cause of conservation of grassland in Amrabad Tiger Reserve, Achampet.


(A.K. Sinha, IFS.,)
Addl. Prl. CCF /Field Director,
Amrabad Tiger Reserve,
Achampet.

Appreciation

Smt. Sunita M. Bhagwat, IFS.,
Chief Conservator of Forests / CF
Rangareddy Circle, Rangareddy.



Room No. 232, 2nd Floor,
Aranya Bhavan, Saifabad,
Hyderabad – 500004.
Mobile: 9440815594
Office: 040 – 23232891.

No. Appreciation/Grassland/2021/M2

Date: 29-01-2021

To,
Dr. Gajanan Muratkar,
Grass Expert and
Head of the Department Environment Science,
Arts, Science and Commerce College, Chikaldara,
Amaravati, Maharashtra - 444807

Sub: Appreciation of Services rendered in "*Management & Ecological Restoration of Grassland with Bio-mass Management*" at Mahavir Harina Vanasthali National Park, Hayathnagar Range, Shamshabad Division, Rangareddy District, Rangareddy Circle - reg.

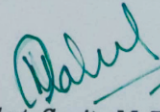
-x-x-x-

This is with great pleasure that, I acknowledge and immensely appreciate your technical guidance & expertise for the development of grasslands in Rangareddy Circle and the contribution towards the capacity building & field demonstration to our Forest Front Line staff & Field Officers.

Your visit on 29th January 2021, to Mahavir Harina Vanasthali National Park, Hayathnagar Range of Shamshabad Division, Rangareddy District and your valuable inputs provided in the "*Management & Ecological Restoration of Grassland with Bio-mass Management*" Workshop at Mahavir Harina Vanasthali National Park have enriched and considerably enhanced to our understanding of improvement, restoration and management of Grassland with respect to Bio-mass management.

I thank you for your support and expertise imparted to our Officers & staff and expect the same co-operation in future also towards the cause of conservation of grasslands in Rangareddy Circle.

With Best wishes,


29/01/2021
(Smt. Sunita M. Bhagwat, IFS.,)

Appreciation



महाराष्ट्र शासन
वन विभाग

वनसंरक्षक तथा क्षेत्र संचालक, ताडोबा-अंधारी व्याघ्र प्रकल्प, चंद्रपूर यांचे कार्यालय

दुरध्वनी क्रमांक (07172) 251414

ई-मेल ccffdtadoba2@mahaforest.gov.in

मुल रोड, चंद्रपुर-442401

Desk No-4/Steno/20-21/1733

Chandrapur, Date : 20/10/2020

Sir,

Subject :- Letter of appreciation

On behalf of Tadoba-Andhari Tiger Reserve, Chandrapur, I place on record our sincere appreciation towards Prof. G. D. Muratkar, for his invaluable contribution towards improvement of grassland management practices in Tadoba-Andhari Tiger Reserve. He has conducted field visits and conducted on field training and workshops involving Forest officials from the cadre of Forest Beat Guards to Field Director on the grassland management, Wild legume identification, grass seed collection and weed eradication. This has resulted in visible change in different grasslands spread over this Tiger Reserve and we express our gratitude and acknowledge the services rendered by him, and hope for his continuing technical support and guidance.

(Dr. Jitendra S. Ramgaokar, IFS)
Conservator of Forests & Field Director,
Tadoba-Andhari Tiger Reserve, Chandrapur

To,

The Principal,
Arts Science and Commerce College,
Chikhaldara, Amravati District,
Maharashtra State-444 807

लोकमत

मेळघाटच्या 'ग्रास मॅन'ने १२ राज्यातील ३० व्याघ्र प्रकल्पात फुलविले कुरण

आंतरराष्ट्रीय व्याघ्र दिन : 'गवत असेल तरच वाघ वाचेल'ची संकल्पना

शोध रिपोर्ट

नरेंद्र जावरे
लोकमत न्यूज नेटवर्क
चिखलदरा (अमरावती) : जंगल असेल तर वाघ दिसेल, वाघासाठी आवश्यक असलेले तुणभक्षी प्राणी आणि त्या प्राण्यांसाठी अति आवश्यक असलेले गवती कुरण अशा या अन्नसाखळीला तयार करण्यासाठी चिखलदरा येथील एका महाविद्यालयाच्या प्राध्यापकाने एक दोन नव्हे, तब्बल देशातील १२ राज्यातील ३० पेक्षा अधिक व्याघ्र प्रकल्पात तुणभक्षी प्राण्यांसाठी कुरणक्षेत्र तयार केले आहे. त्यामुळे



व्याघ्र प्रकल्पात झालेले कार्य दाखविताना प्रा. गजानन मुरतकर.

तुणभक्षी प्राण्यांत गवताच्या आवडीनिवडी

मानवांमध्ये जेवणाच्या आवडीनिवडी आहेत त्याचप्रमाणे चितळ, गवा, सांबर, अशा विविध तुणभक्षी प्राण्यांच्या आवडीनिवडी आहेत. काहीना मुलायम व कडक गवत आवडते. त्यानुसार चितळ गवत हे रसगुल्लाप्रमाणे आवडते, तर गवा कुसळी व गोधळी, सांबर गवत कमी व झाडांची पाने, फुले, फळे जास्त खातो. तुणभक्षी प्राण्यांसाठी दुर्गा, पक्क्या, रानदूर, रानमूग, रामसोयाबीन, बांबू, अशा विविध प्रजातीचे गवत आहे.

पर्यावरणासह व्याघ्र संवर्धनात मोठी मदत झाली आहे. चिखलदरा येथील कला, वाणिज्य महाविद्यालयात पर्यावरणशास्त्राचे विभागाप्रमुख प्रा. गजानन मुरतकर असे

या प्राध्यापकाचे नाव आहे. गवती कुरणामुळे जमिनीची धूप, तापमान थंबवण्यासह पाण्याचा निचरा, कीटक, सरपटणाऱ्या प्राण्यांना नैसर्गिकरित्या आश्रयस्थान, तुणभक्षी प्राण्यांना

आवडते खाद्य व वाघ, बिबट्यासारख्या मांसभक्षी प्राण्यांना जंगलातच शिकार मिळत असल्याने शहरात जाऊन मानव-वन्यजीव संघर्ष थांबण्यास मदत झाली आहे.

या राज्यात गवती कुरण

- मध्यप्रदेश : कान्हा, सातपुडा, पन्ना, पेंच, बांधगड.
- महाराष्ट्र : मेळघाट, सह्याद्री, पेंच, ताडोबा, नवेगाव, टिपेश्वर, नानज, भीमाशंकर, रडेकुरी.
- छत्तीसगड : अंचानकमार व इतर ४ अभयारण्ये.
- राजस्थान : रणथंबोर, मुकुंद-राहिलस.
- कर्नाटक : बंदीपूर नागरहोले काली भद्रा बीआरटी.
- तामिळनाडू : के एम टी आर.
- ओडिशा : सिमलीपाल सातसोरिया.
- तेलंगणा : कवल अमरावाड.
- बिहार : वाल्मीकी टायगर रिझर्व.
- उत्तराखंड : जिम कॉर्बेट आदी.

एकंदर मुंगी ते हत्तीपर्यंत गवत अन्नसाखळीचा दुसरा ठरले आहे. मेळघाट व्याघ्र प्रकल्पात इतर ११ पेक्षा अधिक गवताच्या प्रजाती आहेत.

ताडोबात केवळ बांबू असल्याने मेळघाटच्या सांभरपेक्षा तेथील तुणभक्षी प्राणी कमी वजनाचा व्याघ्र प्रकल्पपेक्षा ११९६ पेक्षा अधिक गवताच्या प्रजाती आहेत.

लोकमत

मेळघाटच्या 'ग्रास मॅन'ने १२ राज्यातील ३० व्याघ्र प्रकल्पात फुलविले कुरण

आंतरराष्ट्रीय व्याघ्र दिन : 'गवत असेल तरच वाघ वाचेल'ची संकल्पना

शोध रिपोर्ट

नरेंद्र जावरे
लोकमत न्यूज नेटवर्क
चिखलदरा (अमरावती) : जंगल असेल तर वाघ दिसेल, वाघासाठी आवश्यक असलेले तुणभक्षी प्राणी आणि त्या प्राण्यांसाठी अति आवश्यक असलेले गवती कुरण अशा या अन्नसाखळीला तयार करण्यासाठी चिखलदरा येथील एका महाविद्यालयाच्या प्राध्यापकाने एक दोन नव्हे, तब्बल देशातील १२ राज्यातील ३० पेक्षा अधिक व्याघ्र प्रकल्पात तुणभक्षी प्राण्यांसाठी कुरणक्षेत्र तयार केले आहे. त्यामुळे पर्यावरणासह व्याघ्र संवर्धनात मोठी मदत झाली आहे. चिखलदरा येथील कला, वाणिज्य

तुणभक्षी प्राण्यांत गवताच्या आवडीनिवडी

मानवांमध्ये जेवणाच्या आवडीनिवडी आहे त्याचप्रमाणे चितळ, गवा, सांबर, अशा विविध तुणभक्षी प्राण्यांच्या आवडीनिवडी आहेत. काहीना मुलायम व कडक गवत आवडते. त्यानुसार चितळ गवत हे रसगुल्लाप्रमाणे आवडते, तर गवा कुसळी व गोधळी, सांबर गवत कमी व झाडांची पाने फुले जास्त खातो. तुणभक्षी प्राणी दुर्गा, पक्क्या, रानदूर, रानमूग, रामसोयाबीन, बांबू, अशा विविध प्रजातीचे गवत आहेत.



व्याघ्र प्रकल्पात झालेले कार्य दाखविताना प्रा. गजानन मुरतकर

महाविद्यालयात पर्यावरणशास्त्राचे विभागाप्रमुख प्रा. गजानन मुरतकर असे या प्राध्यापकाचे नाव आहे. गवती

कुरणामुळे जमिनीची धूप, तापमान थंबवण्यासह पाण्याचा निचरा, कीटक, सरपटणाऱ्या प्राण्यांना नैसर्गिकरित्या

या राज्यात गवती कुरण

- मध्यप्रदेश : कान्हा, सातपुडा, पन्ना, पेंच, बांधगड, महाराष्ट्र : मेळघाट, सह्याद्री, पेंच, ताडोबा, नवेगाव, टिपेश्वर, नानज, भीमाशंकर, रडेकुरी, छत्तीसगड : अंचानकमार व इतर ४ अभयारण्ये. राजस्थान : रणथंबोर, मुकुंदराहिलस, कर्नाटक : बंदीपूर नागरहोले काली भद्रा बीआरटी, तामिळनाडू : के एम टी आर, ओडिशा : सिमलीपाल सातसोरिया, तेलंगणा कवल अमरावाड, बिहार वाल्मीकी टायगर रिझर्व, उत्तराखंड जिम कॉर्बेट आदी २२ राज्यापेक्षा अधिक ठिकाणी त्यांनी गवती कुरण तयार केले आहेत.

आश्रयस्थान, तुणभक्षी प्राण्यांना आवडते खाद्य व वाघ बिबट्यासारख्या मांसभक्षी प्राण्यांना जंगलातच शिकार मिळत असल्याने शहरात जाऊन मानव-वन्यजीव संघर्ष थांबण्यास मदत झाली आहे. एकंदर मुंगी ते हत्तीपर्यंत गवत अन्नसाखळीचा दुसरा ठरले आहे.

मेळघाट व्याघ्र प्रकल्पात इतर व्याघ्र प्रकल्पापेक्षा ११९६ पेक्षा अधिक गवताच्या प्रजाती आहेत. ताडोबात केवळ बांबू असल्याने मेळघाटच्या सांभरपेक्षा तेथील तुणभक्षी प्राणी कमी वजनाचा असल्याने तिथेच पुढे आल्याचे मुरतकर यांनी सांगितले.

एमपी का ग्रास लॅंड अफ्रीकन चीतों की तैयारियों के कारण सुखियों में आए कूनो अभ्यारण्य में कई विशेषताएं वन विहार, कान्हा और सतपुड़ा रिजर्व में लगेगी कूनो की 'रसगुल्ला घास'



अफ्रीका के चीतों की आसुर से पहले की जा 'रसगुल्ला घास' को लेकर सुखियों में आए कूनो-फाल्गुन अभ्यारण्य की घास की भी प्रेरणा में दिमाग है। भोजन के वन विहार, कान्हा और सतपुड़ा के टाइगर रिजर्व में यह की खोजने परम की जागी है। राजस्थान, 748.8 किलोमीटर की विस्तृत में फैले हुए कूनो अभ्यारण्य में करीब 40 फीसदी क्षेत्र में घास के मैदान हैं। यहाँ 86 तरह की घास होती है। दुर्गम मावेलेत घास सबसे खास है। इसे विशेषकर चित्तूर पालतू फलने

10 सालों में बढ़ना शुरू है। इस घास को खाने से चीतान, खंभर व दुर्गम शकाहारी वन्यजीवों की संख्या कई गुना तक बढ़ी है इसलिए अब दुर्गम टाइगर रिजर्व भी वन्यजीवों की लड़ाई खाने के लिए इस घास को अपने पास रखना। चीतोंको फेके घास के मुलुकक घास के बाद इस घास के चीत वन विहार व अन्य नेशनल पार्क में भेजे जायेगी। इस घास को महाराष्ट्र के घास विहार में, जहाँ मुलुकक की विशेषता में फैले हुए कूनो में बढ़ावा देना है। प्रदेस में कूनो के घास के मैदान सबसे अच्छे हैं। इस घास की वजह से ही कूनो फाल्गुन अभ्यारण्य में शकाहारी वन्यजीवों की तादात तेजी से बढ़ रही है।



खासियत है 150 किलोमीटर दूर स्थित कूनो फाल्गुन अभ्यारण्य में 'गवत घास' के मैदान, इसे रसगुल्ला घास भी कहा जाता है।

86 प्रजातियों की घास कूनो फाल्गुन अभ्यारण्य में पाई जाती है
● 42 प्रजातियों की घास वन्यजीव खाते हैं, रोप अभाव लेते हैं
● कूनो नदी की घास वन्यजीवों के लिए दवा का काम करती है

खासियत, प्रोटीन, रूगर के साथ फाइबर-कार्बो हाइड्रेट ज्वाड
कूनो में मावेल घास सबसे अधिक पाई जाती है। इसकी छोटी, घड़ी, मजबूत और जलन से निपटकर रहने वाली प्रकृति होती है। घासों अधिक छोटी और बड़ी मावेल घास खाते खाते हैं। इसमें प्रोटीन, रूगर, फाइबर व कार्बोहाइड्रेट होता है। इसमें घास को खाता भी ज्यादा होती है।
-पिके चर्चा, डीएनए, कूनो संकेत

2011 से की वी घास को बढ़ावा देने की रूझात
कूनो संकेत में सबसे उपयुक्त घास के मैदान है। यह मिट्टने वाली मावेल घास को खाकर चीतान, खंभर व दुर्गम शकाहारी वन्यजीवों की संख्या तेजी से बढ़ी है इसलिए इस घास को विशेष अधिक है। 2011 से 2014 तक मरे जेवन में इस घास को बढ़ावा देने के लिए नसीरी नकक घास के मैदानों को बढ़ावा था। अब ये घास कूनो की घास बन गई है। इसे लो रसगुल्ला घास कहते हैं। - प्रो. सीटी मुरतकर, वन विभाग, घास

Kawal Grasslands Management



Sahyandri Grasslands Management



Tadoba Grasslands Management



Satpuda Grasslands Management



Bandipur Grasslands Management



Kanha Grasslands Management



Panna Grasslands Management



Amrabad Grasslands Management



Pench Grasslands Management



Extension Activity Report

Department of Environmental Science

Academic Year 2019-20

Format for presentation of best Practices

1. Title

Training to the frontline forest staff for grasslands Management in Protected Areas of Telangana State.

2. Goal

To develop grazing habitat for herbivores in Protected Areas specially in Tiger Reserve , Sanctuary and National park.

Participants in the field workshop

DCF, Field Director, RFO, Section officer, Bit guard of tiger reserve .

1. Kawal Tiger Reserve
2. Amrabad Tiger Reserve and Vansthali National Park Hydrabad.

Duration of Activity (Workshop) : 28th October to 2nd November 2019

Concept

To know the soil characters, profile for grassland development in natural pastures, degraded areas of forest and lantana removed areas for restoration of grasslands. To manage the grazing, browsing, breeding, nesting habitats.

To train the frontline staff for

- Grasses, weeds and wild leguminous plants identification from forest areas.
- Enrichment of grasslands
- Eradication of weeds from grasses for habitat improvement
- Brushwood management
- Geo mapping of grasslands
- Restoration of grasslands
- Grasses seeds collection, storage and enrichment.

The Context

The Protected Areas includes Tiger Reserves, National Parks, Wildlife Sanctuaries, the wildlife like Herbivores, Omnivores, Carnivores habited in the protected areas. The grasses are the producers, soil binders , provides chemical energy to the wildlife in the form of fodder species. The protected areas forest are with 2-4.5 % grasses naturally it should be 6.5 %- 7.9%. Now recently natural grasslands and relocated areas of the Protected Areas are developing in to good grasslands for the herbivores.

Grasslands are the green ground cover of protected areas in forest. The grasses are useful for grazing habitat of wildlife (Herbivores). The threats to the grasslands are soil degradation, loss of soil moisture, leach out of nutrients of the soil, forests fires, weed infestation, woody species encroachment, change in grasslands composition, exotic species and decrease in nutritive value of the fodder grasses.

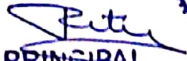
The faculty member of the department of the college has the good expertise in the grasses, weeds and forests flora identification and their nutritive values.

The grassland management practices includes

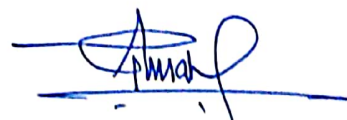
1. To give the field training to the forests field staff in the natural grasslands and relocated areas of the Protected Areas in each season of the year.
2. To know the exact area of grassland year wise by demarcation of grassland area by GPS.
3. Grasses identification training to field staff by local names and scientific names.
4. Weeds identification with local names and their flowering season.
5. Browsing species identification with local names.
6. Field training to collect the grasses seeds and wild legumes seeds.
7. Weed eradication programme two times in a year
8. Grasslands enrichment by seed broadcasting in May - June season.
9. Grasses biomass management practices in mosaic pattern.
10. Wild fruit trees identification and addition in relocated areas.
11. Complete training programmes are organized by the CCF & Field Director of the respective Tiger Reserves in each season.

The practices in the field

Kawal Tiger Reserve, Telangana State


PRINCIPAL
**Art, Science & Commerce
College, Chikhaldera**




(Prof. S. S. Murthy)

**Ecological Impact Assessment of Relocated villages of Akot Wildlife Division
Melghat Tiger Reserve , Amravati**

Interim Progress Report

| | |
|-------------------------------------|--|
| Project Name | Ecological Impact Assessment of Relocated villages of Akot Wildlife Division Melghat Tiger Reserve , Amravati |
| Project report compiled from | Prof. G. D. Muratkar (Grass Expert) Head Department of Environmental Science Arts , Science & Commerce College , Chikhaldara Dist. Amravati |
| Contributors | Mr. Chetan R. Joshi , Mr. T. R. Akhande |
| Reporting period | July 2019 to October 2020 |
| Summery | <p>The relocated villages of Melghat Tiger Reserve are Amona , Barukheda , Bori,Churni , Dhargad , Gullarghat ,Kund , Nagartash , Somthana and Vairat. All these villages are relocated from the core area of MTR from 2002 to 2014. The main objective of the relocation was to develop and extend the good grasslands , grazing , browsing , breeding , nesting and hidden habitats in the large area of MTR. The baseline data before relocation was collected time to time by me and my field team.</p> <p>After relocation of villages what ecological ,phyto sociological and physical changes are occurred are to be studied in the form of Ecological Assessment of the grasslands. The forests type of the Melghat is Tropical dry deciduous type with <i>Tectonagrandis</i> L. (Teak) as a dominant tree vegetation. The grasslands of MTR are mostly heterogeneous with annual , palatable grasses. The dominant useful <i>Dicanthiummannulatum</i> ,<i>Dicanthiumcaricosum</i> fodder grasses are <i>Apludamutica</i> , <i>Brachiariamutica</i> , <i>Heteropogoncontortus</i> ,</p> |

| | <p>The meda quadrivalvis . The wild leguminous plants are distributed in the grasslands of MTR. The grasses maintain the productivity of the grassland ecosystem and play a vital role in grazing food chain. The grasslands maintain the prey base for the Carnivores and useful for the flow of kinetic energy in the ecosystem.</p> | | | | | | | | | | | | | | | | | | | |
|---|---|---------------|---------------|--|-------------------|---------|-------------|---------------|-----------|------|---------------|---------------|-----------|------|---------------|--------------|-------|------|---------------|---------|
| <p>Activities and progress</p> | <p>Ecological and taxonomical Survey of the grasslands</p> <ul style="list-style-type: none"> • Soil pH analysis of each grassland. • To lay down the ecological quadrates in grasslands. • Identification and enumeration of grasses. • Identification and enumeration of wild leguminous plants. • Observations of grasses associates. • To study the % of Perennial and annual Palatable grasses. • To study the % of Perennial and annual non palatable grasses. • Weeds Species identification. | | | | | | | | | | | | | | | | | | | |
| <p>Outputs of the survey and case study.</p> | <ul style="list-style-type: none"> • The intensive survey was carried out in the Monsoon season as a first season of the year. • The soil ecology was determined : <table border="1" data-bbox="464 1529 1332 2161"> <thead> <tr> <th data-bbox="464 1529 710 1686">Relocated Village</th> <th data-bbox="710 1529 895 1686">Soil PH</th> <th data-bbox="895 1529 1102 1686">Soil colour</th> <th data-bbox="1102 1529 1332 1686">Soil moisture</th> </tr> </thead> <tbody> <tr> <td data-bbox="464 1686 710 1843">Barukheda</td> <td data-bbox="710 1686 895 1843">7.48</td> <td data-bbox="895 1686 1102 1843">Brown - white</td> <td data-bbox="1102 1686 1332 1843">1.786 gm / kg</td> </tr> <tr> <td data-bbox="464 1843 710 2000">Nagartash</td> <td data-bbox="710 1843 895 2000">7.15</td> <td data-bbox="895 1843 1102 2000">Black - Brown</td> <td data-bbox="1102 1843 1332 2000">1,981 gm /kg</td> </tr> <tr> <td data-bbox="464 2000 710 2161">Amona</td> <td data-bbox="710 2000 895 2161">7.67</td> <td data-bbox="895 2000 1102 2161">Murmi - Brown</td> <td data-bbox="1102 2000 1332 2161">1.47 gm</td> </tr> </tbody> </table> | | | | Relocated Village | Soil PH | Soil colour | Soil moisture | Barukheda | 7.48 | Brown - white | 1.786 gm / kg | Nagartash | 7.15 | Black - Brown | 1,981 gm /kg | Amona | 7.67 | Murmi - Brown | 1.47 gm |
| Relocated Village | Soil PH | Soil colour | Soil moisture | | | | | | | | | | | | | | | | | |
| Barukheda | 7.48 | Brown - white | 1.786 gm / kg | | | | | | | | | | | | | | | | | |
| Nagartash | 7.15 | Black - Brown | 1,981 gm /kg | | | | | | | | | | | | | | | | | |
| Amona | 7.67 | Murmi - Brown | 1.47 gm | | | | | | | | | | | | | | | | | |

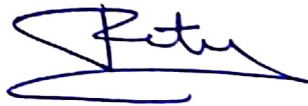
| | | | |
|-----------------------|---------------|----------------------------------|------------------|
| Gullarghat Dhargad | 7.7 to 8.2 | Brown - Black - Red | 1.2 to 1.6 gm |
| Bori | 7.8 | Black - brown and mirmi | 1,95gm / kg |
| Somthana | 7.46 | Red mirmi and brown | 1.85 gm |
| Churni | 7.32 | Mirmi red | 1.64gm |
| Vairat | 7.41 | Red Mirmi | 1.58 gm |
| Kund | 7.45 | Mirmi red | 1.62 gm |

- Rainfall varies from 850 mm to 1900 mm
- Temperature Ranges from 6.5 to 48 degree celcius
- Humidity is variable from grasslands to grasslands 66 to 84 %
- The dominant perennial palatable grasses are :
Dicanthiumannulatum, Dicanthiumcaricosum ,
Dicanthiumpersutum, DicanthiumStrictum,
Heteropogoncontortus, Cynodondactylon,
Cynodonbarberi, Iselimalaxum, Paspaladiumflavedium.
- The dominant annual palatable grasses are :
Themedaquadrivalvis, Setariapumilla, Setaria
intermedia, Brachiariumutica, Echinochloacolonum,

| | | | | | |
|---|--|---|----------------------------|----------------------------|--------------------------------|
| | <p>Dinebraretroflexa , Digitariaabludens, Urochloamutica, Panicumtyhoides, Chloris virgata, Chloris barbata.</p> <ul style="list-style-type: none"> • Wild leguminous plants : Wild mungo, tur, soyabean, udid , methi, matki, etc. • Weeds : The dominant weeds are Rantulas, Gokharu, Aghada, Gajar grass, Kena, Reshimkata, Kombada or kardu, Ageratum conyzoides, Tarota, Tridaxprocumbens. • Wild fruit trees : Moha, Bor, Tendu, Awala, Behada, Tiwas, UMBER, Wad, Bel, Amaltash, Bahuniaspp all etc. | | | | |
| <p>Progress towards the Grasslands Management practices.</p> | <p>Grassland Management practices from last 5 years shows the following positive ecological successions.</p> <ol style="list-style-type: none"> 1. Heterogeneous grasslands. 2. Marvel grass along the boundaries of the cultivated fields and in open grasslands. 3. Marvel grass replaces most of the weeds. 4. Species diversity index increases. 5. Association of the grasses with wild legumes. 6. Soil texture changes. 7. Intermediate grasslands formation. 8. Reduction in the % of unwanted weeds plants. | | | | |
| <p>Evaluation report.</p> | <p>Relocated Site</p> | <p>Grasses association</p> | <p>Wild legumes %</p> | <p>Soil texture</p> | <p>Weeds %</p> |
| | <p>Amona</p> | <p>Good with more annual grasses, Tikhadi grass dominant.</p> | <p>100 %</p> | <p>Murmi, red coloured</p> | <p>Moderate under control.</p> |
| | <p>Barukheda</p> | <p>Good grassland with</p> | <p>Wild tur, soyabeand</p> | <p>Murmi,</p> | <p>Under</p> |

| | | | | | |
|--|------------|---|-----------|----------------------|--|
| | | heterogeneous association. 45 % perennial grasses & 50 % annual grasses. | ominant | red, black | control. |
| | Bori | Taller grassland with Heteropogon, Themeda , Apluda with species diversity. Grassland at the climax stage. | Very less | Murmired | Under control but threat of Lantana in future. |
| | Churni | Mixed type of grassland. | Very less | Murmi red soil | Very high % of weeds |
| | Dhargad | Mixed types of grasses. | Moderate | Red - murmi soil | Under control but village area with more % of weeds. |
| | Gullarghat | Very good grassland only threat of wild Jowar in future. | Moderate | Red - Murmi soil | Weeds controlled. |
| | Kelpani | Good grasses in black loamy soil. Good potential for the heterogeneous grassland development due to soil | Very less | Black and murmi soil | More weeds in new relocated area. |

| | | | | | |
|--|-----------|---|------|----------------|---|
| | | texture diversity. | | | |
| | Kund | Taller grassland with Heteropogon as dominant grass. | 60 % | MURMI RED | Under controlled. |
| | Nagartash | Mixed grassland. | 35% | Red murmi | Controlled |
| | Vairat | Mixed grassland. more patches of Dicanthium along Anikets And in open areas. The taller perrenial grassland developed near the back side of temple in 36 hectares area. | 10 % | Red murmi soil | Controlled ,weed eradication in progress and regular. |



PRINCIPAL
Art, Science & Commerce
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(Prof. G. D. Mhatre)

Extension Activity Images
Department of Environmental Science
Academic Year 2019-20

Addl. Principal Chief Conservator of Forests
(Wildlife) Bangalore



Phone - Off. : 080-23341993
Fax : 080-23345389
E-mail : pccfwl@gmail.com
'Aranya Bhavan', 2nd Floor, 18th Cross
Malleshwaram, Bengaluru - 560 003

No. :

D.O.No.PCCF(WL)/B1/CR-17/2019-20

Date : 09-08-2019

Dear Prof. Gajanan

In continuation to our telephonic discussion with regards to "Developing grasslands in Protected Area landscapes of Karnataka" especially where invasive species have established the lower storey in forests, a workshop is being organised at Bandipur Tiger Reserve, Bandipur at 9.00 am on 22nd August 2019. A few other experts and the Park Managers shall be attending this workshop.

You are therefore requested to kindly grace the workshop as an expert and share your valuable knowledge with participants. It is desirable that you reach the venue on 21st August evening itself. Logistic arrangements shall be made for the same. For any query you can be in touch with me on telephone no. +919480128128. Please share your travel itinerary on our official email id pccfwl@gmail.com with copy communication to skmulkhede@gmail.com.

With regards.

Yours sincerely

(S.K.Mulkhede)

Addl. Principal Chief Conservator of Forests
(Wildlife) Bengaluru

To,
Prof. Gajanan D.Muratkar
Head of Department of Environmental Science
Arts, Science and Commerce College,
Chikhaldara District,
Amravati-444807,
Maharashtra.

Appreciation

ಶಿ. ಶಿಬಿರ ಸೇವಾ ಕೇಂದ್ರ
ಸಂಪನ್ಮೂಲ



ಸಾಗರ ಸಮಾಜ ಸೇವಾ - ಸಿಬಿಬಿ ಸೇವಾ ಕೇಂದ್ರ
ಸಿಬಿಬಿ ಸೇವಾ ಕೇಂದ್ರ, ಸಿಬಿಬಿ, ಮೈಸೂರು, ಕೆ.ಆರ್.ನಗರ ಜಿಲ್ಲೆ, ಕೆ.ಆರ್.ನಗರ
ಫೋನ್: 0824 - 229215 ಫ್ಯಾಕ್ಸ್: 0824 - 229215
e-mail: sibi@karnataka.gov.in

Letter of appreciation for valuable inputs in Sahayadi Tiger Reserve with respect to grassland development and improvement works.

On the behalf of Sahayadi Tiger Reserve, I place on record the appreciation to Prof. G.D. Muratkar for the invaluable contribution made by him towards improvement of relocated sites of both Keyasa Wildlife Sanctuary and Chendoli National park of Sahayadi Tiger Reserve into beautiful meadows.

Since 2017 Dr.Muratkar is regularly visiting Sahayadi Tiger Reserve and imparting field training , conducting workshops for the frontline staff on grassland management, identification of palatable and non palatable grass spp, wild legume identification, grass seed collection and weed eradication etc.

A noticeable changes has been noticed in the relocated sites of the zone of Sahayadi Tiger Reserve and these lands are now converted into beautiful meadows.

On the behalf of Sahayadi Tiger Reserve, I express a sincere gratitude to Dr. Muratkar for his valuable inputs, guidance and regular field visits to the Sahayadi Tiger Reserve.

With Best Wishes,


 Deputy Director,
 Sahayadi Tiger Reserve
 Kolhapur of Karad

To,
 Dr. G.D. Muratkar,
 Head of Department,
 Environment Science, Arts, Science & Commerce
 College of Chikaldhara.

P.K. JHA, I.F.S.
Principal Chief Conservator Of Forests
(Head Of Forest Force)
& Chief Wildlife Warden



Address: M. Chandrababu Naidu
Forest Department - 500 004 T.S.
Office: 2nd Floor, 4th
Floor, 2nd Building,
MCH - 500 004
and Forest Dept. Building, 2nd
Floor, 2nd Building, MCH

RC. NO. PCCT/CH/1 & CH/W/13/2018, DATED: 30.04.2018

Subject: Appreciation letter.

Sir,

On behalf of Telangana State Forest Department I appreciate Prof. G.D. Muratkar for invaluable contribution made by him towards improvement of grassland management practices in both Protected Areas and outside Protected Areas of Telangana Forest Department during last one year. During the said period, he has visited several times both Amarabad and Kanwal Tiger Reserves and different Sanctuaries and conducted field training and workshops involving forest officials from the cadre of Forest Officers to Conservator of Forests / Field Directors on the grassland management, Wild legume identification, grass seed collector and weed eradication. Because of his involvement, visible change has been noticed in the different grasslands spread over in the Protected Areas and Reserve forests and we express our gratitude and acknowledge the services rendered by him.


(PRASHANT KUMAR JHA)
 Principal Chief Conservator of Forests
 (Head of Forest Force)
 &
 Chief Wildlife Warden

To
Prof. G.D. Muratkar,
 Department of Environmental Science,
 Arts, Science & Commerce College,
 Chikaldhara, Dist. Annavilli.

Appreciation

P.K. JHA, I.A.S.,
Principal Chief Conservator Of Forests
(Head Of Forest Force)
& Chief Wildlife Warden



Office Address, Hyderabad,
Andhra Pradesh - 500 002, I.S.
Phone : 080-2333-0000
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Mobile : 98 49 99 3772
ECC: kprajha@gmail.com
pkjha@telangana.gov.in

SC. NO. PCCO/10001 & C.O.N.W./15/2018, DATED: 30.06.2018

Sub:- Appreciation letter.

Sir,

On behalf of Telangana State Forest Department, I appreciate Prof. G.D. Muratkar for invaluable contribution made by him towards improvement of grassland management practices in both Protected Areas and outside Protected Areas of Telangana Forest Department, during last one year. During the said period, he has visited several times both Amarabad and Kawal Tiger Reserves and different Sanctuaries and conducted field training and workshops involving forest officials from the cadre of Beat Officers to Conservator of Forests / Field Directors on the grassland management, Wild Insect Identification, grass seed collection and weed eradication. Because of his involvement, visible change has been noticed in the different grasslands spread over in the Protected Areas and Reserve forests and we express our gratitude and acknowledge the services rendered by him.


(PRASHANT KUMAR JHA)
Principal Chief Conservator of Forests
(Head of Forest Force)
&
Chief Wildlife Warden

To
Prof. G.D. Muratkar,
Department of Environmental Science,
Arts, Science & Commerce College,
Chilhaldera, Dist. Anavilli.

DR. SIDDHANT KUMREY, I.P.S.,
ADIC, P.O. Chief Conservator of Forests,
TELANGANA STATE



Date: 06/07/2018

SC.No. DRG/2018/104, D.No. DR.12/18
Letter of Appreciation

Dear Dr. Muratkar,

At the very outset, I thank you for your unflinching support to the improvement of grasslands in Rangareddy Circle, Telangana Forest Department. During the last two years, your repeated visits to our Circle has certainly helped us in improving the status grasslands in Mahabub Tharu Yasawadi National Park (MNTNP) and in Mangarani National Park (MNP) of Rangareddy District. Under your sustained guidance, the efforts of our field staff have begun to show results in field, which has been appreciated by one and all. This speaks volumes about your passion and commitment towards nature and wildlife.

I particularly find your interactive sessions with forest officials in field very fruitful, as the field officers of all the cadres have now gained insight in identification of different grasses & weedicides, grassland ecology & management, and grassland restoration with weed eradication. Your visit today has further strengthened our understanding on this subject. This letter of appreciation is to show our gratitude for your contribution, and to acknowledge the services rendered. On behalf of Rangareddy Circle, and on my personal behalf, please accept our best wishes for your future endeavours.


(Dr. Siddhant Kumrey)

To
Dr. G. D. Muratkar
Professor & Head,
Department of Environmental Science,
Arts, Science, and Commerce College,
Chilhaldera, Anavilli District,
Telangana State - 504 807

Appreciation

The Indian Science Congress Association, Kolkata, Sponsored

**NATIONAL CONFERENCE ON
SCIENCE AND TECHNOLOGY : RURAL DEVELOPMENT**
(Sustainable Development through Science and Technology)

November 27-28, 2019

Hosted by
SHRI SHIVAJI EDUCATION SOCIETY AMRAVATI'S
SCIENCE COLLEGE, CONGRESS NAGAR,
Nagpur-440012, (M.S.) INDIA.

Outstanding Contribution in Wildlife Conservation

We are pleased to present this award to
Dr. G. D. Muratkar
of
Sipna College, Chikhaldara
for Outstanding Contribution in the field of Science
At National Conference on Science and Technology : Rural Development
(NCSTRD-2019) held during November 27-28, 2019
at SSES Amt's Science College, Congress Nagar, Nagpur


r. A. D. Bobdey
Convenor
NCSTRD-2019


Dr. M. P. Dhore
Chairman, NCSTRD-2019
Principal, SSES Amt's Science College,
Congress Nagar, Nagpur

In Collaboration with

కనాట
తెలంగాణ న్యూస్ పేపర్

మండల కేంద్రంలోని జిల్లా పరిషత్ ఉన్నత పాఠశాల కార్యక్రమం నిర్వహిస్తారు.

పకడ్బందీగా గడ్డిక్షేత్రాల నిర్వహణ

జనారం, స్కూలుటుడీ : కవ్వాలే పులుల సంరక్షణ కేంద్రంలో గడ్డి క్షేత్రాలను పకడ్బందీగా నిర్వహిస్తున్నామని జనారం ఎన్ డీ. మాధవరావు అన్నారు. శుభ్రవారం ప్రత్యేకాధికారి డా. ములాద్వీర సమక్షంలో కవ్వాలేలో పెంచుతున్న గడ్డి క్షేత్రాలు, తీసుకుంటున్న

జాగ్రత్తల గురించి ప్రొజెక్టర్ ద్వారా ఎన్ డీ.కి వివరించారు. పులికి ఆహారంగా ఉపయోగపడే శాశాహార బంతువులను తగిన ఆహారాన్ని సమకూర్చే లక్ష్యంతోనే ఇప్పుడ గడ్డిని పెంచుతున్నట్లుగా ఆయన చెప్పారు. కార్యక్రమంలో కవ్వాలే పులుల సంరక్షణ కేంద్రం ఏర్ప

డై రెక్టర్ నీపీ వి.నోద్రామూర్తి, మంత్రివర్గం, ఆదిలాబాద్, తుమరం డీం ఆసిపాబాద్, నియ్ కేంద్రం డీఎస్ డీలు కె.వినోద్, డా. ప్రభాకర్, రంజిత్ నాయక్, ప్రసాద్, ఉమ్మడి ఆదిలాబాద్ జిల్లాలోని ఎన్ డీ.లు, రేంజీ, డిప్యూటీ రేంజీ, పెక్టర్ అధికారులు పాల్గొన్నారు.



సూక్ష్మీకరణ ఎన్ డీ. మాధవరావు



హాజరైన అధికారులు అధికారులు

Date : 02/11/2019 EditionName : TELANGANA(NIRMAL) PageNo : 11

Training to Forest Bit Guards for Grasslands Management



Training to Forest Bit Guards for Grasslands Management



Training to Forest Bit Guards
for Grasslands Management

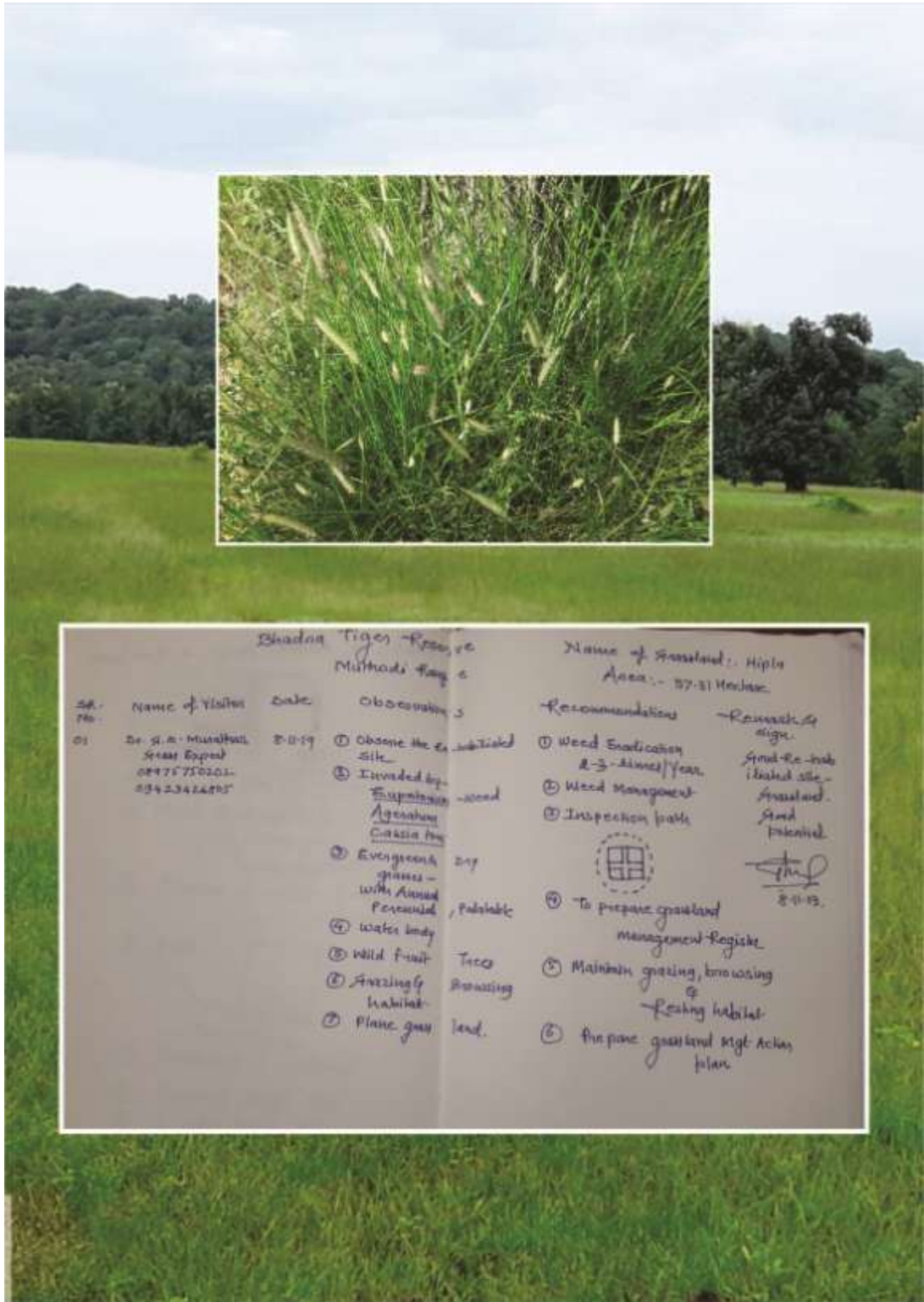


Grasslands




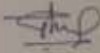
Grasslands





Shadon Tiger Reserve
Mithadi Range

Name of Grassland: Hipla
Area: - 57-81 Hectar

| Sr. No. | Name of Visitor | Date | Observation | Recommendation | Remarks/sign. |
|---------|---|--------|---|--|--|
| 01 | Dr. S. A. Muralidhar Forest Expert 08475750201 03423424895 | 8-8-19 | ① Obscure the ex-situ ② Invaded by - <u>Euphorbia</u> <u>Ageratum</u> <u>Cassia</u> ③ Evergreen grasses - with Annual Perennial ④ water body ⑤ Wild fruit ⑥ Amazingly habitat ⑦ Plank grass | ① Weed eradication 2-3 times/year ② Weed management ③ Inspection path  ④ To prepare grassland management Register ⑤ Maintain grazing, browsing & Resting habitat ⑥ For prepare grassland Mgt Action plan | Good to habi- tated site - Grassland good potential  8-8-19 |

Extension Activity Report
**“Training to the Frontline Staff of
Forest Department for
Grasslands Management in
Protected Areas”**



Training by
Prof. G. D. Muratkar

Assist. Prof. & Head Dept. of Environmental Science
Arts, Science & Commerce College Chikhaldara
Dist. Amravati 444807 M. S.

Duration of Activity
2018-19 & 2019-20

Department of Environmental Science
Arts, Science & Comm. College Chikhaldara
Dist. Amravati 444807

Extension Activity Report

Department of Environmental Science

Academic Year 2018-19

1. Title of the Practice

Training to forest field staff for grasslands management in Protected Areas of India.

2. Goal

To train and motivate the forests field staff for grassland management and habitat improvement in Protected Areas.

Concept

To develop nutritive grasslands for herbivores in Protected Areas by Eradication of invasive weeds from grasses. To enrich the grasslands by broadcasting fodder grasses seeds in pre monsoon. Taller perennial, fodder grasses biomass management by cutting the grasses. To conduct field workshops for grasses seeds collection and weed eradication. To provide action plan for grassland management to field staff.

3. The Context

Grasslands are the green ground cover of protected areas in forest. The grasses are useful for grazing habitat of wildlife (Herbivores). The rehabilitated areas of Melghat Tiger Reserve and other tiger reserves have more cultivated lands, these lands are converted into the good grasslands by the field staff and forests labors.

The challenges in grassland management are woody species, brush woods, Weeds invasive. The eradication of weeds play vital role to increase the productivity of grasslands. Eradication of weeds, grasses seeds collection, enrichment of grasslands by seed sowing useful to develop and manage the good nutritive grasslands. The regular field guidance in grasslands in each season increases the confidence of field staff to develop good grasslands for the herbivores and works for habitat improvement and maintain prey predator relationship.

As per the request and invitation by Principle Chief Conservator of Forest and Head of Forest Force Telangana State the field workshop was organized to restore the grasslands and enrichment in August 2018 and May 2019.

The field Workshops was organized for root level frontline staff and the forest officers.

Beneficiary

| Sr. No. | Name of State | Title of Activity | Beneficiary No. |
|----------------|---------------------------|--|---|
| 1 | Telangana State | To train and motivate the forests field staff for grassland management and habitat improvement | 100 Bit Guard , Range officers , DFO , CCF |
| 2 | Chhattisgarh State | To train and motivate the forests field staff for grassland management | Bit Guard , Range officers , DFO , CCF |

4. The Practice

The grassland development and management training practices in the field workshop are:

- Demarcation of grassland area by GPS
- Grasses identification
- Grasses seeds collection
- Weeds identification and eradication
- Seeds drying
- Seeds broadcasting technique to staff.
- Grasses plot management : Weeding , Demarcation , inspection path , monitoring
- Interconnection of grasslands
- Brushwood cutting in grasslands & along roadside areas

5. Evidence of Success

- A) Developed the good grasslands for herbivores.
- B) Field staff gets confidence to manage the grasslands.
- C) Increase in the density of herbivores.
- D) Habitats : Grazing , Browsing improved.
- E) In relocated areas of the tiger reserves the cultivated lands are converted in to good grasslands.

6. Problems Encountered and Resources Required

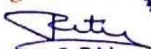
Funding by state government to the forest department for grasslands management inadequate. Grasslands Management is time bound program.

The grassland management practices includes

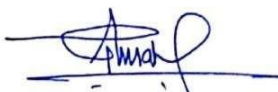
1. To give the field training to the forests field staff in the natural grasslands and relocated areas of the Protected Areas in each season of the year.
2. To know the exact area of grassland year wise by demarcation of grassland area by GPS.
3. Grasses identification training to field staff by local names and scientific names.
4. Weeds identification with local names and their flowering season.
5. Browsing species identification with local names.
6. Field training to collect the grasses seeds and wild legumes seeds.
7. Weed eradication programme two times in a year
8. Grasslands enrichment by seed broadcasting in May - June season.
9. Grasses biomass management practices in mosaic pattern.
10. Wild fruit trees identification and addition in relocated areas.
11. Complete training programmes are organized by the CCF & Field Director of the respective Tiger Reserves in each season.

The practices in the field

Kawal Tiger Reserve, Telangana State


PRINCIPAL
**Art, Science & Commerce
College, Chikhaldara**




(Prof. S. S. Munalkar)

32

Management Practices (Plan for the Development of grasslands)

- Collection and burning of weed species. (May)
- Addition of Browsing bamboo species along the boundaries of village area. (June- July)
- Addition of wild fruit trees by grid line randomly. (July)
- Addition of annual / perennial palatable grasses in plough areas by seed broadcasting. (Duration : May – 25th to 30th)
- Management of natural water bodies by de-siltation.
- Weed Eradication programme : 1) June – July for new weed comers. 2) September – October : weed removal before flowering stages. 3) December – January : removal of succulent weeds .
- Seed collection of wild legumes.
- Weed removal: for continuous three years in proper period which will be useful for reduction of weed species.
- Management of Cuscutareflexa, Cucurbits form relocated sites in premonsoon period.
- Use of natural compost of the villagers in grasslands.
- On priority firstly: Manage the house places of the villages in which the weeds are on large percentage.
- Prepare the grass seed bank of two hectares by fence to develop the grass seed plot.
- After relocation : collect the grass seeds from the different locations in November – December , and broad cast the seeds in next pre monsoon period.

Appreciation

P.K. JHA, I.F.S.
 Principal, Chief Conservator of Forests,
 (Head of Forest Force)



Address: B-10/1, Sahakar Road,
 Pune-411 004, India
 Email: prk@mahaforest.gov.in
 91 20 2622 1941
 91 20 46 32 4774

SG.NO. POC/IMP/2 & CR/W/TS/2018, DATED:22-07-2018

To,

Subj: Letter of appreciation

On behalf of Maharashtra State Forest Department, I place on record the appreciation to Prof. G.D. Murshakar for the invaluable contribution made by him towards improvement of grassland management practices in both Protected Areas and outside Protected Areas in Maharashtra State during last one year. During the said period, he has visited forest model landscape and Saval Tiger Reserves and allowed, sanctioned & sanctioned funds and conducted field training and workshops involving forest officers from the ranks of Forest Post Officers to Conservator of Forests / Field Directors on the grassland management, field square identification, grass seed collection and seed stabilization. Because of his involvement, viable storage has been initiated in the different grasslands spread over in the Protected Areas and Reserve Forests and we express our gratitude and acknowledge the services rendered by him.


(PRASHANT KUMAR JHA)
 Executive Chief Conservator of Forests,
 (Head of Forest Force) &
 Chief Wildlife Warden,

To:
 The Principal,
 Arts Science and Commerce College,
 Chikhaldara, Amravati District,
 Maharashtra State - 444 807

Sanjay Kumar Shukla
 Chief Conservator of Forests & Field Director



KANHA TIGER RESERVE
 Kanha (S.P.) 481501
 Phone: 0761 257601, 257602, 257603
 Fax: 0761 257604 (C), 4 611-4621222
 E-mail: kanha@mahaforest.gov.in
 www.mahaforest.gov.in
 www.kanha.org

To,

Prof. G.D. Murshakar
 Head of the Department, Environment Science
 Arts, Science and Commerce College, Chikhaldara
 Amravati (Maharashtra) - 444807

Subj: Appreciation of Services Rendered to Grassland Management in the Kanha TR.

This is with great pleasure that I acknowledge and extremely appreciate your technical guidance for the development of grasslands in the Kanha Tiger Reserve. An earnest appreciation of central India, you have been visiting Kanha Tiger Reserve to share your experience of grassland management with officers' staff of the tiger reserve, and to train them in the recovery and improvement of this important habitat type upon which depends a large population of ungulates of different species.

Your recent visit, in September and November, 2016, in the protected area and interaction with Kanha management have considerably added to our understanding of the management of grassland habitat. I hope that in future also you will lend us the tremendous support for the cause of wildlife conservation in the tiger reserve.


(Sanjay Kumar Shukla)
 Field Director
 Kanha Tiger Reserve

Appreciation

Puneet Girdhar, IPS
Principal Chief Conservator of Forests
(Wildlife), Bangalore



Office : 080-23345846
Fax : 080-23346389
E-mail : pccf@kfs.org
AranyaBhavan, 2nd Floor,
18th Cross, Malleshwaram,
Bangalore-560 005
Date: 25-02-2018

No. PCCF(WL)/BI/CN/2017-18

To,
Prof. G. S. Murawkar,
Head of Dept. Environmental Science,
Arts, Science & Commerce College, Chikaldhara,
Amenadi,
Maharashtra-444807.

Sir,

Subj: Appreciation for grassland improvement work in protected areas of Karnataka State.


This is to acknowledge with gratitude your immense contribution to the capacity building of our field as well as supervisory staff of the many protected areas for management and improvement of the grass lands.

The grasslands are an important component of the food pyramid of the PAs. Therefore, personally I feel that the increase in tiger numbers in E.R.T, Nagarhole & Dandeli in Karnataka in recent years can be attributed partly to your efforts.

I have no words to thank you for taking out your time to visit not only Tiger Reserves but also the lesser known sanctuaries and natural parts of the State multiple times in a year to train the staff and follow up on their progress on the ground. It has helped the staff in identification of palatable grasses and timely eradication of weeds, thereby constantly improving the quality of the grass lands. The training manual prepared by you will go a long way in further improving their capacity.

Once again we are grateful to you for your efforts and time and hope that you will continue to be associated with our protected areas in future also.

Yours faithfully,


Principal Chief Conservator of Forests
(Wildlife) Bangalore.



Training to Forest Bit Guards for Grasslands Management



Training to Forest Bit Guards for Grasslands Management



Training to Forest Bit Guards for Grasslands Management



Training to Forest Bit Guards for Grasslands Management



Guidance to Forest Staff by Lecture



Extension Activity Report

Department of Environmental Science
Academic Year 2017-18

1. Title of the Practice

Training to forest frontline field staff for grasslands management and habitat management in Protected Areas of India.

2. Goal

To train and motivate the forests field staff for grassland management and habitat improvement in Protected Areas.

Concept

To develop nutritive grasslands for herbivores in Protected Areas by Eradication of invasive weeds from grasses. To enrich the grasslands by broadcasting fodder grasses seeds in pre monsoon. Taller perennial, fodder grasses biomass management by cutting the grasses. To conduct field workshops for grasses seeds collection and weed eradication. To provide action plan for grassland management to field staff.

3. The Context

Grasslands are the green ground cover of protected areas in forest. The grasses are useful for grazing habitat of wildlife (Herbivores). The rehabilitated areas of Melghat Tiger Reserve and other tiger reserves have more cultivated lands, these lands are converted into the good grasslands by the field staff and forests labors.

The challenges in grassland management are woody species, brush woods, Weeds invasive. The eradication of weeds play vital role to increase the productivity of grasslands. Eradication of weeds, grasses seeds collection, enrichment of grasslands by seed sowing useful to develop and manage the good nutritive grasslands. The regular field guidance in grasslands in each season increases the confidence of field staff to develop good grasslands for the herbivores and works for habitat improvement and maintain prey predator relationship.

As per the request and invitation by Principle Chief Conservator of Forest and Head of Forest Force Telangana State the field workshop was organized to restore the grasslands and enrichment in August 2018 and May 2019.

The field Workshops was organized for root level frontline staff and the forest officers.

Beneficiary

| Sr. No. | Name of State | Title of Activity | Beneficiary No. |
|---------|-----------------|--|---|
| 1 | Telangana State | To train and motivate the forests field staff for grassland management and habitat improvement | 40 Bit Guard , Range officers , DFO , CCF and field Director Saheb |
| 2 | Karnataka State | To train and motivate the forests field staff for grassland management | 35-Bit Guard , Range officers , DFO , PCCF |
| 3 | Madhya Pradesh | To train and motivate the forests field staff for grassland management in Protected Areas of Madhya Pradesh –Satpuda Tiger reseve , Bandhavgad Tiger Reserve , Pench Tiger Reserve | 68 Bit Guard , Range officers , DFO , CCF and Field Director saheb |

4. The Practice

The grassland development and management training practices in the field workshop are:

- Demarcation of grassland area by GPS
- Grasses identification
- Grasses seeds collection

- Seeds broadcasting technique to staff.
- Grasses plot management : Weeding , Demarcation , inspection path , monitoring
- Interconnection of grasslands
- Brushwood cutting in grasslands & along roadside areas

5. Evidence of Success

- A) Developed the good grasslands for herbivores.
- B) Field staff gets confidence to manage the grasslands.
- C) Increase in the density of herbivores.
- D) Habitats : Grazing , Browsing improved.
- E) In relocated areas of the tiger reserves the cultivated lands are converted in to good grasslands.

6. Problems Encountered and Resources Required

Funding by state government to the forest department for grasslands management inadequate. Grasslands Management is time bound program.



G. D. Muratkar
Asst. Professor & H.O.D.
Deptt. of Environmental Science
Arts, Science & Commerce College,
Chikhaldara




PRINCIPAL
Art, Science & Commerce
College, Chikhaldara

Grassland Management Plan For Protected Areas of Telangana State

G. D. Muratkar(Grass expert)

Grasslands Restoration & Management Plan

- **May** : Geo-mapping of grassland areas.
- **June** : Brushwood identification and uprooting or cutting in proper way.
- **May 25 -31 Or June 1-12th** : **Grasses seeds broadcasting. (Nutritive grasses)**
- **July second week** : first de-weeding in proper way with identification.
- **August** : observation of grasses seeds germination.
- **September** : IInd phase of de weeding (Weed eradication should be before fruit formation)
- **October-November** : grasses identification & herbarium preparation.
- **September** : Wild leguminous plants identification.
- **November - December** : useful grasses seeds collection. These grasses seeds are useful for restoration practices after Lantana and Brush woods plants species eradication.
- **December- January** : grasses seeds drying, labelling and storages in Protection Camps areas.
- **December** : Identification of wild fruit trees and browsing plants species by plants expert.
- **November- December** : After rainy season management of all natural & artificial water bodies. (Removal of aquatic weeds, aquatic unwanted algal flora, remove terrestrial weeds) check eutrophication in water ponds.

Monitoring of grasslands in each season and its documentation by forests guard and deputy ranger staff of the protected area.

- To prepare grasslands observation and management register in each range of the Tiger Reserve.

Extension Activity Report

Department of Environmental science

**Arts , Science & Commerce College Chikhaldara
Dist. Amravati**



**Training to the Front-line Staff
For Grassland Management in
Protected Areas**

**Academic Year
2017-18**

The field Workshops was organized for root level frontline staff and the forest officers.

Beneficiary

| Sr. No. | Name of State | Title of Activity | Beneficiary No. |
|----------------|------------------------|--|---|
| 1 | Telangana State | To train and motivate the forests field staff for grassland management and habitat improvement | 40 Bit Guard , Range officers , DFO , CCF and field Director Saheb |
| 2 | Karnataka State | To train and motivate the forests field staff for grassland management | 35-Bit Guard , Range officers , DFO , PCCF |
| 3 | Madhya Pradesh | To train and motivate the forests field staff for grassland management in Protected Areas of Madhya Pradesh –Satpuda Tiger reseve , Bandhavgad Tiger Reserve , Pench Tiger Reserve | 68 Bit Guard , Range officers , DFO , CCF and Field Director saheb |

Appreciation

P. K. JHA, I.F.S.
Principal Chief Conservator of Forests
(Head Of Forest Force)



Address: Bhilwara, Rajasthan
Pin-334001 - 332 024 T.S.
Office : 082 2322 484
Fax : 082 2322 391
Mail : p.k.jha@forest.gov.in
p.k.jha@forest.gov.in

RC.NO. PCC/PMF/2 & CH/W/T/S/2016, DATED:22-07,2018

Re,

Subject: Letter of appreciation

On behalf of Telangana State Forest Department, I place on record the appreciation to Prof. G.D. Muratkar for the invaluable contribution made by him towards improvement of grassland management practices in both Protected Areas and outside Protected Areas in Telangana State during last one year. During the said period, he has several times visited Amrabad and Kowal Tiger Reserves and different Sanctuaries & National Parks and conducted field training and workshops involving forest officers from the cadre of forest beat officers to Conservator of Forests / Field Directors on the grassland management, wild square identification, grass seed collection and weed eradication. Because of his involvement, visible change has been noticed in the different grasslands spread over in the Protected Areas and Reserve Forests and we express our gratitude and acknowledge the services rendered by him.

Prashant Kumar Jha
(PRASHANT KUMAR JHA)
Principal Chief Conservator of Forests
(Head of Forest Force) &
Chief Wildlife Warden,

To:
The Principal,
Arts Science and Commerce College,
Chikhalthara, Amravati District,
Maharashtra 431017

Sanjay Kumar Shukla
Chief Conservator of Forests & Field Director



KANHA TIGER RESERVE
Mandla (M.P.) 487881
☎ 07742 25126 (24) & 241-8420000
Fax 07742 25126 (24) & 241-8420000
E-mail: shukla@kanha.org
shukla@kanha.org

To,

Prof. G.D. Muratkar
Head of the Department, Environment Science
Arts, Science and Commerce College, Chikhalthara
Amravati (Maharashtra) - 431017

Re: Appreciation of Services Rendered to Grassland Management in the Kanha TR.

This is with great pleasure that I acknowledge and internally appreciate your technical guidance for the development of grasslands in the Kanha Tiger Reserve. An eminent agronomist of central India, you have been visiting Kanha Tiger Reserve to share your experience of grassland management with officers/ staff of the tiger reserve, and to train them in the necessity and improvement of this important habitat type upon which depends a huge population of organisms of different species.

Your recent visits, in September and November, 2016, to the protected area and interaction with Kanha management have considerably added to our understanding of the management of grassland habitat. I hope that in future also you will lend us this tremendous support for the cause of wildlife conservation in the tiger reserve.



Sanjay Kumar Shukla
Field Director
Kanha Tiger Reserve

Appreciation

Funaji Srihar, IPS
Principal Chief Conservator of Forests
(Wildlife), Bangalore



Office : 080-23345846
Fax : 080-23346389
E-mail: pccwf@gmail.com
Aranyalharan, 2nd Floor,
18th Cross, Malleshwaram,
Bangalore-560 003
Date: 23-02-2018

No. PCCF(WL)/BI/CR-7/2017-18

To,
Prof. G. D. Muratkar,
Head of Dept. Environmental Science,
Arts, Science & Commerce College, Chikaldihara,
Amaravati,
Maharashtra-444807

Sub: Appreciation for grassland improvement work in protected
areas of Karnataka State.
* * *

This is to acknowledge with gratitude your immense contribution to the capacity building of our field as well as supervisory staff of the many protected areas for management and improvement of the grass lands.

The grasslands are an important component of the food pyramid of the PAs. Therefore, personally I feel that the increase in tiger numbers in E.R.T, Nagarhole & Dandeli in Karnataka in recent years can be attributed partly to your efforts.

I have no words to thank you for taking out your time to visit not only Tiger Reserves but also the lesser known sanctuaries and national park of the State multiple times in a year to train the staff and follow up on their progress on the ground. It has helped the staff in identification of palatable grasses and timely eradication of weeds, thereby constantly improving the quality of the grass lands. The training manual prepared by you will go a long way in further improving their capacity.

Once again we are grateful to you for your efforts and time and hope that you will continue to be associated with our protected areas in future also.

Yours faithfully,


Principal Chief Conservator of Forests
(Wildlife) Bangalore.



EXTENSION

Memorandum of Understanding

Memorandum of Understanding in Between Field Director and Chief Conservator of Forests Melghat Tiger Reserve, Amravati And Principal Arts, Science & Commerce College, Chikhaldara Talq, Chikhaldara, Dist Amravati 444807.

Being Party of the First Part : Field Director and Chief Conservator of Forests Melghat Tiger Reserve , Amravati

Being Party of the Second Part : Principal Arts, Science & Commerce College , Chikhaldara Talq, Chikhaldara, Dist Amravati Where as Sipta Shikshan Prasarak Mandal , a public trust duly registered under the provision of Bombay Public Trust Act, 1959, is running the Arts, Science and Comm. College Chikhaldara offers various courses in Arts, Commerce and Science streams for the students and also has expert faculties working in the college for imparting education to the students. And Where AS Chikhaldara comes under the Melghat tribal region, which is mainly a forest area having rich biodiversity. The Party of the First Part requires the Honorary Consultation Services and Scientific, Technical support from the Department of Environmental Science and Botany in the field of 1) Identification of Grasses of Melghat Tiger Reserve, 2) Classification of grasses in to Palatable and Non Palatable, 3) Weeds identification, 4) Wild leguminous plants identification 5) Grasses Seeds Collection, 6) Grassland Management Practices for the herbivores 7) Preparation of Action Plan for Grassland Management. And Where As Prof. G. D. Murarkar, Head Dept. of Environmental Science of the college offered his selfless valuable consultation services and technical support in grassland management practices for the relocated sites of the Melghat Tiger Reserve from the year 2013 to current period of the year 2016-17. The Field Director and Chief Conservator of the Melghat Tiger Reserve, Amravati requested to provide the expertise services of Prof. G. D. Murarkar on honorary basis. And Where As looking to the nature of work and its benefit to the forest and grassland ecosystem, food chain for herbivores and carnivores in general the Principal, Arts, Science & Commerce College, Chikhaldara accepted the request of the Hon.ble Field Director and Chief Conservator of Melghat Tiger Reserve.

Prof. G. D. Murarkar and his team will carry out the following training programmes for the field staff of the Melghat Tiger Reserve in the suitable season specially in Sunday, Holidays and vacations without any remuneration.

- 1) Grasses identification, 2) Weeds identification 3) Wild Leguminous plants identification 4) Seeds collection, storage and broadcasting 5) Enrichment of grasslands 6) Field workshop for field staff 7) Ecological Impact Assessment of Relocated Villages sites of MTR.

Date: 28/12/2016

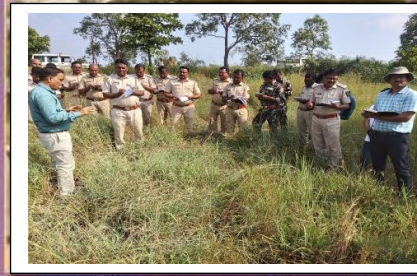
Principal
Arts, Science and Commerce College
Chikhaldara



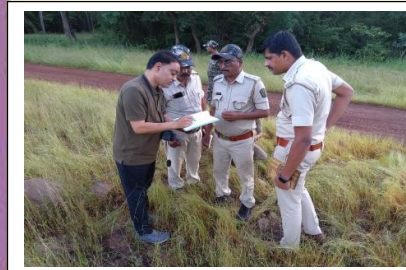
Field Director and Chief Conservator of Forests
MELGHAT TIGER RESERVE, AMRAVATI
Amravati



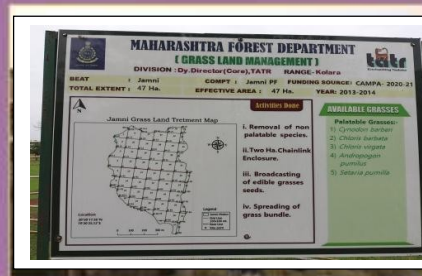
Training to Forest Bit Guards for Grasslands Management



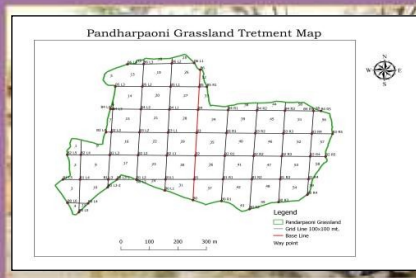
Training to Forest Bit Guards for Grasslands Management



Training to Forest Bit Guards for Grasslands Management



RESULTS



Intervention results



Sipna Shikshan Prasarak Mandal, Amravati
Arts, Science & Commerce College, Chikhaldara, Distt. Amravati
Department of Industrial Chemistry
2017-2018

Name of the extension activity:- "Save Electricity"

Objective:-

- To create awareness in order to save electricity.
- To encourage students to become good citizens of nation through them.

Number of participant – 400


Duration – 01/07/2017 to 01/08/2018

Brief Report:-

The department of Industrial Chemistry was carried out extension activity on Save Electricity in college campus. Students worked on the save electricity by switch off light and electric instrument punctually. Also display slogan on save electricity i.e. "Do Right Save Light"; "Save light, get hopeful life"; "Keep the future bright, "Turn off the light". This way department of Industrial Chemistry was carried out extension activity on Save Electricity in college campus. It is very beneficial to college to encourage about save electricity. Energy audit reflect result of save energy in college.


Acting Principal
Art, Science & Commerce College,
Chikhaldara, Dist. Amravati




A. F. Bobade
Asst. Professor & H.O.D. [Industrial Chemistry]
Arts, Science & Commerce College,
Chikhaldara

Sipna Shikshan Prasarak Mandal, Amravati

Arts, Science & Commerce College, Chikhaldara, Distt. Amravati

**Department of Industrial Chemistry
2018-2019**

Name of the extension activity:- “Save Electricity”

Objective:-

- **To create awareness in order to save electricity.**
- **To encourage students to become good citizens of nation through them.**

Number of participant – 300

Duration – 01/07/2018 to 01/05/2019


Brief Report:-

The department of Industrial Chemistry was carried out extension activity on Save Electricity in college campus. Students worked on the save electricity by switch off light and electric instrument punctually. Also display slogan on save electricity i.e. “Do Right Save Light”; “Save light, get hopeful life”; “Keep the future bright, “Turn off the light”.

This way department of Industrial Chemistry was carried out extension activity on Save Electricity in college campus. It is very beneficial to college to encourage about save electricity. Energy audit reflect result of save energy in college.


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Chikhaldara, Dist. Amravati




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Asst. Professor & H.O.D. (Industrial Chemistry)
Arts, Science & Commerce College,
Chikhaldara

Sipna Shikshan Prasarak Mandal, Amravati's

Arts, Science & Commerce College, Chikhaldara, Distt. Amravati

Department of Industrial Chemistry
2019-2020

Name of the extension activity:- "Save Electricity"

Objective:-

- To create awareness in order to save electricity.
- To encourage students to become good citizens of nation through them.

Number of participant – 300

Duration – 01/06/2019 to 01/08/2020

Brief Report:-

The department of Industrial Chemistry was carried out extension activity on Save Electricity in college campus. Students worked on the save electricity by switch off light and electric instrument punctually. Also display slogan on save electricity i.e. "Do Right Save Light"; "Save light, get hopeful life"; "Keep the future bright, "Turn off the light".

This way department of Industrial Chemistry was carried out extension activity on Save Electricity in college campus. It is very beneficial to college to encourage about save electricity. Energy audit reflect result of save energy in college.


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Chikhaldara, Distt. Amravati




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Arts, Science & Commerce College,
Chikhaldara

Sipna Shikshan Prasarak Mandal, Amravati's

Arts, Science & Commerce College, Chikhaldara, Distt. Amravati

Department of Industrial Chemistry
2020-2021

Name of the extension activity:- "Save Electricity"

Objective:-

- To create awareness in order to save electricity.
- To encourage students to become good citizens of nation through them.

Number of participant – 350

Duration – 01/07/2020 to 01/08/2021


Brief Report: -

The department of Industrial Chemistry was carried out extension activity on Save Electricity in college campus. Students worked on the save electricity by switch off light and electric instrument punctually. Also display slogan on save electricity i.e. "Do Right Save Light"; "Save light, get hopeful life"; "Keep the future bright, "Turn off the light".

This way department of Industrial Chemistry was carried out extension activity on Save Electricity in college campus. It is very beneficial to college to encourage about save electricity. Energy audit reflect result of save energy in college.


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Arts, Science & Commerce College,
Chikhaldara

Sipna Shikshan Prasarak Mandal, Amravati
Arts, Science & Commerce College, Chikhaldara, Distt. Amravati
Department of Industrial Chemistry
2021-2022

Name of the extension activity:- “Save Electricity”

Objectives: -

- **To create awareness in order to save electricity.**
- **To encourage students to become good citizens of nation through them.**

Number of participant – 350

Duration – 01/07/2021 to 01/08/2022


Brief Report: -

The department of Industrial Chemistry was carried out extension activity on Save Electricity in college campus. Students worked on the save electricity by switch off light and electric instrument punctually. Also display slogan on save electricity i.e. “Do Right Save Light”; “Save light,get hopeful life”; “Keep the future bright, “Turn off the light”.

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Chikhaldara, Dist. Amravati




A. P. Bobade
Asst. Professor & H.O.D. [Industrial Chemistry]
Arts, Science & Commerce College,
Chikhaldara

Sipna Shikshan Prasarak Mandal, Amravati's

Arts, Science & Commerce College, Chikhaldara, Distt. Amravati

Department of Industrial Chemistry

Name of the extension activity: - "Save Electricity"

Posters and Slogan



Arts, Science & Commerce College, Chikhaldara
Department of Chemistry
Extension Activity
Academic Year- 2021-22
Title of the Activity: Plastic Free Environment

Date / period: 13th May 2022
Venue: Seminar hall
Objectives of program: To aware about polythene plastic bag pollution.

Making our environment an eco-friendly zone.

Brief Report: Plastics do not undergo degradation, stay in the soil for many years, which affects soil fertility and degrades the soil quality. When plastic enter the drainage and sewerage system, they block the pipes and the drains causing waterlogging. The improperly disposed of food bags, when eaten by animals, cause stomach and intestine related diseases which even lead to suffocation and death. Plastic items find their way to the river and other water bodies, which are then swallowed by fish, seabirds, and other marine species. The waste from the plastic manufacturing industry is thrown directly into the water bodies, thus affecting the chemical property of water, causing hazards on a very large scale. Proper disposal and usage of plastic discards can reduce these problems. A set of regulations should necessarily be followed to stop these problems. There are primarily three ways of managing plastics: • Reduce • Reuse • Recycle

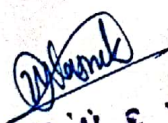
In the academic session 2021-22 Department organized Extension Activity, in which we aware our students about plastic pollution and asked them about reuse of plastic bottles for planting the plant. The duration of this activity was three months. Students planted the sapling in plastic bottle, observe them by taking care and after grown they submitted it on the date they asked.

The program conducted on 13th May 2022 under the presidency of Honble Principal Dr. R. S. Jaipurkar. Dr. U. S. Wasnik in her speech gave brief introduction about the Extension activity of the department. Dr. R. S. Jaipurkar sir addressed the students and insist students to avoid use of single use plastic. The program ended by vote of thanks.


Dr. D.S. Hedao and students of Chemistry were present for the program.

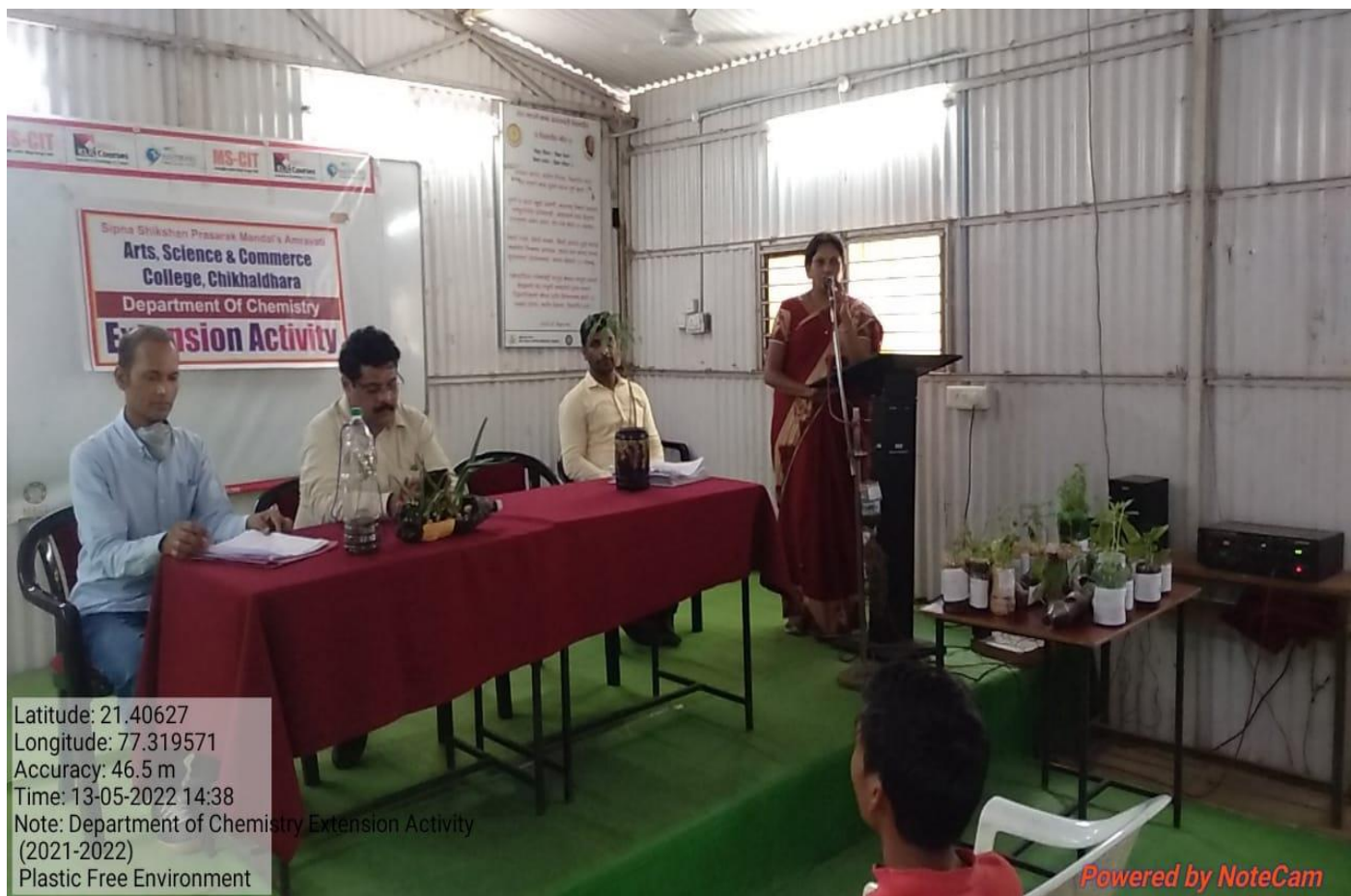
Number of beneficiaries : 52

Feedback link: <https://forms.gle/7dSAjqJg96c4vqUt8>


DR. U. S. WASNIK
Asst. Prof. & H.O.D. (Chemistry)
Arts, Science & Comm. College
Chikhaldara




PRINCIPAL
Art, Science & Commerce
College, Chikhaldara



Dr. U.S. Wasnik, HOD , gave brief introduction about the Extension activity of the department



Hon'ble Principal Dr. R. S. Jaipurkar sir addressed to the students



Students of Chemistry



GROUP PHOTO WITH SAPLINGS

Report of the Activity

2020-21

Extension Activity: Plastic Free Environment

Title: Awareness about plastic bags pollution

Date : 28th August 2021

Venue: Online Google Platform

Objectives of program : To aware about polythene plastic bag pollution

Brief summary of the program: In the academic session 2020-21 due to COVID-19 Pandemic situation extension activity program conducted on online google platform dated 28th August 2021, Saturday at 2.00 pm.

Dr. Usha S. Wasnik shared ppt and focused on how plastic polythene bags create pollution.

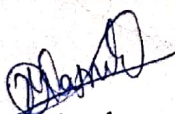
Speaker highlighted that the pollution in environment is very big problem for human beings as well as animals, birds and sea creatures also. Human activities cause plastic pollution and is one of the most pressing environmental issue.

Madam in her speech advised to avoid single use plastic, if you go for shopping remember to take a cloth bag.

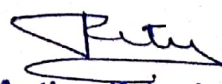
Dr. D.S. Hedao anchored the programme and ended by vote of thanks given by Mr. Rahul P. Rahate

Number of beneficiaries : 14

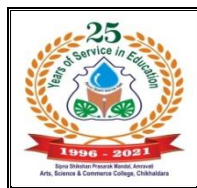
Link :- <https://meet.google.com/rbd-tvno-kzd>


Head
Deptt. of Chemistry
Arts, Science & Comm. College
Chikhaldara

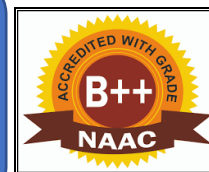



Acting Principal
Art, Science & Commerce College,
Chikhaldara, Dist. Amravati

Sipna Shikshan Prasarak Mandal, Amravati



Arts, Science & Commerce College,
Chikhaldara Distt. Amravati
Department Of Chemistry



3rd Cycle CGPA 2.77

Department of Chemistry
Extension Activity-
2020-21

" Plastic Free Environment"

Organize Lecture On

Awareness About Plastic Bags Pollution

Date :- 28th August 2021,

Saturday at 2.00 pm onwards

Live On Google Meet

Meeting Id :- <https://meet.google.com/rbd-tvno-kzd>



Speaker

Dr. Usha S. Wasnik

Assistant Professor

HOD, Dept. of Chemistry



Mr. R. P. Rahate

Assistant Professor

Dept. of Chemistry



Dr. D. S. Hedao








































Assistant Professor

Dept. of Chemistry

← About this call

People

Info

-  akash pathak  
-  Aniket Sonparote  
-  Anjali Jambekar  
-  Ashvini Guhe  
-  Bhushan Gahare  
-  Dnyanendra Shamrao ...  
-  kanchan Dhahikar  
-  Komal Dahikar  
-  Pragati hekade  
-  Rahul Rahate  
-  Sakshi Choudhary  
-  Sakshi Pundkar  
-  Usha Wasnik  



Arts, Science & Commerce College, Chikhaldara
Department of Chemistry
2019-20

Plastic Free Environment

Title of program conducted : *Information about Plastic pollution and awareness*
Date of program : 14th September 2019
Objectives of program : To inform about harm cause of plastic bags.
To aware about plastic bags pollution.

Number of beneficiaries : 55 Students


Brief summary of the program: In the academic year 2019-20 clippings on plastic bag pollution shown to Chemistry students of college, dated 14th Sep 2018 and aware them about harm effect of plastic bags on environment. Dr. U. S. Wasnik, Head Department of Chemistry gave important information about harm effects of plastic on human beings, animals and sea creatures. Students of B. Sc II Aniket Sonaprote and Pravav Munde showed the demonstration on making of paper bags by using old newspaper.


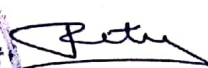
Ku. Samiksha Chorode anchored the program and Ku. Poonam Dukare ended it by vote of thanks.

Students also took oath regarding say no to plastic bags.



Dr. U. S. Wasnik, Assistant Professor, Head Department of Chemistry, addressed the students


Head
Deptt. of Chemistry
Arts, Science & Comm. College
Chikhaldara, Dist. Amravati



Acting Principal
Arts, Science & Commerce College
Chikhaldara, Dist. Amravati



Dr. U. S. Wasnik, Head, Department of Chemistry, addressed to the students



Arts, Science & Commerce College, Chikhaldara
Department of Chemistry
Extension Activity
2018-19

One Day Workshop

on

Recycled Newspaper Bags

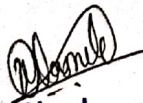
| | |
|------------------------------|--|
| Title of program conducted : | Recycled Newspaper Bags |
| Date of program : | 17 th December 2018 |
| Objectives of program : | To aware about plastic bag pollution. Reuse of waste newspaper. |
| Number of beneficiaries : | 95 students |

Brief summary of the program: In the academic year 2018-19 one day workshop on recycled newspaper bags organised for the students of chemistry under the extension activity *plastic free environment*.


The sole reason of undertaking this workshop is to make students understand the harm caused due to plastic bags and to encourage them to replace plastic bags with paper bags.

In this workshop Dr. Ku. S.N. Gupta, Associate Professor, Department of Chemistry Brijlal Biyani Science College, Amravati taught the students how to make paper bags and different articles out of newspaper. The students learn how to make paper bags from newspaper. Afterwards they signed with their name and their message and thereby spread the message of say no to plastics.

In this workshop students not just learn the art of making paper bag, they also learn the importance of recycling and how it can benefit for everyone.


Head
Deptt. of Chemistry
Arts, Science & Comm. College
Chikhaldara




Acting Principal
Arts, Science & Commerce College
Chikhaldara, Dist. Amravati



Dr. S. N. Gupta, Associate Professor, Brijlal Biyani Science College, Amravati addressed to the students



Students learn how to make newspaper bags



Students of Chemistry Department

Arts, Science & Commerce College, Chikhaldara
Department of Chemistry
2017-18


Plastic Free Environment
Extension Activity Report

- Title of program conducted : *Information about Plastic pollution and awareness*
Date of program : 9th Sept. 2017
Objectives of program : To inform about harm effect of plastic polythene bags.
To aware about plastic bags pollution.
Number of beneficiaries : 55 Students
Brief summary of the program :

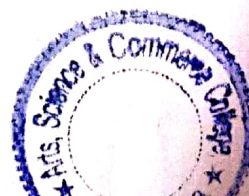
Department of chemistry organized Program on Plastic free Environment for students of B.Sc.I, dated 9th Sept. 2017, Saturday at time 10.30 to 11.30 am. in Seminar hall.

Dr. Ku U. S. Wasnik, Head and Assistant Professor , Dept. Of Chemistry share ppt on plastic bag pollution. Aware the students about how plastic polythene bags polluted the air when plastic bags burned they release toxic substances into air causing air pollution, also the harmful effect of plastic bags on human beings, animals and whole environment.

At the end of program all the students took oath that they not to use plastic bags and use only cotton bags & save earth.


Head
Deptt. of Chemistry
Arts, Science & Comm. College
Chikhaldara


Acting Principal
Art, Science & Commerce College
Chikhaldara Dist. Amravati





Dr. U.S. Wasnik addressed to the students



Students of Chemistry


Arts, Science & Commerce College, Chikhaldara


Report

Extension Activity

2017-2018

- Title of programme conducted : Rainwater Harvesting
- Date of programme : Throughout year
- Objectives of programme :
1. : Awareness in the society
 2. : Suggestion and guidance for construction of the water harvesting structures
- Number of beneficiaries : Approximate 1080 houses.
- Brief summary of the programme : The rainwater harvesting activity was carried out under the 'Swachha Bharat Swasth Bharat Abhiyan and as a departmental extension activity during academic session 2017-2018. During this session, the rainwater harvesting activity was carried out under the two main themes viz.,
- 1) Construction of rainwater harvesting structure
 - 2) Awareness in the society
- Rainwater harvesting structure was constructed by the B.Sc. II students in his own house/rent house. The total eight structures were constructed.
- The door to door and person to person awareness campaign was carried out by the B.Sc. III students in the Chikhaldara and surrounding villages. The total 1080 houses were visited by the students during this campaign.


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Art, Science & Commerce
College, Chikhaldara


Dr. R.S. Mankar
Asst. Professor (Geology)
Arts, Science & Commerce College
Chikhaldara

GLIMPSES OF THE ACTIVITY

CONSTRUCTED STRUCTURE AT CHIKHALDARA



DOOR TO DOOR AND PERSON TO PERSON CAMPAIGN AT VARIOUS VILLAGES



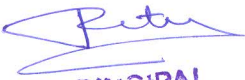
Arts, Science & Commerce College, Chikhaldara


Report

Extension Activity

2018-2019

- Title of programme conducted : Rainwater Harvesting
- Date of programme : Throughout year
- Objectives of programme :
1. : Awareness in the society
 2. : Suggestion and guidance for construction of the water harvesting structures
- Number of beneficiaries : Approximate 580 houses.
- Brief summary of the programme : The rainwater harvesting activity was carried out under the 'Swachh Bharat Swasth Bharat Abhiyan and as a departmental extension activity during academic session 2018-2019. During this session, the rainwater harvesting activity was carried out under the main themes viz., Awareness in the society. The door to door and person to person awareness campaign was carried out by the B.Sc. III students in the Chikhaldara and surrounding villages. Total 580 houses were visited by the students during this campaign


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College, Chikhaldara


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Asst. Professor (Geology)
Arts, Science & Commerce College
Chikhaldara

GLIMPSES OF THE ACTIVITY

DOOR TO DOOR AND PERSON TO PERSON CAMPAIGN AT VARIOUS VILLAGES



Arts, Science & Commerce College, Chikhaldara

Report

Extension Activity

2019-2020

- Title of programme conducted : Rainwater Harvesting
- Date of programme : Throughout year
- Objectives of programme :
1. : Awareness in the society
 2. : Suggestion and guidance for construction of the water harvesting structures
- Number of beneficiaries : Approximate 780 houses.
- Brief summary of the programme : The rainwater harvesting activity was carried out under the 'Swachh Bharat Swasth Bharat Abhiyan and as a departmental extension activity during academic session 2019-2020. During this session, the rainwater harvesting activity was carried out under the main themes viz., Awareness in the society. The door to door and person to person awareness campaign was carried out by the B.Sc. III students in the Chikhaldara and surrounding villages. The total 780 houses were visited by the students during this campaign


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Asst. Professor (Geology)
Arts, Science & Commerce College
Chikhaldara

GLIMPSES OF THE ACTIVITY

DOOR TO DOOR AND PERSON TO PERSON CAMPAIGN AT VARIOUS VILLAGES



Arts, Science & Commerce College, Chikhaldara


Report

Extension Activity

2020-2021

- Title of programme conducted : Rainwater Harvesting
- Date of programme : Throughout year
- Objectives of programme :
1. : Awareness in the society
 2. : Suggestion and guidance for construction of the water harvesting structures
- Number of beneficiaries : Approximate 194.
- Brief summary of the programme : The rainwater harvesting activity was carried out under the 'Swachh Bharat Swasth Bharat Abhiyan and as a departmental extension activity during academic session 2020-2021. During this session, the rainwater harvesting activity was carried out under the main themes viz., Awareness in the society. Due to pandemic situation, the online awareness program has been conducted on 22th March 2021 on the eve of world water day. The online program conducted through the Google form. The total 194 participant participated in this program throughout Maharashtra.
- Program Link : <https://forms.gle/smd1CfCaHGaq47MG7>



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Art, Science & Commerce
College, Chikhaldara



Dr. R.S. Mankar
Asst. Professor (Geology)
Arts, Science & Commerce College
Chikhaldara

Arts, Science & Commerce College, Chikhaldara

Report Extension Activity 2021-2022

- Title of programme conducted : Rainwater Harvesting
- Date of programme : Throughout year
- Objectives of programme :
1. : Awareness in the society
 2. : Suggestion and guidance for construction of the water harvesting structures
- Number of beneficiaries : Approximate 600.
- Brief summary of the programme : The rainwater harvesting activity was carried out under the 'Swachh Bharat Swasth Bharat Abhiyan and as a departmental extension activity during academic session 2021-2022. During this session, the rainwater harvesting activity was carried out under the main themes viz., Awareness in the society. Due to pandemic situation, the online and Door Door campaigning awareness program has been conducted during August to December 2021. The online program conducted through the Google form. The total 600 houses were visited by the students during this campaign.


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Art, Science & Commerce
College, Chikhaldara

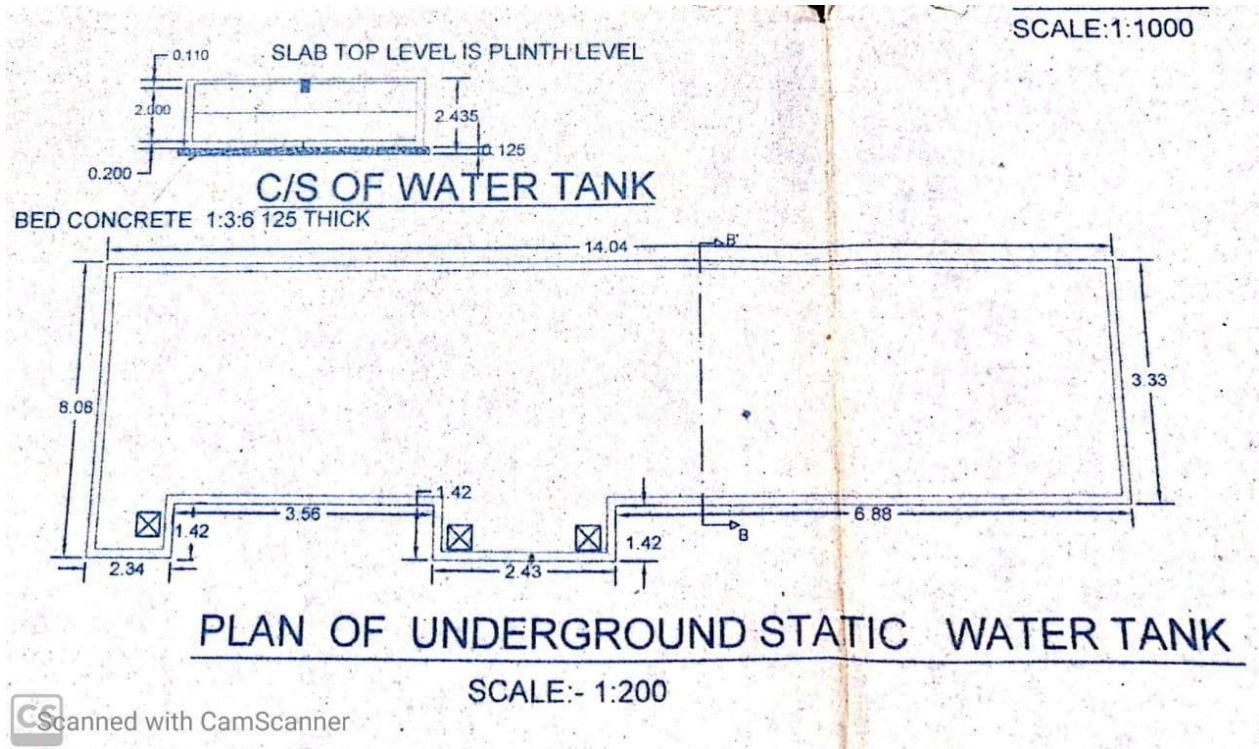

Dr. R.S. Menkar
Asst. Professor (Biology)
Art, Science & Commerce College
Chikhaldara

GLIMPSES OF THE ACTIVITY

DOOR TO DOOR AND PERSON TO PERSON CAMPAIGN AT VARIOUS VILLAGES



**Sipna Shikshan Prasark Mandal Amravati's
Arts, Science and Commerce College, Chikhaldara Dist. Amravati
Environmental Consciousness and Sustainability -Rain Water Harvesting**



Map of the Tank of Rain water harvesting at college campus –Girls Hostel Building



Water conservation facility available at college campus –Girls Hostel Building



Water conservation and distribution facilities available at college campus – Girls Hostel Building

Extension Activity

Report on

“Census of Heritage Trees of Chikhaldara Area”



By:

Department of Environmental Science

Academic Year 2021-22

Extension Activity

Report on

Census of Heritage Trees of Chikhaldara Area

By:

Department of Environmental Science

Academic Year 2021-22

1. Title

Census of Heritage Trees of Chikhaldara Area

2. Goal / Objectives :

- To train college students for tree identification.
- To train college students for how to identify trees.
- To count the heritage trees of ChikhaldaraMunicipalCopuncil Area.
- To know the concept of Heritage trees.
- To know the criteria for heritage trees.
- Conservation of heritage trees by demarcation.

Participants in the field workshop

| Sr. No. | Name of student participated in extension activity | Duration | Beneficiaries | Beneficiary Number |
|---------|---|---------------------------|---|---|
| 1 | Ku. Renuka M. Bharate M. Sc. Part II Mr . C. M. Jambhekar | December 2021 toMay 2022 | CEO , Muncipal Council Chikhaldfara , Dist. Amravati , Maharashtra State | 02 |
| 2 | Mr. SachinChawake Nodal Officer Heritage tree Census | December 2021 to May 2022 | Nodal Officer Heritage tree Census | Complete population of Chikhaldara hill station |

Concept

Chikhaldara Hill Station :Chikhaldara is 'Class C category' ULB having Population less than 40,000. • As of 2011 records, the total population of Chikhaldara has reached 5158. A decadal growth rate of about 9.49% was witnessed for a period between 2001 to 2011. Table below shows the population growth trend of Chikhaldara. • As per census records, the municipal area of Chikhaldara is approximately 3.94 Sq. Km i.e. 394 Hectare. Considering the census data of 2011, the Population Density is approximately 13 Person per hectare. •

Significant floating population is witnessed in the town as Chikhaldara is famous hill station. Although tourists come throughout the year with the peak in the month of July and August. As per data available with ULB floating population is 1,66,890 in year 2017 and is at peak in the month of July (30,473) and August (29,209). At per Census 2011, the town has 948 residential households / premises distributed into 18 wards • As per ULB records, about 569 Non-residential Premises are existing in the ULB jurisdiction. • The total road length in Town is 24.5 km. Out of the total road lengths, 73.88 % roads are width more than 3.5m, 24.9 % roads are width less than 3.5m. About 81.63 % roads are pucca roads and remaining 17.14 % are kutchra in nature. • The ULB currently produces total 0.74 MLD water. Out of the total water produced, 0.25 MLD water comes from Ground water sources (34%) and 0.49 MLD water comes from Surface water sources (66 %).

What are heritage trees?

Heritage Trees are trees that have been formally recognized by City Council for their unique size, age, historical or horticultural significance. Under the proposed amendment, a tree with an estimated age of 50 years or more shall be defined as a heritage tree. It may belong to specific species, which will be notified from time to time. Experts believe that in addition to the age, the state climate change department (which will be implementing the Tree Act), should also consider a tree's rarity, its botanical, historical, religious, mythological and cultural importance in defining a heritage tree. The local Tree Authority will have to ensure tree census to be carried out every five years along with counting of heritage trees. There are a range of criteria that designate a tree as a heritage tree. These attributes—both material and non-material—makes the tree stand out. The material attributes could be age or size of the tree. It could also be the result of the form or shape of the tree. Further, it could be that the tree is a rare species or a tree at risk of being lost. The non-material criteria relate to cultural and aesthetic aspects. It could be that the tree has a historical or cultural association either with a person, an event or a place. It could also be a tree associated with myth or folklore. A comprehensive definition of a heritage tree by Aird (2005) is given below:

“A notable specimen because of its size, form, shape, beauty, age, color, rarity, genetic constitution, or other distinctive features; a living relic that displays evidence of cultural modification by native or non-native people, including strips of bark or knot-free wood removed, test hole cut to determine soundness, furrows cut to collect pitch or sap, or blazes to mark a trail; a prominent community landmark; a specimen associated with a historic person, place, event or period; a representative of a crop grown by ancestors and their successors that is at risk of disappearing from cultivation; a tree associated with local folklore, myths, legends or traditions; a specimen identified by members of a community as deserving heritage recognition.”

Under the proposed amendment, a tree with an estimated age of 50 years or more shall be defined as a heritage tree. The Maharashtra government will make amendments to the Maharashtra (Urban Areas) Protection and Preservation of Trees Act of 1975, to introduce provisions for the protection of 'heritage trees'.

Many of the heritage trees especially the Ficus are keystone species in the environment. **The old trees serve as important roosting, nesting sites or as a food source for many species of wildlife.**

The major criteria for heritage tree designation are **age, rarity, and size, as well as aesthetic, botanical, ecological, and historical value.** Heritage tree ordinances are developed to place limits upon the removal of these trees.

Heritage trees in India

In Bengaluru city, the capital of Karnataka, is situated a 150 feet tall New Caledonian Pine or Cook Pine (also known in Asia as the Christmas tree) (*Araucaria columnaris*).

1. In Bengaluru is the DoddaAalada Mara or the Big Banyan (*Ficus benghalensis*) estimated to be around 400 years old and whose canopy supported by aerial roots extends over 4 acres.
2. There are other famous banyans across the country such as the 550-year-old banyan in the BalSaman Palace in the desert city of Jodhpur, Rajasthan, that has a huge colony of bats roosting amongst its branches.
3. The banyan in Kolkata Botanical Garden, in Kolkata in West Bengal, with a canopy extending across 4.67 acres, and the 450-year-old banyan in Chennai, Tamil Nadu.
4. Another ancient banyan is found inside the Allahabad Fort and is protected by the Indian Army. The tree is visited by hundreds of pilgrims during the KumbhMela, which is held once in 12 years.
5. A tamarind tree in Gwalior, in the central Indian state of Madhya Pradesh, is planted on the tomb of Tansen, the famous singer and one of the jewels in the court of emperor Akbar.
6. Tamarind stands in the premises of the Osmania General Hospital in Hyderabad, Telangana, with a plaque that says, "This tree saved 150 lives".
7. While Dehra Dun may still be a small town, heritage trees are also present in crowded megacities such as Mumbai, the business capital of India and capital of the Maharashtra state. Scattered across the city are around 120 baobabs (*Adansoniadigitata*), African trees believed to have been brought to India a thousand years ago by Abyssinian and Portuguese traders. These are extremely rare 'green monuments' and are classified as to be protected according to a tree census conducted of trees in Mumbai.

The Context

Heritage Trees are trees that have been formally recognized by City Council for their unique size, age, historical or horticultural significance.

Under the proposed amendment, a tree with an estimated age of 50 years or more shall be defined as a heritage tree. The Maharashtra government will make amendments to the Maharashtra (Urban Areas) Protection and Preservation of Trees Act of 1975, to introduce provisions for the protection of 'heritage trees'.

Many of the heritage trees especially the Ficus are keystone species in the environment. The old trees serve as important roosting, nesting sites or as a food source for many species of wildlife.

The major criteria for heritage tree designation are age, rarity, and size, as well as aesthetic, botanical, ecological, and historical value. Heritage tree ordinances are developed to place limits upon the removal of these trees.

Results of Extension activity:

Heritage Trees Age wise

| Sr. No. | Name of tree | 50-60 | 60-80 | 80-100 | 100-150 | 150-200 | More than 200 |
|---------|--------------------------------|-------|-------|---------|---------|---------|---------------|
| 1 | <i>Agathisrobusta</i> | | | | 150 | | |
| 2 | <i>Pinusroxburji</i> | | | | 120 | | |
| 3 | <i>Arucariabidwai</i> | | | | | 200 | |
| 4 | <i>Ficusbengalensis</i> | | | 100 | | | |
| 5 | <i>Ficusreligiosa</i> | | 75 | | | | |
| 6 | <i>Cactus tree</i> | | | 80-85 | 125 | | |
| 7 | <i>Toonaciliata</i> | | 75 | | | | |
| 8 | <i>Acrocarpusfraxinifolius</i> | | 80 | | | | |
| 9 | <i>Cupressusemipervense</i> | | | | 120 | | |
| 10 | <i>Eucalyptus obliqua</i> | | | 100-120 | | | |
| 11 | <i>Mangiferaindica</i> | | 75-80 | | | | |
| 12 | <i>Eugenia jambolana</i> | | 75 | | | | |
| 13 | <i>Lagerstomiaparviflora</i> | 55 | | | | | |
| 14 | <i>Caryearborea</i> | 50 | | | | | |
| 15 | <i>Grewiarobusta</i> | | 75 | | | | |
| 16 | <i>Coffeearabica</i> | | | | 150 | | |
| 17 | <i>Artocarpusheterophyllus</i> | | 75 | | | | |
| 18 | <i>Mallotusphilipense</i> | 55 | | | | | |
| 19 | <i>Spathodiacampanulata</i> | | 65-70 | | | | |
| 20 | <i>Terminaliabelerica</i> | 50 | 80 | | | | |

Heritage Trees Numbers in Chikhaldara Hill Station :

| Sr. No. | Name of tree | Number | % Distribution |
|---------|--------------------------------|--------|----------------|
| 1 | <i>Agathisrobusta</i> | 02 | 0.52 |
| 2 | <i>Pinusroxburghi</i> | 08 | 2.10 |
| 3 | <i>Arucariabidwai</i> | 05 | 1.30 |
| 4 | <i>Ficusbengalensis</i> | 09 | 2.36 |
| 5 | <i>Ficusreligiosa</i> | 10 | 2.4 |
| 6 | <i>Cactus tree</i> | 01 | 0.26 |
| 7 | <i>Toonaciliata</i> | 10 | 2.4 |
| 8 | <i>Acrocarpusfraxinifolius</i> | 70 | 18.56 |
| 9 | <i>Cupressussemipervense</i> | 10 | 2.4 |
| 10 | <i>Eucalyptus obliqua</i> | 10 | 2.4 |
| 11 | <i>Mangiferaindica</i> | 28 | 7.36 |
| 12 | <i>Eugenia jambolana</i> | 55 | 14.47 |
| 13 | <i>Lagerstomiaparviflora</i> | 01 | 0.26 |
| 14 | <i>Caryeaarborea</i> | 10 | 2.4 |
| 15 | <i>Grewiarobusta</i> | 21 | 5.52 |
| 16 | <i>Coffeaarabica</i> | 100 | 26.31 |
| 17 | <i>Artocarpusheterophyllus</i> | 05 | 1.30 |
| 18 | <i>Mallotusphilipense</i> | 10 | 2.4 |
| 19 | <i>Spathodiacampanulata</i> | 02 | 0.52 |
| 20 | <i>Terminaliabelerica</i> | 10 | 2.4 |
| | | 380 | |

Heritage trees Native and Exotic trees %

| Sr. No. | Native plants number | % of native heritage trees | Exotic heritage trees | % of exotic heritage trees | Remark |
|---------|----------------------|----------------------------|-----------------------|----------------------------|--|
| 1 | 011 | 55 % | | | |
| 2 | | | 09 | 45% | Exotic heritage trees % 50 , municipal corporation promotes plantation of native trees |

Outcome of the Extension Activity

Heritage Trees are trees that have been formally recognized by City Council for their unique size, age, historical or horticultural significance

Heritage trees are important, of course, for their biological value, but so also for their cultural value. Heritage trees are historical art facts—connecting urban residents to the past and providing a sense of belonging in cities.

Individual wise Heritage Tree Count of Municipal Council Chikhaldara

| | | | |
|----|-------------------------|--------------------------|--|
| 1 | Agathisrobusta | Pine tree | Forest garden |
| 2 | Pinusroxburgi | Pine tree | Forest garden |
| 3 | Arucariabidwai | Khrismas tree | Forest garden |
| 4 | Ficusbengalensis | Wad | Devi point , near forest rest house , Circuit House , Tourism centre |
| 5 | Ficusreligiosa | Pimpal | Back of police station |
| 6 | Cactus tree | Cactus | Forest rest house |
| 7 | Toonaciliata | GorNeem | Police station , green valley |
| 8 | Acrocarpusfraxinifolius | Halige | College campus Sipna |
| 9 | Cupressussemipervense | Vidya | Electric rest house , Forest Rest house |
| 10 | Eucalyptus obliqua | Nilgiri | Back side of forest garden |
| 11 | Mangiferaindica | Mango | Circuit House |
| 12 | Eugenia jambolana | Jambhul | HVPM Campus |
| 13 | Lagerstomiaparviflora | Jarul | Tracery office opposite side |
| 14 | Caryearborea | Kumbhi | Rajakothi |
| 15 | Grewiarobusta | Silver oak | Upper Platue |
| 16 | Coffearabica | Coffee | Upper platue |
| 17 | Artocarpusheterophyllus | Jackfruit | Electricity rest house |
| 18 | Mallotusphilipense | Kumkum | Upper platue college campus Sipna |
| 19 | Spathodiacampanulata | Aakasshevaga , Shankasur | Near ITI Colege |
| 20 | Terminaliabelerica | behada | Hariken point |
| 21 | Old Phonix trees | Shindi trees | Opposite to police station |
| 22 | Jarul tree | | Near treasury office |
| 23 | Amaltash trees | Cassia fistula | Wild distribution |
| 24 | Pechis tree | Peach | Rare distribution Gawalipura |
| 25 | Saitus bushes | | Wild fruit trees |
| 26 | Old jambhul trees | | |
| 27 | Litchi tree | | Rare fruit tree of chikhaldara |

Recommendations to Muncipal Council Chikhaldara authorities

- ❖ Muncipal Council Chikhaldara authorities can prepare the strategy plan for conservation of Heritage trees.
- ❖ Strategy plan : Long term & short term plan for trees conservation.
- ❖ Conservation of native trees.
- ❖ To promote native trees and to avoid exotic trees to maintain local diversity.
- ❖ Discussion in VrukshaPradhikaran Meeting regarding Heritage trees conservation.
- ❖ Conservation of old trees and to maintain their data.
- ❖ To promote afforestation programme of native trees

Heritage Conservative Measure:

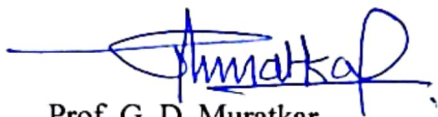
The Maharashtra government will **make amendments** to the Maharashtra (Urban Areas) Protection and Preservation of Trees Act of 1975, to introduce provisions for the protection of 'heritage trees'. The Maharashtra Cabinet also green-lighted the formation of the Maharashtra Tree Authority in local civic bodies and councils which will take all decisions regarding the protection of trees.

Tree Authority formation

- The amendments also make room for the formation of the Maharashtra State Tree Authority and also tree authority in local civic bodies and councils.
- The Tree Authority is tasked with "increasing the tree cover in urban areas and protecting the existing ones." Experts shall be a part of the local tree authority.
- Their knowledge and expertise will form the basis of decisions taken up by the authority.
- Ensure preparation of a tree plan and should aspire over the years to have 33 percent green belt in their area.

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Prof. G. D. Muratkar
Head Department of Environmental Science



चिखलदरा नगर परिषद कार्यालय, चिखलदरा

पालिका भवन, मुख्य चौक, चिखलदरा जि. अमरावती 444807

दुरध्वनी: 07220-230248/230210



Website - www.chikhaldaramahaulb.maharashtra.gov.in E-mail: mcchikhaldara@gmail.com

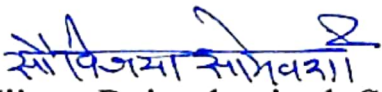
क्रमांक/चिनप/Heritage Tree Census/कावि- 100 /2022 दिनांक: -27/05/2022

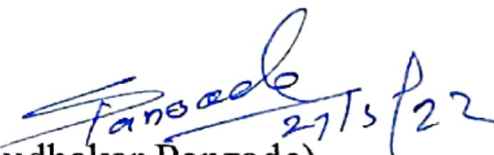
Reference:- Letter:- चिनप/स्वच्छता/कावि/311/21-22 दि.31/12/2021

Letter of Completion of Project on Census of Heritage Trees of Chikhaldara

With the reference to above reference it is to certify that, the Dept. of Enviromental Science Arts, Science & Commrece College, Chikhaldara completed the project works entitled "Census of Heritage Trees of Municipal Council Chikhaldara and submitted the project report on Dt.27.05.2022

Thanks for the co-operation & submission of Project. Especially thanks to Mr.Gajanan Muratkar Sir (HOD. Dept of EVS)


(Vijaya Rajendrasingh Somwanshi)
President,
Chikhaldara Municipal Council


(Sudhakar Panzade)
Chief Officer,
Chikhaldara Municipal Council



Best Practice 2

ARTS, SCIENCE AND COMMERCE COLLEGE, CHIKHALDARA
SESSION 2021-22
ADMISSION AND EDUCATIONAL AWARENESS CAMPAIGNING
REPORT

During the session 2021-22 we arranged the admission and educational awareness campaigning in the tribal region of Melghat. As per the aims given above, our staff reached to the students residing in the villages of two tehsils of Melghat i.e. Dharni and Chikhaldara. During this campaigning we visited nearby 120 villages during two schedules. The first schedule was from 22nd to 30th November, 2021 and the second drive was from 14th to 26th October, 2021.

The villages were allotted to the group of teachers. The details of the schedule, groups of teachers and the villages allotted are given in details in the tables. During their visits our teachers and non-teaching staff visited the allotted villages. We met with the present students, the alumni, and the students who are passed in the HSC examinations. We also visited to their homes and talked with the parents for giving the information about our college. We also told them the importance of higher education for their betterment.

During the visits we visited the junior colleges to meet the concerning teachers. We collected the list of students. We also visited to the respected persons of the villages such as Sarpanch, Police-Patil, Gramsevak, etc. and convey the information to them also so that they can encourage the parents and students for taking higher education.

For us it is a continuous process throughout the year. We always keep contact with all the persons we met during the visits. All the teachers are informed to take follow-up by contacting the junior college students, the willing students, their parents and other persons to increase the admissions. If any of them have any problem regarding the admission process the admission committee is always ready to solve their difficulties on phone or direct visits. We convinced many parents especially of girl students to let their daughter take higher education who are not willing to send their wards to the senior college.

The reports submitted by the teachers are analyzed. Some issues are found behind the negligence and unwillingness of parents and students for not taking the admissions to the higher education are as follows

- Most of the students are from economically weak background hence cannot afford the expenditure of education
- There is limited seats for the ST students in the Government hostels
- Many students go for the daily wages work to earn money and hence cannot attain the college regularly.
- Gaoli Samaj is not willing to educate their girls as the girls get married as soon as they complete 18 years of age

- Chikhaldara is not convenient for travelling for most of the villages of Melghat
- Some prime subjects do not have sufficient teaching staff

Due to the efforts of the staff we reached at the following position in the year 2021-22

| SN | FACULTY | CLASS | NO. OF STUDENTS | | | TOTAL | | |
|----|--------------------|------------|-----------------|-------|-------|------------|------------|------------|
| | | | BOYS | GIRLS | TOTAL | BOYS | GIRLS | TOTAL |
| 1 | ARTS | B.A. I | 62 | 20 | 82 | 131 | 50 | 181 |
| 2 | | B.A. II | 53 | 18 | 71 | | | |
| 3 | | B.A. III | 16 | 12 | 28 | | | |
| 4 | SCIENCE | B.Sc. I | 48 | 31 | 79 | 126 | 81 | 207 |
| 5 | | B.Sc. II | 41 | 20 | 61 | | | |
| 6 | | B.Sc. III | 37 | 30 | 67 | | | |
| 7 | COMMERCE | B.Com. I | 64 | 19 | 83 | 121 | 32 | 153 |
| 8 | | B.Com. II | 43 | 6 | 49 | | | |
| 9 | | B.Com. III | 14 | 7 | 21 | | | |
| 10 | M.Sc. (EVS) | M.Sc. I | 10 | 7 | 17 | 17 | 16 | 33 |
| 11 | | M.Sc. I | 7 | 9 | 16 | | | |
| 12 | Grand Total | | | | | 395 | 179 | 574 |

Suggestions by the Committee

- We need to provide the residential facilities to the poor students on minimum rates
- We need to try to increase the seats in the ST hostels
- We need to provide some facilities to the students such as Photo copy, print outs, online document feeling, canteen on subsidies rates etc.

If we shift to the Aladoh campus, it will be more convenient for the students to travel and come to college.

K. N. S. M.
Co-ordinator



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ARTS, SCIENCE AND COMMERCE COLLEGE, CHIKHALDARA
SESSION 2021-22
ADMISSION AND EDUCATIONAL AWARENESS CAMPAIGNING

As per decided in the Admission and Educational Awareness Program, we all have to go for the admission and educational awareness drive. We all have to campaign as per given schedule and allotted villages. During the campaigning program please visit the said villages and meet to the key persons like the principal/ Head master of the junior college/ our alumni/ current students/ or any other person who can help us for the admissions. Please carry the pamphlets and some prospectus with you for the information. Take the Geo-tag photographs of the campaigning.

Submit your reports in the prescribed format. Please follow the rules regarding the COVID-19.

SCHEDULE AND ALLOCATION OF THE VILLAGES
FROM 15-10-21 TO 20-10-21

| S. N. | Name of the Teacher/s | Place for Campaigning |
|-------|---|--|
| 1 | Dr. A.F. Bobade , Dr. V. S. Mangle Mr. B.S. Dheshmukh | Borala, Govarkhedha Bajar, Nagapur, wada pati, Telkhar, ekzira, chandpur, Dharamdoh, Bahadarpur, and nearby areas |
| 2 | Dr. A.V. Dudul , Dr. H.U.Petkar , Dr. N. J. Suryawanshi | Pimpalkhuta, Khatkali, Devgaon, Hirdamal, chichati, Kalapani, Badnapur, Baglinga, Malkapur, Somwarkhedha, Vastapur, Kulangana, Gothadi, and nearby areas |
| 3 | Mr. G.D. Muratkar, Dr. M.B. Sardar, | Avagad, Karda, Madizadap, Khadimal, Chunkhadi, Mahariyam, Navalgav and nearby areas |
| 4 | Dr. V.D. Kapse, Dr. V.R. Patil, Dr. P. G. Gawande | Tembrusonda, Chichkheda, Jamli (R), Ambapati, Girguti, Khongda and nearby areas |
| 5 | Mr. V.M. More, Dr. A. R. Bakshi , S.L. Kottewar, | Churni, Dahendry ,Dahendry, Dhana , Gagagrkheda , Kotami, Korda, Rajnikund, Bhandora, Pallya, Butida and nearby areas |
| 6 | Mr. P.M. Kute , Mr. A.R. Kanhu, Mr. Ravi Yewale | Semadoh, Raypur, Rahu, Hatru, Biba, Sumita ,Salita, Bhandum and nearby areas |
| 7 | Dr. U.G.Tayade, Dr. R.S.Mankar Dr. S.P. Chvhan | Jarida, Kamida, khari, Biba, Piplya, Bordha, Hirda and nearby areas |
| 8 | Dr. G. B. Dhawale , Mr. R.P.Rahate , Dr. V. H. Meshram, Mr. S.V Gumble | Doma, Kajaldoh, Bamadevi, Katkumbh, Pachdongri, Bagdari, Koylari,Tordavadi and nearby areas |
| 9 | Dr. K.N. Shah, Dr. B. N. Mahajan, Dr. S. G Mahajan | Thokbarda, Upatkhedha, Sonapur, Morgad, Aki, Ruiphata, Satti ruiphata, Chauramal, and nearby areas |
| 10 | Mr. P.S. Tayade, Dr. G.R. Dhokane, Mr. Girish Sahu | Malhara, Vazzar, Masona, nimkund, Mohiphata, Buradghat, Kohana, Bihali, Ghatang, Bhulori, Lawada-1, and nearby areas |
| 11 | Dr. D.S. Hedao, Dr. N.S. Bayaskar | Achalpur, Paratwada, and nearby areas |

| | | |
|----|---|---|
| 12 | Dr. U.S. Wasnik, Dr. N. Y. Bhoge, Mr. R. H. Panurkar | Chikhaldara, Khatkali, Amjhari, Tetu, Bori, Bela, Kamapur, Jamunnala, Salona, Masondi, Jambli, and nearby areas |
| 13 | Mr. V.M. Lakade, Mr. Raja Chaudhari | Lawada, Aaladoh, Motha, Madki, Aadnadi, Manbhang, Bhilkheda, Jaitadahi, Memna, Dhamni, and nearby areas |
| 14 | Dr. S.N. Jagtap, Dr. U.R. Kokate | Kandli, Narsala, Ekaspur, Dhotarkheda, Dhamangaon, Sawali, Hanvatkheda, Daryabad, and nearby areas |

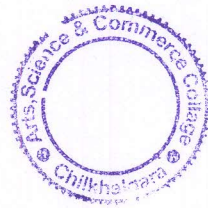
NOTE – PLEASE INFORM ON WHATSAPP TO PRINCIPAL AND DR. K.N. SHAH ABOUT THE
INDIVIDUAL SCHEDULE OF CAMPAIGNING.

ML

Dr. R.S. Jaipurkar

Principal

PRINCIPAL
Art, Science & Commerce
College, Chikhaldara



K.N.S.

Dr. K.N. Shah

Coordinator

ARTS, SCIENCE AND COMMERCE COLLEGE, CHIKHALDARA
SESSION 2021-22
ADMISSION AND EDUCATIONAL AWARENESS CAMPAIGNING

| S. N. | Name of the Teacher/s | Place for Campaigning |
|-------|---|--|
| 1 | Dr. A.F. Bobade , Dr. V. S. Mangle Mr. B.S. Dheshmukh | Susarda, Sawalikheda, Rajpur, Sadrawadi, Khaparkheda, and nearby areas |
| 2 | Dr. A.V. Dudul , Dr. H.U.Petkar , Dr. N. J. Suryawanshi | Ratnapur, Gondwadi, Mokha, Chinchghat, Bhokarbardi, and nearby areas |
| 3 | Mr. G.D. Muratkar, Dr. M.B. Sardar, | Bijudhawadi, Mansudhawadi, Baru, and nearby areas |
| 4 | Dr. V.D. Kapse, Dr. V.R. Patil, Dr. P. G. Gawande | Tembrusonda, Jambli (R), Wadgaon Fattepur, and nearby areas |
| 5 | Mr. V.M. More, Dr. A. R. Bakshi , S.L. Kottewar, | Churni, Dahendri, Jarida, Gangarkheda, and nearby areas |
| 6 | Mr. P.M. Kute , Mr. A.R. Kanhu, Mr. Ravi Yewale | Rahu, Hatru, Biba, Bhandum, Raypur, and nearby areas |
| 7 | Dr. U.G.Tayade, Dr. R.S.Mankar Dr. S.P. Chvhan | Dharni, Duni, Chitri, Bhokarbardi, Tembli, and nearby areas |
| 8 | Dr. G. B. Dhawale , Mr. R.P.Rahate , Dr. V. H. Meshram, Mr. S.V Gumble | Doma, Kajaldoh, Bamadevi, Katkumbh, and nearby areas |
| 9 | Dr. K.N. Shah, Dr. B. N. Mahajan, Dr. S. G Mahajan | Telkhar, Badanapur, Sonapur, and nearby areas |
| 10 | Mr. P.S. Tayade, Dr. G.R. Dhokane, Mr. Girish Sahu | Semadoh, Harisal, Chikhali, and nearby areas |
| 11 | Dr. D.S. Hedao, Dr. N.S. Bayaskar | Achalpur, Paratwada, and nearby areas |
| 12 | Dr. U.S. Wasnik, Dr. N. Y. Bhoge, Mr. R. H. Panurkar | Salona, Ghatang, Bela, Kamapur, Jambli, and nearby areas |
| 13 | Mr. V.M. Lakade, Mr. Raja Chaudhari | Chikaldara, Aadnadi, Aladoh, Motha, Madki, and nearby areas |
| 14 | Dr. S.N. Jagtap, Dr. U.R. Kokate | Kandli, Narsala, Ekaspur, Dhotarkheda, Dhamangaon, Dhamani, and nearby areas |

NOTE – PLEASE INFORM ON WHATSAPP TO PRINCIPAL AND DR. K.N. SHAH ABOUT THE INDIVIDUAL SCHEDULE OF CAMPAIGN AND DAILY REPORT

Dr. R.S. Jaipurkar

Principal

PRINCIPAL
Art, Science & Commerce
College, Chikhaldara



Dr. K.N. Shah

Coordinator

ARTS, SCIENCE AND COMMERCE COLLEGE CHIKHALDARA
ADMISSION COMMITTEE REPORT
2020-21

For the session 2020-21, the admission committee worked for the student's counseling by keeping in mind the situation of the COVID-19 pandemic.

- The first meeting of the session was conducted on 20/07/2020 using the online platform.
- It was decided that the admissions will be done by using the online as well as offline mode
- Teachers were asked to communicate with the teachers related to their concerning areas in order to get the lists and contact numbers of the HSC students and to contact them.
- Despite of all the efforts due to the pandemic situations, only 436 admission were there up to the date 30/09/2020. The meeting was taken on 30/09/2020.
- The last date of admission was extended by the University up to 30/10/2020
- The admission campaigning of direct visits was again applied. Follow up meetings were taken on 13/10/2020 and 26/10/2020
- Due to the efforts of all the staff, the admissions were increased and the data of admission is as follows

No. of students admitted in the year 2020-21

| SN | FACULTY | CLASS | NO. OF STUDENTS | | | TOTAL | | |
|----|--------------------|------------------|-----------------|-------|-------|------------|------------|------------|
| | | | BOYS | GIRLS | TOTAL | BOYS | GIRLS | TOTAL |
| 1 | ARTS | B.A. I | 87 | 28 | 115 | 143 | 59 | 202 |
| 2 | | B.A. II | 36 | 19 | 55 | | | |
| 3 | | B.A. III | 20 | 12 | 32 | | | |
| 4 | SCIENCE | B.Sc. I | 54 | 25 | 79 | 148 | 87 | 235 |
| 5 | | B.Sc. II | 41 | 31 | 72 | | | |
| 6 | | B.Sc. III | 53 | 31 | 84 | | | |
| 7 | | B.Sc. Additional | | | 02 | | | |
| 8 | COMMERCE | B.Com. I | 46 | 7 | 53 | 90 | 23 | 113 |
| 9 | | B.Com. II | 27 | 12 | 39 | | | |
| 10 | | B.Com. III | 17 | 4 | 21 | | | |
| 11 | M.Sc. (EVS) | M.Sc. I | 8 | 10 | 18 | 8 | 10 | 18 |
| 12 | | M.Sc. I | 0 | 0 | 0 | | | |
| 13 | Grand Total | | | | | 391 | 180 | 571 |

ML
PRINCIPAL
 Art, Science & Commerce
 College Chikhaldara



K.N.M
 Co-ordinator

ARTS, SCIENCE AND COMMERCE COLLEGE CHIKHALDARA
SESSION 2020-21
ADMISSION CAMPAIGNING (ADMISSION AND COUNSELING)
DATE 19/10/20 TO 25/10/20

| S.N. | NAME(S) OF THE TEACHER(S) | PLACES FOR CAMPAIGNING |
|------|--|---|
| 1 | BOBADE SIR, RAHATE SIR, KOTTEWAR SIR | DHARNI, MASONA, HARISAL AND NEARBY AREAS |
| 2 | DUDUL SIR, SURYAWANSHI SIR | CHANDUR BZ, KARAJGAV, SHIRAJGAV, GOUKHEDA AND NEARBY AREAS |
| 3 | MURATKAR SIR | DARYAPUR AND NEARBY AREAS |
| 4 | KAPSE SIR | PARATWADA (SUBODH AND CITY HIGH), KARAJGAON, SHIRAJGAON AND NEARBY AREAS |
| 5 | SARDAR SIR | TALEGAV, LAKHANWADI, DHARNI AND NEARBY AREAS |
| 6 | BAKSHI SIR, MORE SIR | SALONA, GHATANG, KAJALDOH, NEARBY AREAS |
| 7 | KUTE SIR, KANHU SIR | KATKUMBH, CHURNI, JARIDA, AND NEARBY AREAS |
| 8 | TAYADE SIR, CHAVHAN SIR | KATKUMBH, CHURNI, JARIDA, AND NEARBY AREAS |
| 9 | DHOKNE SIR, MANGALE SIR | PATHROT, PARATWADA, KARAJGAV, SHIRAJGAV, AND NEARBY AREAS |
| 10 | SHAH SIR, MAHAJAN SIR | TEMBRUSONDA, TELKHAR, BADANAPUR, AND NEARBY AREAS |
| 11 | DHAWALE SIR, GAWANDE SIR, PETKAR SIR | ACHALPUR, DHARNI, TEMBLI, AND NEARBY AREAS |
| 13 | MANKAR SIR, MESHARAM SIR | MORSHI, WARUD, AMRAVATI, AND NEARBY AREAS |
| 15 | RAJUBHAU TAYADE, MAHAJAN SIR SG | CHANDUR BZ. KARAJGAV, SHIRAJGAV AND NEARBY AREAS |
| 16 | JAGTAP MADAM, BHOGE MADAM, WASNIK MADAM | CHIKHALDARA, PANDHARI, AALADOH, MOTHA, AAMZARI, AND NEARBY AREAS |

**NOTE: PLEASE TRY AND CONTRIBUTE BY DOING ATLEAST TWO ADMISSIONS PER TEACHER.
PLEASE INFORM ON WHATSAPP TO PATIL SIR/ SHAH SIR ABOUT THE INDIVIDUAL
SCHEDULE OF CAMPAINIGN**

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Art, Science & Commerce
College, Chikhaldara



K. A. M
Co-ordinator

ARTS, SCIENCE AND COMMERCE COLLEGE CHIKHALDARA
SESSION 2020-21
ADMISSION CAMPAIGNING (ADMISSION AND COUNSELING)
DATE 21/09/20 TO 29/09/20

| S.N. | NAME(S) OF THE TEACHER(S) | PLACES FOR CAMPAIGNING |
|------|--|---|
| 1 | BOBADE SIR, RAHATE SIR, KOTTEWAR SIR | DHARNI, MASONA, HARISAL AND NEARBY AREAS |
| 2 | DUDUL SIR, SURYAWANSHI SIR | CHANDUR BZ, KARAJGAV, SHIRAJGAV, GOUKHEDA AND NEARBY AREAS |
| 3 | MURATKAR SIR | DARYAPUR AND NEARBY AREAS |
| 4 | KAPSE SIR | PARATWADA (SUBODH AND CITY HIGH), KARAJGAON, SHIRAJGAON AND NEARBY AREAS |
| 5 | SARDAR SIR | TALEGAV, LAKHANWADI, DHARNI AND NEARBY AREAS |
| 6 | BAKSHI SIR, MORE SIR | SALONA, GHATANG, KAJALDOH, NEARBY AREAS |
| 7 | KUTE SIR, KANHU SIR | KATKUMBH, CHURNI, JARIDA, AND NEARBY AREAS |
| 8 | TAYADE SIR, CHAVHAN SIR | KATKUMBH, CHURNI, JARIDA, AND NEARBY AREAS |
| 9 | DHOKNE SIR, MANGALE SIR | PATHROT, PARATWADA, KARAJGAV, SHIRAJGAV, AND NEARBY AREAS |
| 10 | SHAH SIR, MAHAJAN SIR | TEMBRUSONDA, TELKHAR, BADANAPUR, AND NEARBY AREAS |
| 11 | DHAWALE SIR, GAWANDE SIR, PETKAR SIR | ACHALPUR, DHARNI, TEMBLI, AND NEARBY AREAS |
| 13 | MANKAR SIR, MESHAM SIR | MORSHI, WARUD, AMRAVATI, AND NEARBY AREAS |
| 15 | RAJUBHAU TAYADE, MAHAJAN SIR SG | CHANDUR BZ. KARAJGAV, SHIRAJGAV AND NEARBY AREAS |
| 16 | JAGTAP MADAM, BHOGE MADAM, WASNIK MADAM | CHIKHALDARA, PANDHARI, AALADOH, MOTHA, AAMZARI, AND NEARBY AREAS |

**NOTE: PLEASE TRY AND CONTRIBUTE BY DOING ATLEAST TWO ADMISSIONS PER TEACHER.
PLEASE INFORM ON WHATSAPP TO PATIL SIR/ SHAH SIR ABOUT THE INDIVIDUAL
SCHEDULE OF CAMPAIGNING**

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College, Chikhaldara



K.N.M
Co-ordinator

SOME PHOTOS OF ADMISSION CAMPAIGNING DRIVE





ARTS, SCIENCE AND COMMERCE COLLEGE, CHIKHALDARA
ADMISSION AND EDUCATIONAL AWARENESS CAMPAIGNING
REPORT (2019-20)

During the session 2019-20 admission and educational awareness campaigning was arranged in the tribal region of Melghat. As per the aims and objectives of the committee, our staff tried to reach in the nearby villages to contact the students, parents and some key persons. During this campaigning we visited nearby villages in two spans.

The villages were allotted to the group of teachers. During the visits we met not only with the HSC passed students but also present students and alumni. We also visited to their homes and talked with the parents for giving the information about our college. We also told them the importance of higher education for their betterment.

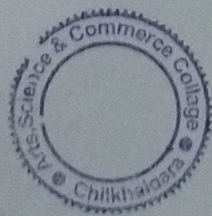
We also visited the junior colleges to meet the concerning teachers and collected the list of students. For us it is a continuous process throughout the year. We always keep contact with the persons we met during the visits. All the teachers are informed to take follow-up by contacting the junior college students, the willing students, their parents and other persons to increase the percentage of higher education seeking students. The problems regarding the admission process if any are sought out by the admission committee. Parents, especially of girl students are convinced for sending their wards to higher education. The reports submitted by the teachers are analyzed to find out the issues behind the negligence and unwillingness of parents and students. Following are some common issues that are found

- Economically weak background hence cannot afford the expenditure of education
- Girls get married as soon as they complete 18 years of age specially in Gaoli Samaaj
- Limited seats for the ST students in the Government hostels
- No government hostel facilities for other backward students
- Many students go for the daily wages work to earn money and hence cannot attain the college regularly.

NUMBER OF STUDENTS ADMITTED UP TO 31/12/2020

| SN | FACULTY | CLASS | NO. OF STUDENTS | | | TOTAL | | |
|----|--------------------|------------|-----------------|-------|-------|------------|------------|------------|
| | | | BOYS | GIRLS | TOTAL | BOYS | GIRLS | TOTAL |
| 1 | ARTS | B.A. I | 67 | 22 | 89 | 95 | 40 | 135 |
| 2 | | B.A. II | 19 | 12 | 31 | | | |
| 3 | | B.A. III | 9 | 6 | 15 | | | |
| 4 | SCIENCE | B.Sc. I | 52 | 34 | 86 | 138 | 89 | 227 |
| 5 | | B.Sc. II | 47 | 29 | 76 | | | |
| 6 | | B.Sc. III | 39 | 26 | 65 | | | |
| 8 | COMMERCE | B.Com. I | 26 | 10 | 36 | 38 | 13 | 51 |
| 9 | | B.Com. II | 9 | 2 | 11 | | | |
| 10 | | B.Com. III | 3 | 1 | 4 | | | |
| 13 | Grand Total | | | | | 271 | 142 | 413 |

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 Art, Science & Commerce
 College, Chikhaldara



K. H. M
 CO-ordinator

कला, विज्ञान व वाणिज्य महाविद्यालय,
चिखलदरा

सत्र २०१९-२०२०

प्रवेश व शैक्षणिक मार्गदर्शन अभियान

| अक्र | भेटीचा दिनांक | भेटीचे स्थळ | प्राध्यापकाचे नांव | स्वाक्षरी |
|------|---------------|--|---|-----------|
| १ | | १) नगर परिषद ज्यु. कॉलेज चांदूर बाजार, २) काबरा हायस्कूल व ज्यु कॉलेज , चांदूर बाजार ३) गो. सी. टोम्पे ज्यु कॉलेज, चांदूर बाजार | डॉ. एन.जे. सुर्यवंशी डॉ. आर. एस. मानकर | |
| २ | | १) ल. भ. भेले ज्यु कॉलेज, शिरजगांव ✓ २) शंकरराव ज्यु. कॉलेज, करजगांव ✓ ३) मसोणा ४) सुंदराबाई गोपालस्वामी ज्यु. कॉलेज, परतवाडा ✓ ५) झलौने कोचिंग सेंटर, परतवाडा ✓ ६) म्युनिसिपल ज्यु. कॉलेज, परतवाडा ✓ | प्रा. ए. एफ. बोवडे डॉ. व्ही.एस. मंगळे डॉ. पी.जी. गावंडे प्रा. जी. डी. मुरतकर | |
| ३ | | १) सुबोध ज्यु. कॉलेज, अचलपूर २) सिटी ज्यु. कॉलेज, अचलपूर ३) राष्ट्रीय ज्यु. कॉलेज, अचलपूर ४) रहेमानिया ज्यु. कॉलेज, अचलपूर | डॉ. डी. एस. हेडावू प्रा. बी.एस. देशमुख प्रा. आर. पी. राहाटे | |
| ४ | | १) वडगांव फत्तेपूर २) श्रीमती पंचफुलाबाई हरणे ज्यु. कॉलेज, अंजनगांव सुर्जी ३) जयसिंग ज्यु महा.ए पश्रोटे | डॉ. जी. आर. ढोकणे प्रा. के. एन. शाह | |
| ५ | | एकलव्य पब्लिक स्कूल, चिखलदरा गिरीजन ज्यु. महा., चिखलदरा दिपशिख सैनिक स्कूल, चिखलदरा | डॉ. यु. एस. वासनिक डॉ. यु. आर. कोकाटे डॉ. एन. वाय. भोगे डॉ. एस. आर. कडू | |

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PRINCIPAL
Art, Science & Commerce
College, Chikhaldara



K. V. S. M.
Co-ordinator

SOME PHOTOS OF ADMISSION CAMPAIGNING DRIVE



ARTS, SCIENCE AND COMMERCE COLLEGE CHIKHALDARA
ADMISSION COMMITTEE REPORT
2018-19

In the academic year 2018-19, admission process was carried out as per the rules and regulations (guidelines) provided by the respected statutory bodies such as Sant Gadge Baba Amravati University as well as Maharashtra Government.

The application forms received were sorted as per the percentage obtained in the previous qualifying class (12th class). Merit lists were displayed as per the criteria. The reservation policy of government was strictly followed by the committee.

Before the admission process, the committee had taken initiatives for the admission campaigning and the education awareness program in the junior colleges of the nearby areas. The teams of teachers were formed and requested to look forward towards the mission.

Due to the efforts taken by the committee and the respected teachers the following admission figure was obtained during the year.

ADMISSION DATA (2018-19)

| PROGRAM/CLASS | I year | II year | III year | Total |
|---------------|------------|------------|------------|------------|
| B.A. | 106 | 30 | 30 | 166 |
| B.Sc. | 127 | 90 | 84 | 301 |
| B.Com. | 57 | 19 | 23 | 99 |
| | 290 | 139 | 137 | 566 |

CATEGORY WISE ADMISSION DATA

| CATEGORY | | | | | | | | | |
|----------|-----|-----|-----|-----|-----|-----|----------|------|-------|
| SC | ST | VJ | NTB | NTC | OBC | SBC | MINORITY | OPEN | TOTAL |
| 063 | 248 | 008 | 061 | 007 | 139 | 003 | 011 | 026 | 566 |

SEXWISE DATA

| MALE | FEMALE | TOTAL |
|------|--------|-------|
| 377 | 189 | 566 |

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PRINCIPAL
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 College, Chikhaldara



K. N. M.
 (Co-ordinator)

Arts, Science and Commerce College,
Chikhaldara
Admission Committee (2017-18)
Duty Chart For Admission Process
Time 11.30 A.M. to 05.30 P.M.

| Date | Name of Teacher | | | Signature | | |
|--|-------------------|---------------------|---------------------|-----------|---------|----------|
| | Arts | Science | Commerce | Arts | Science | Commerce |
| 12 th & 13 th June 2017 | Dr. U.G. Tayade | Prof. G.D. Muratkar | Prof. A.R. Kanhu | | | |
| 14 th & 15 th June 2017 | Dr. S.P. Chavhan | Dr. V.D. Kapse | Prof. P.M. Kute | | | |
| 16 th & 17 th June 2017 | Dr. B.N. Mahajan | Dr. U.R. Kokate | Prof. S.L. Kottewar | | | |
| 19 th & 20 th June 2017 | Dr. G.B. Dhawale | Dr. U.S. Wasnik | Prof. V.M. More | | | |
| 21 st & 22 nd June 2017 | Prof. M.B. Sardar | Prof. N.S. Bayaskar | Prof. A.R. Kanhu | | | |
| 23 rd & 24 th June 2017 | Dr. H.U. Petkar | Dr. G.R. Dhokane | Prof. P.M. Kute | | | |
| 27 th & 28 th June 2017 | Prof. A.R. Bakshi | Dr. V.S. Mangle | Prof. S.L. Kottewar | | | |
| 29 th & 30 th June 2017 | Dr. V.H. Meshram | Dr. D.S. Hedao | Prof. V.M. More | | | |
| 01 st & 03 rd July 2017 | Dr. S.N. Jagtap | Dr. N.J. Suryawansi | Prof. A.R. Kanhu | | | |
| 04 th & 05 th July 2017 | Dr. A.V. Dudul | Dr. N.Y. Bhoge | Prof. P.M. Kute | | | |
| 06 th & 07 th July 2017 | Dr. S.P. Chavhan | Prof. K.N. Shah | Prof. S.L. Kottewar | | | |
| 08 th & 10 th July 2017 | Dr. U.G. Tayade | Prof. R.P. Rahate | Prof. V.M. More | | | |
| 11 th & 12 th July 2017 | Dr. G.B. Dhawale | Dr. R.S. Mankar | Prof. A.R. Kanhu | | | |
| 13 th & 14 th July 2017 | Prof. M.B. Sardar | Prof. A.F. Bobade | Prof. P.M. Kute | | | |
| 15 th & 17 th July 2017 | Dr. H.U. Petkar | Dr. V.R. Patil | Prof. S.L. Kottewar | | | |
| 18 th & 19 th July 2017 | Prof. A.R. Bakshi | Dr. N.Y. Bhoge | Prof. A.R. Kanhu | | | |
| 20 th & 21 st July 2017 | Dr. V.H. Meshram | Prof. N.S. Bayaskar | Prof. V.M. More | | | |
| 22 nd & 24 th July 2017 | Dr. S.N. Jagtap | Dr. V.D. Kapse | Prof. P.M. Kute | | | |
| 25 th & 26 th July 2017 | Dr. A.V. Dudul | Dr. R.S. Mankar | Prof. S.L. Kottewar | | | |
| 27 th & 28 th July 2017 | Dr. V.H. Meshram | Dr. N.J. Suryawansi | Prof. P.M. Kute | | | |
| 29 th & 31 st July 2017 | Prof. A.R. Bakshi | Prof. K.N. Shah | Prof. A.R. Kanhu | | | |

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Art, Science & Commerce
College, Chikhaldara



A. Bobade
Coordinator

SOME PHOTOS OF ADMISSION CAMPAIGNING DRIVE



ARTS, SCIENCE AND COMMERCE COLLEGE, CHIKHALDARA, DIST-
AMRAVATI

Admission Committee Report

2017-18

Every academic session 2017-18, admission process is carried out as per S.G.B.U. Amravati guideline. Display the merit list after sorting admission form as per percentage of 12th class. Committee also take efforts for increasing admissions in this session by counseling by teaching and non-teaching staff. Visit to junior colleges collect the student list with addresses. Send college information on Inland-Letters to student address. In academic session 2017-18 B.Sc.-Ist 126; B.Sc.-IIst 91 ; B.Sc.-IInd 92 B.Sc.-IIIrd 83 ; B.A-Ist 112; B.A-IIst 28 B.A- IIIst 25 & B.Com.Ist-85; B.Com.IInd-28 ; B.Com. -IIIrd year -11 students are admitted.

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Art, Science & Commerce
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A. F. Bobade

A. F. Bobade
Asst. Professor & H.O.D. [Industrial Chemistry]
Arts, Science & Commerce College,
Chikhaldara

कला, विज्ञान व वाणिज्य महाविद्यालय, चिखलदरा, जि. अमरावती.

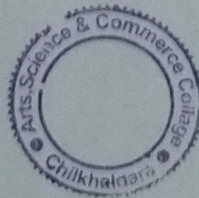
सत्र 2017-18

प्रवेश अभियान दिनांक 10 जून 2017 व 12 व 13 जून 2017

| | |
|--|---|
| सुबोध ज्यू कॉलेज, अचलपूर | माहितीपत्रक विद्यार्थ्यांचे हातून वाटप करणे |
| सिटी ज्यू कॉलेज, अचलपूर | डॉ. व्ही. डी. कापसे |
| लुल्ला ज्यू कॉलेज, गौरखेडा | ✓ प्रा. आर. पी. रहाटे |
| सुंदराबाई गोपालस्वामी ज्यू कॉलेज, परतवाडा | डॉ. पी. जी. गावंडे |
| म्युनिसिपल ज्यू कॉलेज परतवाडा | डॉ. व्ही. डी. कापसे / <i>VSM</i> |
| राष्ट्रीय ज्यू कॉलेज, अचलपूर | डॉ. जी. बी. ढवळे |
| मसोना, हरीसाल, बिहाली | ✓ डॉ. पी. जी. गावंडे |
| मसोना, हरीसाल, बिहाली | प्रा. ए. एफ. बोबडे |
| रत्नापूर, कुटूंगा, गोंडवाडी, वैरागड, धारणी | प्रा. पी. एम. कुटे |
| रत्नापूर, कुटूंगा, गोंडवाडी, वैरागड, धारणी | प्रा. अ. आर. कान्हू |
| टेम्बुसोंडा, बदनापुर, गौरखेडाबाजार, | प्रा. एम. बी. सरदार |
| आडनदी, तेलखार, जांभली (आर) | ✓ डॉ. आर. एस. मानकर |
| आडनदी, तेलखार, जांभली (आर) | ✓ प्रा. एस. एल. कोत्तेवार |
| एकलव्य पब्लिक स्कूल चिखलदरा | ✓ श्री. आर. एच. पाणुरकर |
| दिपशिखा सैनिकी स्कूल, चिखलदरा | ✓ श्री. आर. एच. पाणुरकर |
| डोमा, जरीदा, चुर्णी, काजालडोह, हतरु | ✓ प्रा. व्ही. एम. मोरे |
| डोमा, जरीदा, चुर्णी, काजालडोह, हतरु | ✓ डॉ. व्ही. एच. मेश्राम |
| सलोना | ✓ श्री. आर. एच. पाणुरकर |
| जयसिंग ज्यू कॉलेज पथोट | ✓ डॉ. जी. आर. ढोकणे |
| श्री. शे. का. ज्यू कॉलेज, चौसाळा | प्रा. एन. एस. बायस्कर |
| श्रीमती पंचफुलाबाई हरणे ज्यु. कॉलेज अंजनगांव | |

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PRINCIPAL
Art, Science & Commerce
College Chikhaldara



A. Bobade

Co-ordinator

Activity Report

Palak Yojana (Arts Faculty)

Session: 2017 -18

Objectives of committee:

- 1) To pay personal attention to students
- 2) To address various problems of student
- 3) To provide academic and personal guidance

Number of beneficiaries : 169

Brief summary of the Activity:

In the session 2017-18 total 169 students admitted in the arts faculty and 14 to 18 students were adopted by each teacher who is expected to provide academic and personal guidance to his wards and also keep in touch with the parents. The attendance of the students is recorded regularly by the palak teacher. Student's progress is personally monitored by teachers through "PalakYojna". We make it our concern that the students admitted to the institute must avail of the most and the best here. Regular attendance, good academic performance can be ensured under PalakYojana. We also try to address the personal problems of students through PalakYojana. It is only after consistent and regular contacts with them the students open up and are willing to share their concerns. Most of the students are from outside requiring hostel facility. The existing hostel cannot accommodate even 50 % of the needy. This stands out as a towering must. We can help a few students in accommodation to some extent.


Acting Principal

Art, Science & Commerce College
Chikhaldara, Dist. Amravati


H. U. Patkar
Asst. Professor & H.O.D. (Sociology)
Arts, Science & Commerce College,
Chikhaldara

Arts, Science & Commerce College, Chikhaldara, Dist. Amravati

Activity Report

Palak Yojana (Arts Faculty)

Session: 2018 -19

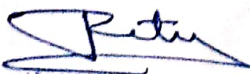
Objectives of committee:

- 1) To pay personal attention to students
- 2) To address various problems of student
- 3) To provide academic and personal guidance

Number of beneficiaries : 162

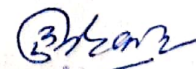
Brief summary of the Activity:

In the session 2018-19 total 162 students admitted in the arts faculty and 12 to 19 students were adopted by each teacher who is expected to provide academic and personal guidance to his wards and also keep in touch with the parents. The attendance of the students is recorded regularly by the palak teacher. Student's progress is personally monitored by teachers through "PalakYojna". We make it our concern that the students admitted to the institute must avail of the most and the best here. Regular attendance, good academic performance can be ensured under PalakYojana. We also try to address the personal problems of students through PalakYojana. It is only after consistent and regular contacts with them the students open up and are willing to share their concerns. Most of the students are from outside requiring hostel facility. The existing hostel cannot accommodate even 50 % of the needy. This stands out as a towering must. We can help a few students in accommodation to some extent.



Acting Principal

Art, Science & Commerce College
Chikhaldara, Dist. Amravati



Asst. Professor & H.O.D. (Sociology)
Arts, Science & Commerce College,
Chikhaldara

Arts, Science & Commerce College, Chikhaldara, Dist. Amravati

Activity Report

Palak Yojana (Arts Faculty)

Session: 2019 -20

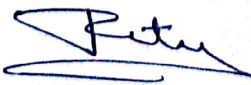
Objectives of committee:

- 1) To pay personal attention to students
- 2) To address various problems of student
- 3) To provide academic and personal guidance


Number of beneficiaries : 132

Brief summary of the Activity:

In the session 2019-20 total 132 students admitted in the arts faculty and 12 to 14 students were adopted by each teacher who is expected to provide academic and personal guidance to his wards and also keep in touch with the parents. The attendance of the students is recorded regularly by the palak teacher. Student's progress is personally monitored by teachers through "PalakYojna". We make it our concern that the students admitted to the institute must avail of the most and the best here. Regular attendance, good academic performance can be ensured under PalakYojana. We also try to address the personal problems of students through PalakYojana. It is only after consistent and regular contacts with them the students open up and are willing to share their concerns. Most of the students are from outside requiring hostel facility. The existing hostel cannot accommodate even 50 % of the needy. This stands out as a towering must. We can help a few students in accommodation to some extent.



Acting Principal
Art, Science & Commerce College
Chikhaldara, Dist. Amravati



H. U. Petkar
Asst. Professor & H.O.D. (Sociology)
Arts, Science & Commerce Coll.
Chikhaldara

Arts, Science & Commerce College, Chikhaldara, Dist. Amravati

Activity Report

Palak Yojana (Arts Faculty)

Session: 2020 -21

Objectives of committee:

- 1) To pay personal attention to students
- 2) To address various problems of student
- 3) To provide academic and personal guidance

Number of beneficiaries : 193

Brief summary of the Activity:

In the session 2020-21 total 193 students admitted in the arts faculty and 18 to 20 students were adopted by each teacher who is expected to provide academic and personal guidance to his wards and also keep in touch with the parents. The online attendance of the students is recorded regularly by the palak teacher. Student's progress is personally monitored by teachers through "PalakYojna". We make it our concern that the students admitted to the institute must avail of the most and the best here. Regular attendance, good academic performance can be ensured under PalakYojana. We also try to address the personal problems of students through PalakYojana. It is only after consistent and regular contacts with them the students open up and are willing to share their concerns. Most of the students are from outside requiring hostel facility. The existing hostel cannot accommodate even 50 % of the needy. This stands out as a towering must. We can help a few students in accommodation to some extent.



Principal

**Arts, Science & Commerce College
Chikhaldara Dist. Amravati**


H.U. Patkar

**Asst. Professor & H.O.D. (Sociology)
Arts, Science & Commerce College,
Chikhaldara**

**&
संयोजक**

**पालक योजना कला शाखा
कला, विज्ञान व वाणिज्य महाविद्यालय
चिखलदरा**

Sipna Shikshan Prasarak Mandal Amravati.
Arts, Science & Commerce College, Chikhaldara, Dist. Amravati
Palak Yojana (Arts Faculty)
Session: 2021 -22

Objectives :

- 1) To pay personal attention to students
- 2) To address various problems of student
- 3) To provide academic and personal guidance

Number of Beneficiaries : 181

Brief Summary :

In the session 2021-22 total 181 students admitted in the arts faculty and 17 to 19 students were adopted by each teacher who is expected to provide academic and personal guidance to his wards and also keep in touch with the parents. The Student's progress is personally monitored by teachers through "PalakYojna". We make it our concern that the students admitted to the institute must avail of the most and the best here. Regular attendance, good academic performance can be ensured under PalakYojana. We also try to address the personal problems of students through PalakYojana. It is only after consistent and regular contacts with them the students open up and are willing to share their concerns. Most of the students are from outside requiring hostel facility. We can help a few students in accommodation to some extent.



Dr. M.B.Sardar
Convener
Palak Yojana

M. B. Sardar
Asst. Professor & H.O.D. [Marathi]
Arts, Science & Commerce College,
Chikhaldara



Principal
PRINCIPAL
Art, Science & Commerce
College, Chikhaldara

**Arts, Science & Commerce College, Chikhaladara
Palak Yojana (Science)
Academic Year-2017-18**

Activity Report

Palak Yojana is an innovative scheme conducted by the college for development of student.

The main objectives of the scheme are


- 1) To pay personal attention to the student.
- 2) To address various problems of student.
- 3) To provide academic and personal guidance.

The total number of students (beneficiaries): 297

Brief summary of the activity:

In the academic year 2017-18 total 297 students were admitted in the science faculty and there were 17 -18 students under the vigilance of every teacher. It is expected to from every teacher (*Palak*) to provide personal and academic guidance to his ward (*Playa*) and also keep in touch with his parents. The teacher personally records the student's attendance. Also student's progress is monitored by the teacher. It is our prime concern that students admitted in the college must get the most and the best available here. It is tried to address the problems of students by the teacher and the institute through 'Palak Yojana' so as to ensure regular attendance good academic performance of student. Palak Melava was also organized on 3rd February 2018. Total 42 parents were present in Palak Melava.


Acting Principal
Art, Science & Commerce College
Chikhaladara, Dist. Amrayati


उत्तरीयक
पालक योजना विज्ञान शाखा
कला, विज्ञान व वाणिज्य महाविद्यालय
चिखलदारा

Arts, Science & Commerce College, Chikhaladara
Palak Yojana (Science)
Academic Year-2018-19

Activity Report

Palak Yojana is an innovative scheme conducted by the college for the development of student.

The main objectives of the scheme are

- 1) To pay personal attention to the student.
- 2) To address various problems of student.
- 3) To provide academic and personal guidance.

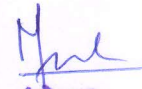
The total number of students (beneficiaries): 301

Brief summary of the activity:

Total 301 number of students admitted in the science faculty in the academic year 2018-19 and there were 16 -18 students were adopted by every teacher (Palak) who is expected to provide personal and academic guidance to his ward (*Playa*) and also keep himself in touch with the student his parents. Student's attendance is personally recorded by the teacher. The teacher also monitors the student's progress.. It is our prime concern that students admitted in the college must get the most and the best available here. Regular attendance and good academic performance can be ensured through 'Palak Yojana'. Palak Melava was also organized on 3rd February 2018. Total 42 parents were present in Palak Melava.



Acting Principal
Art, Science & Commerce College
Chikhaladara, Dist. Amrayati



संयोजक
सलक योजना विज्ञान शाखा
कला, विज्ञान व वाणिज्य महाविद्यालय,
चिखलदारा

**Arts, Science & Commerce College, Chikhaladara
Palak Yojana (Science)
Academic Year 2019-20**

Activity Report

Palak Yojana is an innovative scheme introduced by the college for development of student.

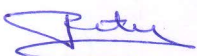
The main objectives of this scheme are


- 1) To pay personal attention to the student.
- 2) To address various problems of student.
- 3) To provide academic and personal guidance.

The total number of students (beneficiaries): 226

Brief summary of the activity:

Total 226 students were admitted in the academic year 2019-20 in the science faculty and there were 15 -16 students adopted by every teacher (*Palak*) who is expected to provide academic and personal guidance to his students(*Playa*) and also keep in touch with his parents. The teacher personally records the student's attendance. He also personally monitors the students' progress. We make it our prime concern that the students admitted to the institute must avail of the most and the best here. It is the effort of all teachers to ensure regular attendance and improve academic performance of their students. We also try to address the problems of students through Palak Yojana. The consistent and regular contacts with the student make them to share their problems. Most of the students are of poor economical back ground. We can help a few students to some extent. It is noteworthy here that in the pandemic of COVID-19, Palak Yojana played an important role to contact the students personally and to send them exam related information as received from the university, to conduct online examination and to address exam related queries. Palak Melava was also organized on 15th February 2020. Total 43 parents are present in Palak Melava.


Acting Principal
Art, Science & Commerce College
Chikhaladara, Dist. Amrayati


संयोजक
पालक योजना विज्ञान शाखा
कला, विज्ञान व वाणिज्य महाविद्यालय
चिखलदरा

**Arts, Science & Commerce College, Chikhaladara
Palak Yojana (Science)
Academic Year 2020-21**

Activity Report

Palak Yojana is an innovative scheme introduced by the college for the benefit of student.

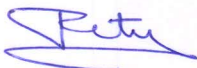
The main objectives of this scheme are

- 1) To pay personal attention to the student.
- 2) To address various problems of student.
- 3) To provide academic and personal guidance.


The total number of students (beneficiaries): 262

Brief summary of the activity:

In science faculty, total 262 students were admitted in the academic session 2020-21 and there were 17 -18 students adopted by every teacher(*Palak*) who is expected to provide academic and personal guidance to his students(*Playa*) and also keep in touch with his parents. The teacher personally records the student's attendance. Student's progress is personally monitored by the teachers. It is our prime concern that the students admitted to the institute must avail of the most and the best here. Also it is the effort of all teachers to ensure regular attendance and improve academic performance of their students. We also try to address the problems of students through Palak Yojana. The consistent and regular contacts with the student make them to share their problems. Most of the students have weak economical back ground. We can help a few students to some extent. It is noteworthy here that in the pandemic of COVID-19, the Palak Yojana played an important role to contact the students personally and to send them exam related information as received from the university, to conduct online examination and to address their exam related queries.



**Acting Principal
Art.Science & Commerce College
Chikhaladara, Dist. Amrayati**



**संयोजक
बालक योजना विज्ञान शाखा
कला, विज्ञान व वाणिज्य महाविद्यालय
चिखलदरा**

Arts, Science & Commerce College, Chikhaladara
Palak Yojana (Science)
Academic Year 2021-22
Activity Report

Palak Yojana is an innovative scheme introduced by the college for the benefit of student.

The main objectives of this scheme are

- 1) To pay personal attention to the student.
- 2) To address various problems of student.
- 3) To provide academic and personal guidance.

The total number of students (beneficiaries): 243

Brief summary of the activity:

In science faculty, total 243 students were admitted in the academic session 2021-22 and there about 14 -15 students adopted by every teacher(*Palak*) who is expected to provide academic and personal guidance to his students(*Playa*) and also keep in touch with his parents. The teacher personally records the student's attendance and monitors his/her progress. The prime concern is that the students admitted to the institute must avail of the most and the best here. All the teachers make the efforts to ensure regular attendance and improve academic performance of their students. Their problems are also addressed through Palak Yojana. The regular contacts with the student make them to share their problems. The information received from government, university is being shared to all students. Also the COVID-19 vaccinated students' information is also collected through Palak Yojana and sent to the government.


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Arts, Science & Commerce College, Chikhaldara
Palak Yojana (Commerce)
Academic Year-2017-18

Activity Report

Palak Yojana is an innovative scheme conducted by the college for development of student.

The main objectives of the scheme are

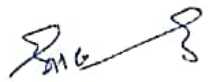
- 1) To pay personal attention to the student.
- 2) To address various problems of student.
- 3) To provide academic and personal guidance.

The total number of students (beneficiaries): 125

Brief summary of the activity:

In the academic year 2017-18 total 125 students were admitted in the science faculty and there were 17-18 students under the vigilance of every teacher. It is expected to from every teacher (*Palak*) to provide personal and academic guidance to his ward (*Playa*) and also keep in touch with his parents. The teacher personally records the student's attendance. Also student's progress is monitored by the teacher. It is our prime concern that students admitted in the college must get the most and the best available here. It is tried to address the problems of students by the teacher and the institute through 'Palak Yojana' so as to ensure regular attendance good academic performance of student.




संयोजक
पालक योजना वाणिज्य शाखा
कला, विज्ञान व वाणिज्य महाविद्यालय
चिखलदरा


Acting Principal
Art, Science & Commerce College,
Chikhaldara, Dist. Amravati

Arts, Science & Commerce College, Chikhaladara
Palak Yojana (Commerce)
Academic Year-2018-19

Activity Report

Palak Yojana is an innovative scheme conducted by the college for development of student.

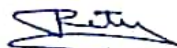
The main objectives of the scheme are

- 1) To pay personal attention to the student.
- 2) To address various problems of student.
- 3) To provide academic and personal guidance.

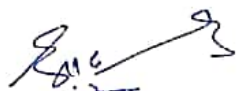
The total number of students (beneficiaries): 99

We could meet and get in touch with most of the students through palak yojana. We develop personal relations with them. Students share their difficulties, discrepancies with us as their real parents lack required awareness about education we have to make up for the void. Through counseling and consultation we can develop a proper mindset among students. This has improved the regularity and students' participation in various curricular, co-curricular and extracurricular activities in college. In the session 2018-19 total 99 students admitted in the Commerce faculty and 24 to 27 students were adopted by each teacher who is expected to provide academic and personal guidance to his wards and also keep in touch with the parents. The attendance of the students is recorded regularly by the palak teacher. Student's progress is personally monitored by teachers through "Palak Yojna". We make it our concern that the students admitted to the institute must avail of the most and the best here. Regular attendance, good academic performance can be ensured under Palak Yojana. We also try to address the personal problems of students through Palak Yojana. It is only after consistent and regular contacts with them the students open up and are willing to share their concerns. Most of the students are from outside requiring hostel facility. The existing hostel cannot accommodate even 50 % of the needy. This stands out as a towering must. We can help a few students in accommodation to some extent.




Acting Principal

Art, Science & Commerce College,
Chikhaladara, Dist. Amravati


संयोजक
पालक योजना समिती शाखा
कला, विज्ञान व वाणिज्य महाविद्यालय
चिखलदरा

Arts, Science & Commerce College, Chikhaladara
Palak Yojana (Commerce)
Academic Year-2019-20

Activity Report

Palak Yojana is an innovative scheme conducted by the college for development of student.

Objectives of Committee :

- To pay personal attention to students.
- To address various problems of students.
- To provide academic and personal guidance.

Number of beneficiaries :- 51 students

Brief summary of the Activity :-

In the session 2019 -20 total 51 students admitted in the Commerce faculty. All Students Through Palak Yojna are adopted by each teacher who is expected to provide academic and personal guidance to his wards and also keep in touch with the parents. Efforts were made to ensure regular attendance of the students in the college and by contacting the irregular and absent students by telephone, letter and face to face, they were instructed to attend the college regularly and efforts were made to solve their problems. Counseling is also provided to parents when required. The attendance of the students is recorded regularly by the palak teacher. Student's progress is personally monitored by teachers through "Palak Yojna". We make it our concern that students admitted to the institute must avail of the most and the best here. regular attendance, good accademic performance, can be ensured under palak yojna.



S.L. Kottewar

Palak Yojana Coordinator

(Department of Commerce)

संयोजक

पालक योजना समिती शाखा

कला, विज्ञान व वाणिज्य महाविद्यालय

चिखलदरा

Acting Principal

Art, Science & Commerce College,
Chikhaladara, Dist. Amravati

Arts, Science & Commerce College, Chikhaladara
Palak Yojana (Commerce)
Academic Year-2020-21

Activity Report

Palak Yojana is an innovative scheme conducted by the college for development of student.

Objectives of Committee :

- To pay personal attention to students.
- To address various problems of students.
- To provide academic and personal guidance.

Number of beneficiaries :- 112 students

Brief summary of the Activity :-

In the session 2020 -21 total 112 students admitted in the Commerce faculty and All Number of students who have been given guardianship under parental scheme to parent teachers in Commerce branch ,Parent Teacher Mr.A.R. Kanhu – 28, Mr. S.L Kottewar - 29 Dr. P.M.Kute - 27, Mr. V. M. More – 28 , Students Through Palak Yojna are adopted by each teacher who is expected to provide academic and personal guidance to his wards and also keep in touch with the parents. Efforts were made to ensure regular attendance of the students in the college and by contacting the irregular and absent students by telephone, letter and face to face, they were instructed to attend the college regularly and efforts were made to solve their problems. Counseling is also provided to parents when required. The attendance of the students is recorded regularly by the palak teacher. Student's progress is personally monitored by teachers through "Palak Yojna". We make it our concern that students admitted to the institute must avail of the most and the best here. regular attendance, good accademic performance, can be ensured under palak yojna.





S.L.Kottewar
Palak Yojana Coordinator
(Department of Commerce)

कला, विज्ञान व वाणिज्य विभाग
चिखलदारा



Acting Principal
Art Science & Commerce College,
Chikhaladara, Dist. Amravati

Arts, Science & Commerce College, Chikhaldara, Dist. Amravati
Palak Yojana Commerce Faculty
Academic Year-2021-22

Activity Report

Palak Yojana is an innovative scheme conducted by the college for development of student.

Objectives of Committee :

- To pay personal attention to students.
- To address various problems of students.
- To provide academic and personal guidance.

Number of beneficiaries :- 152 students

Brief summary of the Activity :-

We could meet and get in touch with most of the students through palak yojana. We develop personal relations with them. Students share their difficulties, discrepancies with us as their real parents lack required awareness about education we have to make up for the void. Through counseling and consultation we can develop a proper mindset among students. This has improved the regularity and students' participation in various curricular, co-curricular and extracurricular activities in college. In the session 2021-22 total 152 students admitted in the Commerce faculty and 38 students were adopted by each teacher who is expected to provide academic and personal guidance to his wards and also keep in touch with the parents. The attendance of the students is recorded regularly by the palak teacher. Student's progress is personally monitored by teachers through "Palak Yojna". We make it our concern that the students admitted to the institute must avail of the most and the best here. Regular attendance, good academic performance can be ensured under Palak Yojana. We also try to address the personal

problems of students through Palak Yojana. It is only after consistent and regular contacts with them the students open up and are willing to share their concerns. Most of the students are from outside requiring hostel facility. The existing hostel cannot accommodate even 50 % of the needy. This stands out as a towering must. We can help a few students in accommodation to some extent.

MSL
PRINCIPAL
Art, Science & Commerce
Art, Science & Commerce College
Chikhaldara, Dist. Amra



A handwritten signature in black ink, appearing to read 'S.L. Kottewar', written over a horizontal line.

Mr.S.L.Kottewar, Palak Yojana Coordinator

Arts, Science & Commerce College, Chikhaldara

Gunwant Vidyarthi Satkar Programme Report 2020-21 & 2021-22

Title of the Activity : Gunwant Vidyarthi Satkar Programme
Academic Year : 2020-21 and 2021-22
Title of program conducted : Felicitation and prizes distribution ceremony
Date of program : 28/03/2023
Objectives of program :


1. Motivate the students to obtain rank and good marks.
2. To make them aware about the competition.
3. To enhance the quality of student.
4. Creating Student Activism that would make him/her perfect

Number of beneficiaries : 62

Brief summary of the program : The prize distribution ceremony of Gunwant Vidyarthi Satkar committee was held on 28th March 2023 In the opening ceremony of Annual Gathering. Dr.R.S. Jaipurkar,Principal of the college was present as a chairperson and Smt. Vijaya Somwanshi, President, Municipal Council, Chikhaldara was guest of honor.

The prize distribution was based upon the various results obtained from the various category viz., B.Sc., B.A. and B.Com results of Sant Gadge Baba Amravati University Amravati for the session 2020-2021 and 2021-2022, best sportsman from various sports, university color coat and various college level exams conducted by Career Guidance Cell. Total 62 cash prizes were distributed amounting of Rs. 39,566/- (*Thirty Nine thousand five hundred sixty six only*)




Dr. R. S. Jaipurkar
Principal
Arts Science & Commerce College,
Chikhaldara, Dist - Amravati

Arts, Science & Commerce College, Chikhaldara

Committee Report 2019-20

Name of Committee : GunwantVidyarthiSatkarcommittee Year: 2019-20

Title of program conducted : Felicitation and prizes distribution ceremony

Date of program : 14/02/2020

Objectives of program :

1. Motivate the students to obtain rank and good marks.
2. To make them aware about the competition.
3. To enhance the quality of student.
4. Creating Student Activism that would make him/her perfect

Number of beneficiaries : 63

Brief summary of the program : The prize distribution ceremony of GunwantVidyarthiSatkar committee was held on 14th February 2020 in the opening ceremony of annual Gathering. Dr. V.R. Patil principal of the college was present as a chairperson and Dr. DineshkumarSatange, Director, Student Development, SGB Amravati University, Amravati was guest of honour.

The prize distribution was based upon the various results obtained from the various category viz., B.Sc., B.A. and B.Com results of SantGadge Baba Amravati University Amravati for the session 2018-19, best sportsman from various sports, university colour coat and various college level exams conducted by Career Guidance Cell. Total 63 cash prizes were distributed amounting of Rs. 35,561/- (*Thirty five thousand four hundred sixty one only*)



Arts, Science & Commerce College, Chikhaldara

GunwantVidhyarthiSatskar committee

Committee Report 2019-20

Brief Report

The GunwantVidhyarthiSatskar was held on 14th February 2020 after the inauguration of annual Gathering by distributing the cash prizes and certificates under the GunwantVidhyarthiSatskar Committee. For this function, Dr. V. R. Patil, Principal, ASCC was present as a chairperson and Dr. Dineshkumar Satange, Director, Student Development, SGB Amravati University, Amravati was present as chief guest.

The prize distribution was based upon the various results obtained from the various category viz., B.Sc., B.A. and B.Com results of SantGadge Baba Amravati University Amravati for the session 2018-19, best sportsman from various sports, university colour coat and various college level exams conducted by Career Guidance Cell. Total 68 cash prizes of Rs. 39066/- (Rs. *Thirty nine thousand and sixty six only*) received from the sponsors of Gunwant Vidhyarthi Satskar 2018-2019 out of which total 63 cash prizes of Rs. 35561/- (*Thirty five thousand four hundred sixty one only*) has been fully utilized for the purpose for which it was received from the sponsors. Remaining amount of Rs. 3004 /- was transferred to the college account. The detailed of prizes are as follows;

- 1) Total Number of prizes received : 68
- 2) Total Number of eligible candidates : 64
- 3) Total Number of prizes distributed : 63
- 4) Total Number of Students Absent : 01



RYL
Dr. R. S. Jaipurkar
Principal
Arts Science & Commerce College,
Chikhaldara, Dist - Amravati

Arts, Science & Commerce College, Chikhaldara

Committee Report 2018-19

Name of Committee : Gunwant Vidyarthi Satkar committee Year: 2018-19

Title of program conducted : Felicitation and prizes distribution ceremony

Date of program : 01/02/2019

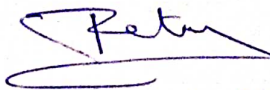
Objectives of program :


1. Motivate the students to obtain rank and good marks.
2. To make them aware about the competition.
3. To enhance the quality of student.
4. Creating Student Activism that would make him/her perfect

Number of beneficiaries : 60

Brief summary of the program : The prize distribution ceremony of Gunwant Vidyarthi Satkar committee was held on 01st February 2019 in the opening ceremony of annual Gathering. Dr. V. R. Patil principal of the college was present as a chairperson and Mr. Yashwant Bahale , was guest of honor.

The prize distribution was based upon the various results obtained from the various category viz., B.Sc., B.A. and B.Com results of Sant Gadge Baba Amravati University Amravati for the session 2017-18, best sportsman from various sports, university colour coat and various college level exams conducted by Career Guidance Cell. Total 60 cash prizes were distributed amounting of Rs. 33,059/- (Thirty three thousand and fifty nine only)


Acting Principal
Art, Science & Commerce College,
Chikhaldara, Dist. Amravati


Co-ordinator,
Gunwant Vidyarthi Satkar
Committee

Arts, Science & Commerce College, Chikhaldara

Committee Report 2017-18

Name of Committee : Gunwant Vidyarthi Satkar committee Year: 2017-18

Title of program conducted : Felicitation and prizes distribution ceremony

Date of program : 02/02/2018


Objectives of program :

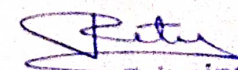
1. Motivate the students to obtain rank and good marks.
2. To make them aware about the competition.
3. To enhance the quality of student.
4. Creating Student Activism that would make him/her perfect

Number of beneficiaries : 60

Brief summary of the program : The prize distribution ceremony of Gunwant Vidyarthi Satkar committee was held on 02nd February 2018 in the opening ceremony of annual Gathering. Dr. V. R. Patil principal of the college was present as a chairperson and Mrs. Piusa Jagtap (IFS), was guest of honor. Mr. Yogesh Manohare , G.S. of the college was present as a chief guest.

The prize distribution was based upon the various results obtained from the various category viz., B.Sc., B.A. and B.Com results of Sant Gadge Baba Amravati University Amravati for the session 2017-18, best sportsman from various sports, university colour coat and various college level exams conducted by Career Guidance Cell. Total 60 cash prizes were distributed amounting of Rs. 33,558/- (*Thirty three thousand five hundred fifty eight only*)


Co-ordinator
Gunwant Vidyarthi Satkar
Samiti


Acting Principal
Art, Science & Commerce College,
Chikhaldara, Dist. Amravati

Sipna Shikshan Prasarak Mandal, Amravati
Arts, Science and Commerce College, Chikhaldara
The Best Student Award Committee
(2021-2022)

REPORT

Since establishment of the best student award committee in 2004, every year through a well defined process the Best Student of the Year is selected.

Objectives:

- To encourage students for better academic performance
- Personality development of students
- To create affinity for college among students
- To develop social view among students
- To develop writing skill of students
- To develop skill of discussion of students
- To develop communication skill of students

Selection Procedure:

Step I: Nomination of students by all the departments and committees.

Step II: Written test, group discussion and interview of top 10-12 students.

Date WT/GD/Interview: 23.05.2022

Date of Award Ceremony: 20.12.2022

Total Number of Students Nominated: 48

No. of Students Selected for WT/GD/Interview: 12

Question Paper Content of Written Test:

Picture/Theme Story Test, Situation Reaction Test, Personal View etc

Topic of Group Discussion: Work from Home: Pros and Cons

Focus Areas for Interview: Affinity for College, Personality & General Awareness

Topper: Akash Pathak (B.Sc.III)

Documents: Notice for Staff & Students, Score Sheets, Attendance of the Students,
Certificate & Photographs

Summary:

All the departments and concerned committees are asked to nominate the students for the best student award. For nomination special data sheet is provided to all. Out of nominated students top 12 students are selected. For these top 12 students written test, group discussion and interview are conducted. From this The Best Student is selected. Trophy and Certificate is given to the best student in the jubilant atmosphere during cultural program in the college.





Latitude: 21.406265
 Longitude: 77.319567
 Elevation: 1094.45±68 m
 Accuracy: 16.1 m
 GPSTime: 20 December, '22 1:27:01 AM
 Time zone: India Standard Time
 Note: BEST STUDENT AWARD

Powered by NoteCam

Mr. Akash Pathak is receiving award.

CERTIFICATE

SIPNA SHIKSHAN PRASARAK MANDAL AMRAVATI'S
ARTS, SCIENCE & COMMERCE COLLEGE, CHIKHALDARA
 NACC REACCREDITED WITH CGPA 2.77 AT GRADE B++ (2018-2023)



This is to certify that Mr./Miss. AKASH PATHAK
has obtained the first position in "The Best Student Award Competition". And we feel great pleasure to declare him/her as "The Best Student" of the year 2020-2021.

Dated : 20 / 12 / 2022
 Place : Chikhaldara



Shri. Jagdish M. Gupta
 Ex. MLC & Ex. State Minister, Maharashtra
 President
 Sipna Shikshan Prasarak Mandal,
 Amravati




Dr. D. S. Hedao
 Convener
 Selection Committee




Dr. R. S. Jaipurkar
 Principal
 Arts, Science & Commerce College,
 Chikhaldara.

Certificate


 Dr. D.S. HEDAO
 Convener
 The Best Student Award Committee




 Dr. R.S. JAIPURKAR
 Principal
PRINCIPAL
 Art, Science & Commerce
 College Chikhaldara

Sipna Shikshan Prasarak Mandal, Amravati
Arts, Science and Commerce College, Chikhaldara
The Best Student Award Committee
(2020-2021)

REPORT

Since establishment of the best student award committee in 2004, every year through a well defined process the Best Student of the Year is selected.

Objectives:

- To encourage students for better academic performance
- Personality development of students
- To create affinity for college among students
- To develop social view among students
- To develop writing skill of students
- To develop skill of discussion of students
- To develop communication skill of students

Selection Procedure:

Step I: Nomination of students by all the departments and committees.

Step II: Written test, group discussion and interview of top 10-12 students.

Date WT/GD/Interview: 15.07.2021

Date of Award Ceremony: 20.12.2022

Total Number of Students Nominated: 48

No. of Students Selected for WT/GD/Interview: 10

Question Paper Content of Written Test:

Picture/Theme Story Test, Situation Reaction Test, Personal View etc

Topic of Group Discussion: Importance of Mental Health During Pandemic

Focus Areas for Interview: Affinity for College, Personality & General Awareness

Topper: Ku. Nandini G. Ingle (B.A. II)

Documents: Certificate, Photographs etc

Summary:

All the departments and concerned committees are asked to nominate the students for the best student award. For nomination special data sheet is provided to all. Out of nominated students top 10 students are selected. For these top 10 students written test, group discussion and interview are conducted. From this The Best Student is selected. Trophy and Certificate is given to the best student in the jubilant atmosphere during cultural program in the college.





Latitude: 21.406267
 Longitude: 77.319565
 Elevation: 1103.99±20 m
 Accuracy: 16.3 m
 GPSTime: 20 December, '22 1:20 PM
 Time zone: India Standard Time
 Note: BEST STUDENT AWARD

Powered by NoteCam

Ku. Nandini G. Ingle is receiving award.

CERTIFICATE

SIPNA SHIKSHAN PRASARAK MANDAL AMRAVATI'S
ARTS, SCIENCE & COMMERCE COLLEGE, CHIKHALDARA
 NACC REACCREDITED WITH CGPA 2.77 AT GRADE B++ (2018-2023)



*This is to certify that Mr./Miss. Ku. Nandini G. Ingle
 has obtained the first position in "The Best Student Award
 Competition". And we feel great pleasure to declare him/her
 as "The Best Student" of the year 2019-2020.*

Dated : 20 / 12 / 2022
Place : Chikhaldara



Shri. Jagdish M. Gupta
Ex. MLC & Ex. State Minister, Maharashtra
President
Sipna Shikshan Prasarak Mandal,
Amravati




Dr. D. S. Hedao
Convener
Selection Committee




Dr. R. S. Jaipurkar
Principal
Arts, Science & Commerce College,
Chikhaldara.

Certificate


 Dr. D.S. HEDAO
 Convener
 The Best Student Award Committee




 Dr. R.S. JAIPURKAR
 Principal
PRINCIPAL
Art, Science & Commerce
College, Chikhaldara

Sipna Shikshan Prasarak Mandal, Amravati
Arts, Science and Commerce College, Chikhaldara
The Best Student Award Committee
(2019-2020)

REPORT

Since establishment of the best student award committee in 2004, every year through a well defined process the Best Student of the Year is selected.

Objectives:

- To encourage students for better academic performance
- Personality development of students
- To create affinity for college among students
- To develop social view among students
- To develop writing skill of students
- To develop skill of discussion of students
- To develop communication skill of students

Selection Procedure:

Step I: Nomination of students by all the departments and committees.

Step II: Written test, group discussion and interview of top 10-12 students.

Date WT/GD/Interview: 12.02.2020

Date of Award Ceremony: 15.02.2020

Total Number of Students Nominated: 48

No. of Students Selected for WT/GD/Interview: 12

Question Paper Content of Written Test:

Picture/Theme Story Test, Situation Reaction Test, Personal View etc

Topic of Group Discussion: Social Media

Focus Areas for Interview: Affinity for College, Personality & General Awareness

Topper: Mr. Sunil S. Chavan (B.A. II)

Documents: Notice for Staff & Students, Score Sheets, Attendance of the Students, Certificate & Photographs



Summary:

All the departments and concerned committees are asked to nominate the students for the best student award. For nomination special data sheet is provided to all. Out of nominated students top 12 students are selected. For these top 12 students written test, group discussion and interview are conducted. From this The Best Student is selected. Trophy and Certificate is provided to the best student in the jubilant atmosphere during cultural program in the college.



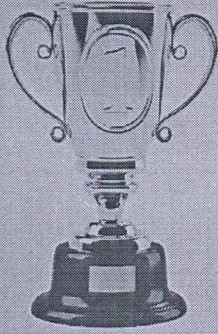
Mr. Sunil S. Chavan is receiving award.



CERTIFICATE

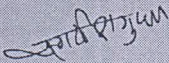
SIPNA SHIKSHAN PRASARAK MANDAL AMRAVATI'S
ARTS, SCIENCE & COMMERCE COLLEGE, CHIKHALDARA

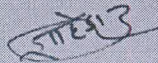
NACC REACCREDITED WITH CGPA 2.77 AT GRADE B++ (2018-2023)

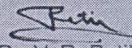


*This is to certify that Mr./Miss. Sunil S. Chavan
has obtained the first position in "The Best Student Award
Competition". And we feel great pleasure to declare him/hér
as "The Best Student" of the year 2018-19.*

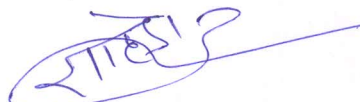
Dated : 15/02/2020
Place : Chikhaldara


Shri. Jagdish M. Gupta
Ex. MLC & Ex. State Minister, Maharashtra
President
Sipna Shikshan Prasarak Mandal,
Amravati

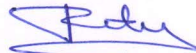

Dr. D. S. Hedao
Convener
Selection Committee


Dr. V. R. Patil
Principal
Arts, Science & Commerce College,
Chikhaldara.

Certificate


Dr. D.S. HEDAOO
Convener
The Best Student Award Committee




Dr. V. R. PATIL
Asstg. Principal
Principal
Art, Science & Commerce College
Chikhaldara, Dist. Amravati

Sipna Shikshan Prasarak Mandal, Amravati
Arts, Science and Commerce College, Chikhaldara
The Best Student Award Committee
(2018-2019)

REPORT

Since establishment of the best student award committee in 2004, every year through a well defined process the Best Student of the Year is selected.

Objectives:

- To encourage students for better academic performance
- Personality development of students
- To create affinity for college among students
- To develop social view among students
- To develop writing skill of students
- To develop skill of discussion of students
- To develop communication skill of students

Selection Procedure:

Step I: Nomination of students by all the departments and committees.

Step II: Written test, group discussion and interview of top 10-12 students.

Date WT/GD/Interview: 29th Jan, 2019

Date of Award Ceremony: 02nd Feb, 2019

Total Number of Students Nominated: 50

No. of Students Selected for WT/GD/Interview: 12

Question Paper Content of Written Test:

Picture/Theme Story Test, Situation Reaction Test, Personal View etc

Topic of Group Discussion: Farmer's Suicides

Focus Areas for Interview: Affinity for College, Personality & General Awareness

Topper: Ku. Ekta J. Kanase (B.Sc.II)

Documents: Notice for Staff & Students, Score Sheets, Attendance of the Students, Certificate & Photographs



Summary:

All the departments and concerned committees are asked to nominate the students for the best student award. For nomination special data sheet is provided to all. Out of nominated students top 12 students are selected. For these top 12 students written test, group discussion and interview are conducted. From this The Best Student is selected. Trophy and Certificate is provided to the best student in the jubilant atmosphere during cultural program in the college.



Ku. Ekta Kanase receiving award.



CERTIFICATE

SIPNA SHIKSHAN PRASARAK MANDAL AMRAVATI'S ARTS, SCIENCE & COMMERCE COLLEGE, CHIKHALDARA

NACC REACCREDITED WITH CGPA 2.77 AT GRADE B++ (2018-2023)



This is to certify that ~~Mr./Miss.~~ Ekta J. Kanase
has obtained the first position in "The Best Student Award
Competition". And we feel great pleasure to declare him/her
as "The Best Student" of the year 2017-18.

Dated : 02/02/2019
Place : Chikhaldara

Shri. Jagdish M. Gupta
Ex. MLC & Ex. State Minister, Maharashtra
President
Sipna Shikshan Prasarak Mandal,
Amravati

Dr. D. S. Hedao
Convener
Selection Committee

Dr. V. R. Patil
Principal
Arts, Science & Commerce College,
Chikhaldara.

Certificate

Dr. D.S. HEDA OO
Convener
The Best Student Award Committee



Dr. V. R. PATIL
Principal
Art, Science & Commerce College
Chikhaldara, Dist. Amravati

Sipna Shikshan Prasarak Mandal, Amravati
Arts, Science and Commerce College, Chikhaldara
The Best Student Award Committee
(2017-2018)

REPORT

Since establishment of the best student award committee in 2004, every year through a well defined process the Best Student of the Year is selected.

Objectives:

- To encourage students for better academic performance
- Personality development of students
- To create affinity for college among students
- To develop social view among students
- To develop writing skill of students
- To develop skill of discussion of students
- To develop communication skill of students

Selection Procedure:

Step I: Nomination of students by all the departments and committees.

Step II: Written test, group discussion and interview of top 10-12 students.

Date WT/GD/Interview: 30.01.2018

Date of Award Ceremony: 03.02.2018

Total Number of Students Nominated: 47

No. of Students Selected for WT/GD/Interview: 10

Question Paper Content of Written Test:

Picture/Theme Story Test, Situation Reaction Test, Personal View etc

Topic of Group Discussion: Health and Wealth

Focus Areas for Interview: Affinity for College, Personality & General Awareness

Topper: Mr. Yogesh N. Manohare

Documents: Notice for Staff & Students, Score Sheets, Attendance of the Students, News, Certificate & Photograph



Summary:

All the departments and concerned committees are asked to nominate the students for the best student award. For nomination special data sheet is provided to all. Out of nominated students top 10 students are selected. For these top 10 students written test, group discussion and interview are conducted. From this The Best Student is selected. Trophy and Certificate is provided to the best student in the jubilant atmosphere during cultural program in the college.



Mr. Yogesh Manohare is receiving award.



CERTIFICATE



SIPNA SHIKSHAN PRASARAK MANDAL AMRAVATI'S
ARTS, SCIENCE & COMMERCE COLLEGE, CHIKHALDARA.

NAAC REACCREDITED WITH CGPA 2.58 AT GRADE B (2013-2018)



This is to certify that Mr./Miss. Yogesh N. Manohare.....
has obtained the first position in the "Best Student Award Competition".
And we feel great pleasure to declare him/her as "The Best Student"
of the year 2016-2017.

Dated : 03-02-2018

Place : Chikhaldara

Shri. Jagdish M. Gupta
Ex.MLC & Ex. State Minister, Maharashtra
President
Sipna Shikshan Prasarak Mandal,
Amravati

Dr. D. S. Hedao
Convener
Selection Committee

Dr. V. R. Patil
Principal
Arts, Science & Commerce College,
Chikhaldara

Certificate



सिपनाचा 'द बेस्ट स्टुडंट अवॉर्ड' योगेशला

अमरावती : सिपना शिक्षण प्रसारक मंडळाच्या वतीने दरवर्षी दिल्या जाणारा द बेस्ट स्टुडंट ऑफ द इअर पुरस्कार यावर्षी बी. ए. भाग १ मध्ये शिकणाऱ्या योगेश मनोहरे याला देण्यात आला. दरवर्षी संस्थेकडून उत्कृष्ट विद्यार्थ्यांची निवड केली जाते. याकरिता ४७ विद्यार्थ्यांचे नामांकन या पुरस्काराकरिता प्राप्त झाले होते. यापैकी १० विद्यार्थ्यांची पात्र म्हणून निवड करण्यात आली. यामध्ये राहुल काकडे, राहुल वाढाई, रूचिता उघडे, एकता कनासे, हीना खान, अंकिता गांवडे, वैशाली तायडे, रवींद्र शेळके, सुनीता भिलावेकर यांचा समावेश होता. यातून योगेश मनोहरे याची या पुरस्काराकरिता निवड करण्यात आली.

सिपना शिक्षण प्रसारक मंडळ
दि. 06/03/18 पत्र 015

News in Daily Newspaper Tarun Bharat. Date: 06.03.2018



Dr. D.S. HEDA OO
Convener
The Best Student Award Committee



Dr. V. R. PATIL
Acting Principal
Art, Science & Commerce College
Chikhaldara, Dist. Amravati

SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI

Name of College : Arts, Science and Commerce College, Chikhaldara, Distt. Amravati

College Code : 0163

Appendix -E

Statement of Admitted Student Session 2017-18

Upto 01/10/2017

| Sr. No. | Name of Exam | SC | | ST | | VJ | | NT-B | | NT-C | | NT-D | | OBC | | SBC | | MARATH | | MUSLIM | | OPEN | | P. | | Blind | | Third Person | Total | | Total | |
|----------------------------|----------------------|-----------|------------|-----------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|------------|-----------|-----------|----------|----------|----------|-----------|----------|-----------|-----------|----------|----------|----------|----------|-----------|--------------|-----------|------------|------------|------------|
| | | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | | | | | |
| 1 | B.A. I | 8 | 6 | 33 | 25 | 0 | 0 | 21 | 8 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | 41 | 110 |
| | B.A. II | 0 | 0 | 9 | 10 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 14 | 28 | |
| | B.A. III | 4 | 2 | 13 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Arts Total | 12 | 8 | 55 | 41 | 0 | 0 | 24 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 14 | 28 | |
| 2 | B.Sc. I | 10 | 4 | 12 | 20 | 0 | 0 | 9 | 1 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 17 | 8 | 25 | |
| | B.Sc. II | 9 | 2 | 11 | 11 | 0 | 1 | 2 | 2 | 2 | 0 | 0 | 0 | 34 | 12 | 0 | 1 | 1 | 0 | 5 | 2 | 7 | 3 | 0 | 0 | 0 | 0 | 78 | 44 | 122 | | |
| | B.Sc. III | 4 | 3 | 14 | 5 | 0 | 0 | 2 | 1 | 2 | 1 | 1 | 0 | 26 | 13 | 0 | 1 | 0 | 0 | 4 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | 58 | 34 | 92 | | |
| | Science Total | 23 | 9 | 37 | 36 | 0 | 1 | 13 | 4 | 4 | 2 | 1 | 0 | 22 | 16 | 0 | 0 | 0 | 0 | 4 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 34 | 92 |
| 3 | B.Com. I | 17 | 3 | 19 | 17 | 0 | 0 | 9 | 0 | 0 | 1 | 0 | 82 | 41 | 0 | 2 | 1 | 0 | 13 | 3 | 14 | 11 | 0 | 0 | 0 | 0 | 52 | 31 | 83 | | | |
| | B.Com. II | 2 | 2 | 10 | 3 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 13 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 188 | 109 | 297 | | | |
| | B.Com. III | 2 | 1 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 23 | 85 | | | |
| | Commerce | 21 | 6 | 34 | 20 | 1 | 0 | 10 | 2 | 0 | 2 | 0 | 0 | 17 | 4 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 9 | 28 | | | |
| 4 | M.Sc. I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 4 | 2 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 8 | 4 | 12 | | |
| | M. Sc. II | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89 | 36 | 125 | | |
| | PG Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | 56 | 23 | 126 | 97 | 1 | 1 | 47 | 16 | 4 | 4 | 1 | 0 | 107 | 45 | 2 | 3 | 2 | 0 | 14 | 6 | 17 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total Category wise | 79 | | 223 | | 2 | | 63 | | 8 | | 1 | | 152 | | 5 | | 2 | | 20 | | 30 | | 0 | | 0 | | 0 | | 0 | 377 | 208 | 585 |

[Signature]
Asstt. Registrar (Enrollment)
Sant Gadge Baba Amravati Univer. -

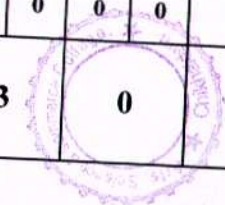


[Signature]
Principal
Arts, Science & Commerce College
Chikhaldara Dist. Amravati

Upto01/10/2018

| Sr. No. | Name of Exam | SC | | ST | | VJ | | NT-B | | NT-C | | NT-D | | OBC | | SBC | | MARATH | | MUSLIM | | OPEN | | P. | | Blind | | Third Person | Total | | Total |
|---------|----------------------------|-----------|------------|------------|------------|----------|----------|------------|-----------|----------|----------|------------|-----------|------------|-----------|----------|----------|----------|----------|-----------|----------|-----------|----------|----------|----------|----------|------------|--------------|------------|-----------|-------|
| | | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | | Boys | Girls | |
| 1 | B.A. I | 5 | 1 | 47 | 29 | 1 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 38 | 106 |
| | B.A. II | 1 | 1 | 7 | 9 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 12 | 30 |
| | B.A. III | 0 | 1 | 11 | 9 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 18 | 12 | 30 | |
| | Arts Total | 6 | 3 | 65 | 47 | 1 | 0 | 20 | 9 | 0 | 0 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 18 | 12 | 30 | |
| 2 | B.Sc. I | 7 | 4 | 35 | 23 | 2 | 0 | 7 | 1 | 0 | 1 | 0 | 0 | 27 | 8 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 104 | 62 | 166 | |
| | B.Sc. II | 9 | 5 | 5 | 13 | 2 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 26 | 12 | 0 | 0 | 0 | 0 | 2 | 0 | 7 | 2 | 0 | 0 | 0 | 0 | 88 | 39 | 127 | |
| | B.Sc. III | 9 | 4 | 10 | 9 | 0 | 1 | 1 | 2 | 2 | 0 | 0 | 0 | 23 | 13 | 1 | 0 | 0 | 0 | 5 | 0 | 6 | 2 | 0 | 0 | 0 | 0 | 57 | 33 | 90 | |
| | Science Total | 25 | 13 | 50 | 45 | 4 | 1 | 11 | 4 | 3 | 1 | 0 | 0 | 76 | 33 | 2 | 0 | 0 | 0 | 9 | 1 | 16 | 7 | 0 | 0 | 0 | 0 | 51 | 33 | 84 | |
| 3 | B.Com. I | 8 | 2 | 17 | 4 | 0 | 0 | 9 | 3 | 2 | 0 | 0 | 0 | 10 | 2 | 0 | 0 | 0 | 0 | 9 | 1 | 16 | 7 | 0 | 0 | 0 | 0 | 196 | 105 | 301 | |
| | B.Com. II | 3 | 0 | 7 | 2 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 11 | 57 | |
| | B.Com. III | 1 | 2 | 7 | 4 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 16 | 3 | 19 | |
| | Commerce Total | 12 | 4 | 31 | 10 | 1 | 1 | 14 | 3 | 3 | 0 | 0 | 0 | 15 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 8 | 23 | | |
| 4 | M.Sc. I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 77 | 22 | 99 | |
| | M. Sc. II | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | PG Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Total | 43 | 20 | 146 | 102 | 6 | 2 | 45 | 16 | 6 | 1 | 0 | 0 | 102 | 37 | 3 | 0 | 0 | 0 | 9 | 2 | 17 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Total Category wise | 63 | 248 | 8 | 61 | 7 | 0 | 139 | 3 | 0 | 0 | 102 | 37 | 3 | 0 | 0 | 0 | 9 | 2 | 17 | 9 | 0 | 0 | 0 | 0 | 0 | 377 | 189 | 566 | | |

[Signature]
Asst. Registrar (Enrollment)
Sant Gadge Baba Amravati University



[Signature]
Principal
Arts, Science & Commerce College
Chikhaldara, Amravati

Name of College : Arts, Science and Commerce College, Chikhaldara, Distt. Amravati

College Code : 0163

Appendix -E

Statement of Admitted Student Session 2019-20

Upto 01/10/2019

| Sr. No. | Name of Exam | SC | | ST | | VJ | | NT-B | | NT-C | | NT-D | | OBC | | SBC | | MARATH | | MUSLIM | | OPEN | | P. | | Blind | | Third Person | Total | | Total | |
|---------|----------------------------|-----------|-----------|------------|-----------|----------|----------|-----------|-----------|----------|----------|----------|----------|-----------|-----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|--------------|------------|------------|-------|------------|
| | | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | | | |
| 1 | B.A. I | 7 | 0 | 43 | 14 | 0 | 0 | 11 | 8 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 22 | 89 | |
| | B.A. II | 1 | 1 | 13 | 5 | 0 | 0 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 19 | 12 | 31 | | |
| | B.A. III | 1 | 1 | 2 | 3 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 6 | 15 | | |
| | Arts Total | 9 | 2 | 58 | 22 | 0 | 0 | 21 | 14 | 1 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 95 | 40 | 135 | | |
| 2 | B.Sc. I | 10 | 5 | 19 | 9 | 0 | 1 | 6 | 2 | 1 | 1 | 0 | 0 | 10 | 12 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 2 | 0 | 0 | 0 | 0 | 52 | 34 | 86 | | |
| | B.Sc. II | 3 | 2 | 15 | 15 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 20 | 8 | 1 | 0 | 0 | 0 | 1 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 47 | 29 | 76 | | |
| | B.Sc. III | 5 | 5 | 4 | 7 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 0 | 21 | 9 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 39 | 26 | 65 | | |
| | Science Total | 18 | 12 | 38 | 31 | 1 | 1 | 11 | 6 | 2 | 1 | 0 | 0 | 51 | 29 | 1 | 0 | 0 | 0 | 5 | 2 | 11 | 7 | 0 | 0 | 0 | 0 | 138 | 89 | 227 | | |
| 3 | B.Com. I | 1 | 0 | 18 | 10 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 26 | 10 | 36 | | |
| | B.Com. II | 0 | 0 | 1 | 1 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 9 | 2 | 11 | | |
| | B.Com. III | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 4 | | |
| | Commerce Total | 2 | 0 | 21 | 11 | 0 | 0 | 11 | 1 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 38 | 13 | 51 | | |
| 4 | M.Sc. I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | M. Sc. II | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | PG Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | Total | 29 | 14 | 117 | 64 | 1 | 1 | 43 | 21 | 3 | 2 | 0 | 0 | 57 | 30 | 1 | 0 | 0 | 0 | 6 | 2 | 14 | 8 | 0 | 0 | 0 | 0 | 271 | 142 | 413 | | |
| | Total Category wise | 43 | | 181 | | 2 | | 64 | | 5 | | 0 | | 87 | | 1 | | 0 | | 8 | | 22 | | 0 | | 0 | | 0 | | 413 | | 413 |

(Signature)
Asstt. Registrar (Enrolment)
Shri Gadge Baba Amravati University



(Signature)
Principal
Arts, Science & Commerce College
Chikhaldara Dist. Amravati

SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI

Name of College : Arts, Science and Commerce College, Chikhaldara, Distt. Amravati

College Code : 0163

Appendix -E

Statement of Admitted Student Session 2020-2021

Up to 01/10/2021

| Sr. No. | Name of Exam | SC | | ST | | VJ | | NT-B | | NT-C | | NT-D | | OBC | | SBC | | MARATH | | MUSLIM | | OPEN | | P. | | Blind | | Third Person | Total | | Total | |
|----------------------------|-----------------------|-----------|------------|------------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|------------|-----------|-----------|----------|----------|----------|-----------|----------|-----------|-----------|----------|----------|----------|----------|------------|--------------|------------|------------|------------|-----|
| | | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | | | | | |
| 1 | B.A. I | 4 | 1 | 66 | 15 | 0 | 1 | 12 | 10 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 87 | 28 | 115 |
| | B.A. II | 1 | 1 | 23 | 12 | 0 | 0 | 6 | 5 | 1 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 19 | 55 | |
| | B.A. III | 2 | 1 | 13 | 6 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 20 | 12 | 32 | | |
| | Arts Total | 7 | 3 | 102 | 33 | 0 | 1 | 23 | 17 | 2 | 1 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 143 | 59 | 202 | | |
| 2 | B.Sc. I | 9 | 7 | 18 | 10 | 0 | 0 | 4 | 1 | 2 | 0 | 0 | 0 | 18 | 5 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 54 | 25 | 79 | | |
| | B.Sc. II | 5 | 4 | 13 | 8 | 0 | 1 | 6 | 1 | 0 | 1 | 0 | 0 | 10 | 12 | 0 | 0 | 0 | 0 | 2 | 2 | 5 | 2 | 0 | 0 | 0 | 0 | 41 | 31 | 72 | | |
| | B.Sc. III | 4 | 2 | 13 | 16 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 26 | 9 | 1 | 0 | 0 | 0 | 1 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 53 | 31 | 84 | | |
| | Science Total | 18 | 13 | 44 | 34 | 1 | 1 | 12 | 4 | 2 | 1 | 0 | 0 | 54 | 26 | 1 | 0 | 0 | 0 | 6 | 3 | 10 | 5 | 0 | 0 | 0 | 0 | 148 | 87 | 235 | | |
| 3 | B.Com. I | 2 | 1 | 37 | 5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 46 | 7 | 53 | | |
| | B.Com. II | 3 | 0 | 18 | 10 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 12 | 39 | | |
| | B.Com. III | 1 | 0 | 5 | 2 | 0 | 0 | 7 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 17 | 4 | 21 | | |
| | Commerce Total | 6 | 1 | 60 | 17 | 0 | 0 | 14 | 0 | 0 | 1 | 0 | 0 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 90 | 23 | 113 | | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 3 | M.Sc. I | 0 | 1 | 4 | 3 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 10 | 18 | | |
| | M. Sc. II | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | PG Total | 0 | 1 | 4 | 3 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 10 | 18 | | |
| Total | 31 | 18 | 210 | 87 | 1 | 2 | 50 | 22 | 5 | 3 | 0 | 0 | 69 | 35 | 1 | 0 | 0 | 0 | 7 | 4 | 15 | 8 | 0 | 0 | 0 | 0 | 389 | 179 | 568 | | | |
| Total Category wise | 49 | | 297 | | 3 | | 72 | | 8 | | 0 | | 104 | | 1 | | 0 | | 11 | | 23 | | 0 | | 0 | | 0 | | 568 | | 568 | |

Handwritten Signature
 Asst. Registrar (Enrollment)
 Sant Gadge Baba Amravati University



Handwritten Signature
 Principal
 Arts, Science & Commerce College
 Chikhaldara Dist. Amravati

Name of College : Arts, Science and Commerce College, Chikhaldara, Distt. Amravati

Appendix -E

College Code : 0163

Statement of Admitted Student Session 2021-2022

Up to 01/10/2022

| Sr. No. | Name of Exam | SC | | ST | | VJ | | NT-B | | NT-C | | NT-D | | OBC | | SBC | | MARATH | | MUSLIM | | OPEN | | P. | | Blind | | Third Person | Total | | Total | |
|----------------------------|-----------------------|-----------|------------|-----------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|------------|-----------|-----------|----------|----------|----------|-----------|----------|-----------|----------|----------|----------|----------|----------|------------|--------------|------------|------------|-----------|----|
| | | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls | | | |
| 1 | B.A. I | 9 | 1 | 38 | 12 | 1 | 0 | 5 | 4 | 0 | 0 | 0 | 0 | 7 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 62 | 20 | 82 |
| | B.A. II | 1 | 1 | 41 | 7 | 0 | 1 | 9 | 8 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 | 18 | 71 | |
| | B.A. III | 1 | 1 | 9 | 8 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 12 | 28 | |
| | Arts Total | 11 | 3 | 88 | 27 | 1 | 1 | 17 | 14 | 1 | 0 | 0 | 0 | 9 | 3 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 16 | 12 | 28 | |
| 2 | B.Sc. I | 7 | 4 | 16 | 13 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 16 | 9 | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 48 | 31 | 79 | |
| | B.Sc. II | 7 | 6 | 13 | 8 | 0 | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 14 | 2 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 41 | 20 | 61 | | |
| | B.Sc. III | 5 | 3 | 11 | 7 | 0 | 1 | 4 | 1 | 0 | 1 | 0 | 0 | 9 | 13 | 0 | 0 | 0 | 0 | 2 | 2 | 6 | 2 | 0 | 0 | 0 | 0 | 37 | 30 | 67 | | |
| | Science Total | 19 | 13 | 40 | 28 | 0 | 1 | 8 | 6 | 2 | 1 | 0 | 0 | 39 | 24 | 0 | 0 | 0 | 0 | 9 | 5 | 9 | 3 | 0 | 0 | 0 | 0 | 126 | 81 | 207 | | |
| 3 | B.Com. I | 5 | 2 | 44 | 11 | 0 | 0 | 5 | 6 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 19 | 83 | |
| | B.Com. II | 2 | 1 | 33 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 43 | 6 | 49 | | |
| | B.Com. III | 2 | 0 | 6 | 6 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 7 | 21 | | |
| | Commerce Total | 9 | 3 | 83 | 21 | 0 | 0 | 12 | 6 | 0 | 0 | 0 | 0 | 15 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 121 | 32 | 153 | | |
| 4 | M.Sc. I | 1 | 0 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 7 | 17 | | |
| | M. Sc. II | 0 | 1 | 4 | 3 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 9 | 16 | | |
| | PG Total | 1 | 1 | 10 | 7 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 4 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 16 | 33 | | |
| Total | 40 | 20 | 221 | 83 | 1 | 2 | 38 | 27 | 4 | 1 | 0 | 0 | 67 | 34 | 1 | 0 | 1 | 0 | 12 | 6 | 10 | 6 | 0 | 0 | 0 | 0 | 395 | 179 | 574 | | | |
| Total Category wise | 60 | | 304 | | 3 | | 65 | | 5 | | 0 | | 101 | | 1 | | 1 | | 18 | | 16 | | 0 | | 0 | | 0 | | 574 | 574 | | |

Handwritten signature
 Asstt. Registrar (Enrollment)
 Sant Gadge Baba Amravati University



Handwritten initials ML
 Principal
 Arts, Science & Commerce College,
 Chikhaldara Distt. Amravati