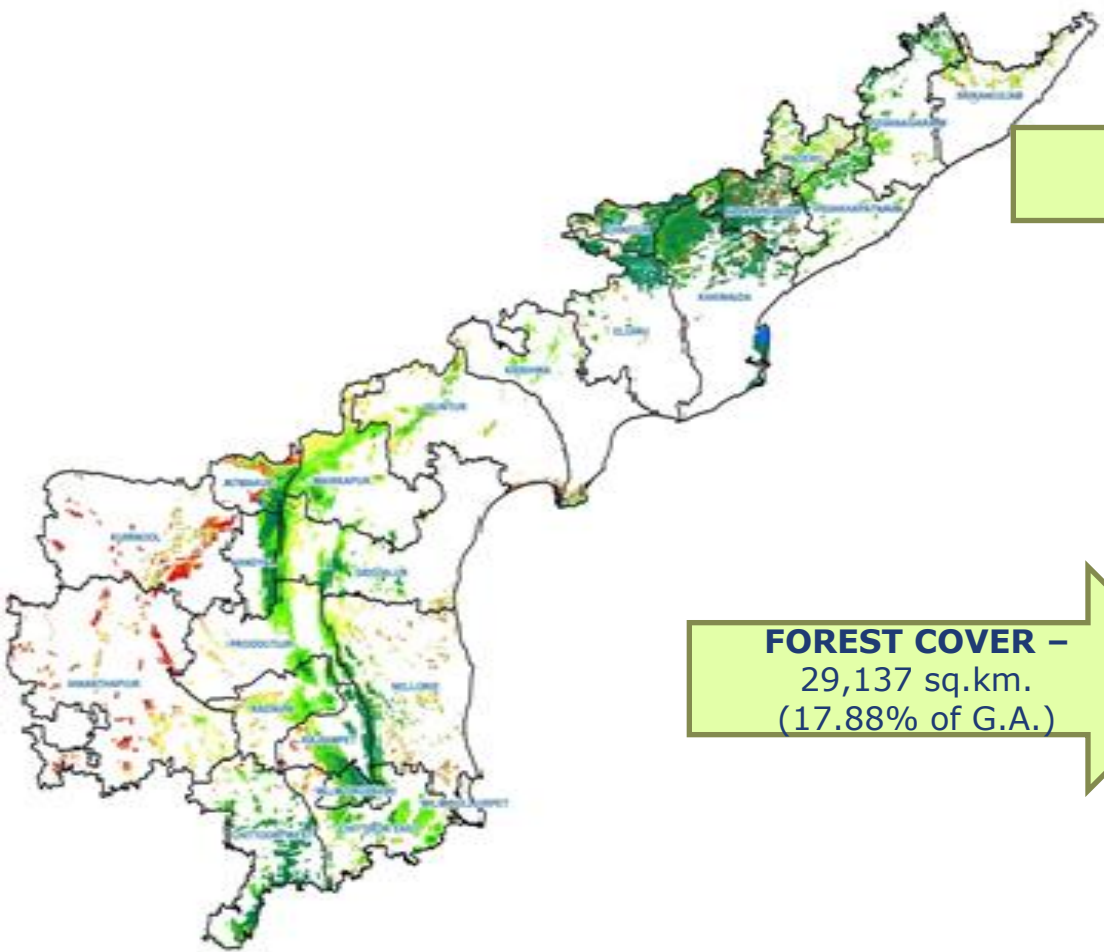


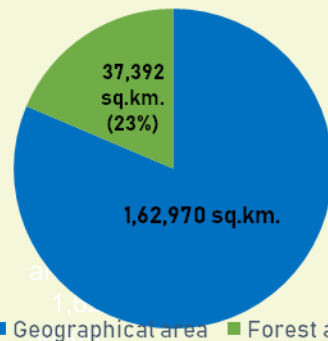
ANDHRA PRADESH FOREST DEPARTMENT

**Forest Fire Management
Needs & Challenges**

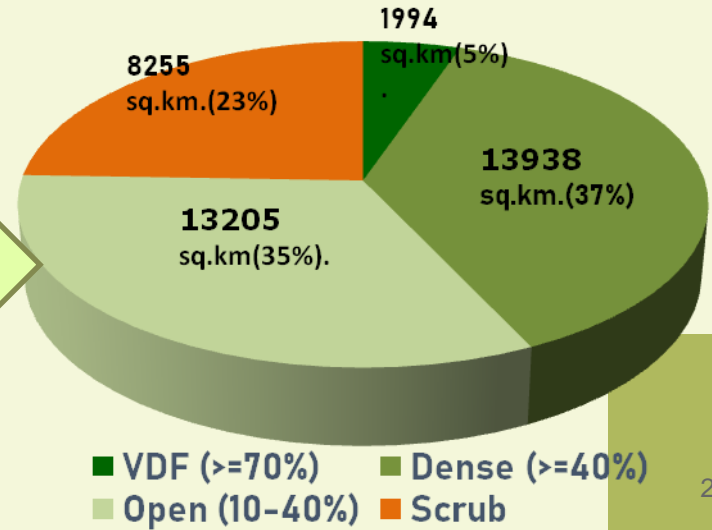
ANDHRA PRADESH FOREST



**FOREST AREA-
37,392 sq.km.
(23% of G.A.)**



**FOREST COVER -
29,137 sq.km.
(17.88% of G.A.)**



INDIA STATE OF FOREST REPORT, 2021 (ISFR,2021)

Forest Survey of India, MoEF & CC has been carrying out the task of nationwide biennial forest cover monitoring and assessment since 1987.



Change in Forest cover

Andhra Pradesh shown significant gain in forest cover (647 Sq.km)

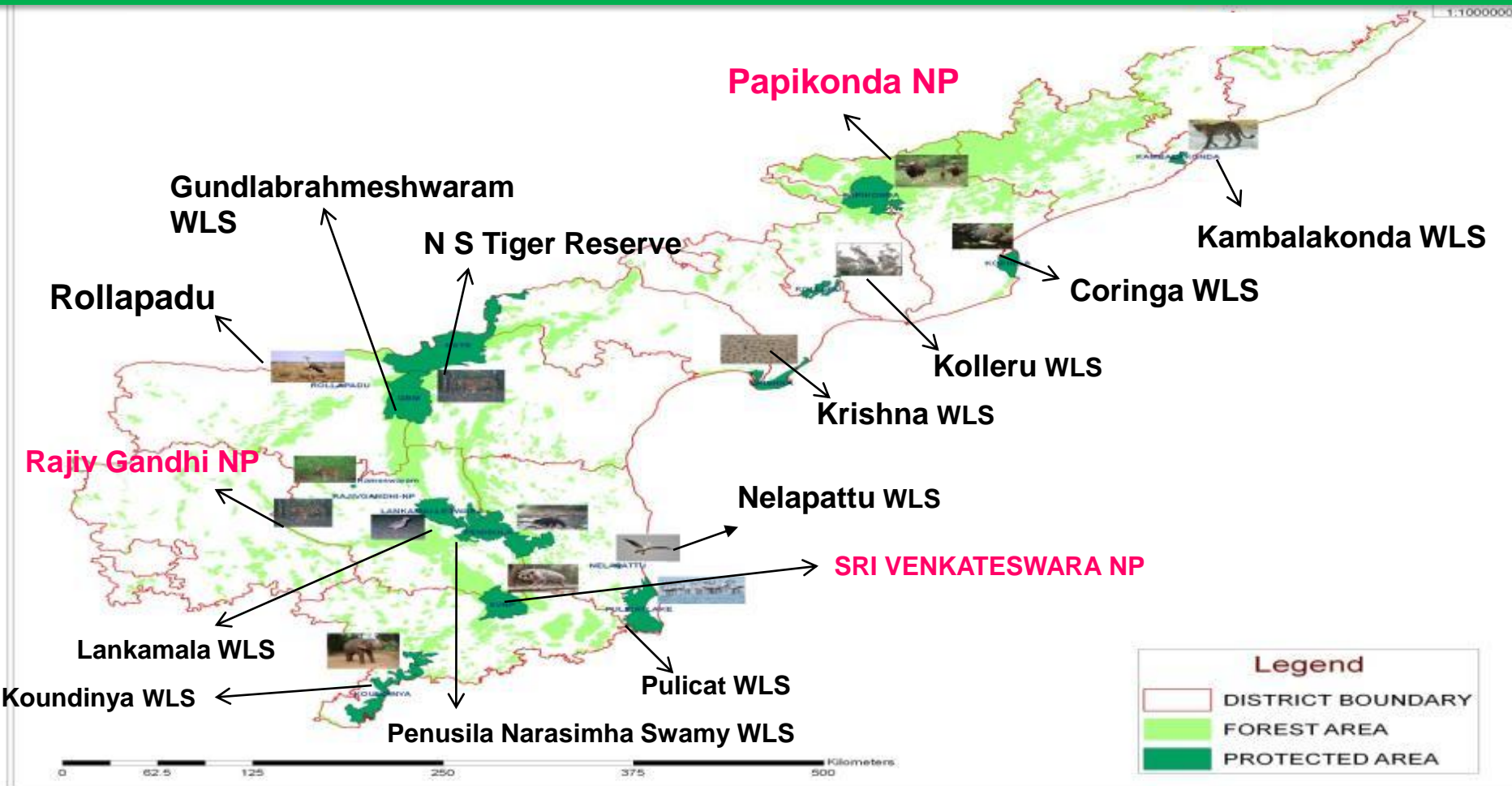
Attributes:

- Better conservation measures,
- Protection
- Afforestation activities etc.,

The state of Andhra Pradesh is constantly showing positive change in the forest cover

PROTECTED AREAS

1:1000000



FIRE - CAUSES

- **NATURAL :**

- Dry areas.
- Forest litter/Bodha grass

- **MANMADE:**

- Collection of NTFP/ Forest fringe villages
- Red sander Smugglers
- Encroachment for cultivation purpose
- Devotees visiting temples located inside Forest (Srisailam).

- Most affected areas in State are Kurnool(Srisailam), Tirupati, and Visakahapatnam

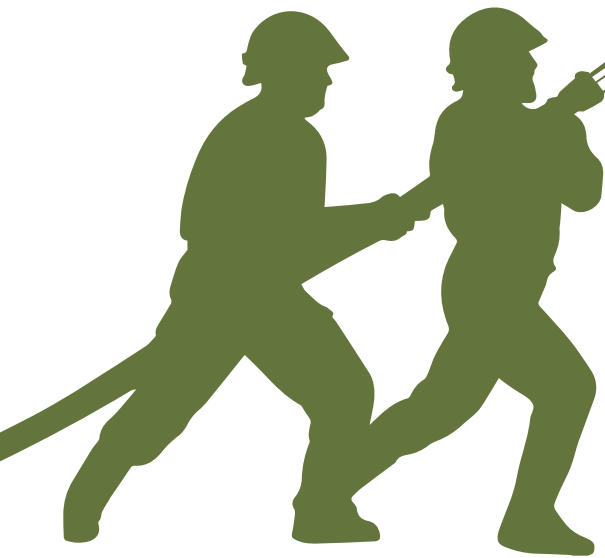
FOREST FIRE PATTERN

- Mostly Dry Deciduous Forests.
- Vegetation start drying up from December/January onwards.
- Rainy season - South west monsoon from June to September except some parts of Chittoor, Nellore , Prakasam., Kadapa Districts, where North East monsoon prevails.
- Forest fire incidences are more in the months of February, March and April.

EFFECTS OF FIRE

- In Andhra Pradesh, the forest fires are only ground fires.
- There is no human/wildlife loss reported.
- Site deterioration
- Effect on young regeneration

Latitude: 13.989405
Longitude: 79.210357
Elevation: 366.48±15 m
Accuracy: 3.9 m
Time: 09-04-2022 06:49
Note: m.bbvi bet 3



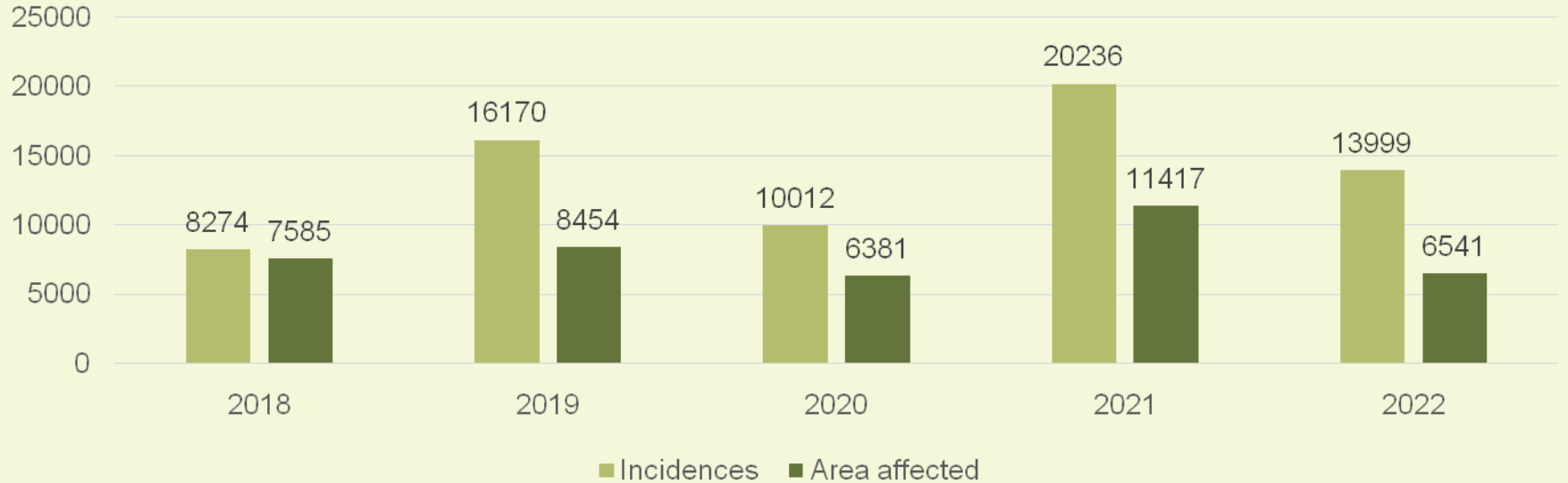
Fire incidences

Fire incidents occurred & Area affected in last 5 years

| Fire incidents occurred & Area affected in last 5 years | | | | | | | | | | |
|---|-------------|----------------|--------------|----------------|--------------|----------------|--------------|-----------------|--------------|---------------|
| Circle | 2018 | 2019 | | 2020 | | 2021 | | 2022 | | |
| | | Area | Area | Area | Area | Area | Area | Area | Area | |
| Anantapuram | 769 | 1642.63 | 809 | 250.16 | 1395 | 418.75 | 2775 | 640.17 | 2345 | 533.47 |
| FDPT Srisailam | 1143 | 1478.99 | 2128 | 1161.14 | 1739 | 981.261 | 2334 | 1110.43 | 2103 | 848.02 |
| Guntur | 980 | 357.05 | 1489 | 404.70 | 1059 | 254.101 | 2390 | 945.76 | 1250 | 160.23 |
| Kurnool | 1798 | 2066.59 | 1609 | 1533.62 | 1513 | 1673.59 | 5134 | 4918.92 | 3671 | 3123.15 |
| Rajahmundry | 1040 | 815.69 | 4418 | 2793.34 | 1865 | 2000.80 | 2442 | 1314.91 | 1602 | 564.14 |
| Visakhapatnam | 1795 | 667.17 | 3406 | 748.29 | 1338 | 320.11 | 2610 | 638.75 | 1569 | 314.13 |
| WLM Tirupati | 749 | 557.56 | 2311 | 1563.62 | 1103 | 733.31 | 2551 | 1848.61 | 1459 | 997.77 |
| Total | 8274 | 7585.69 | 16170 | 8454.87 | 10012 | 6381.91 | 20236 | 11417.65 | 13999 | 6540.9 |

FOREST FIRE TREND

Data from MODIS(1kmx1km)
SNPP(375mx 375m)



Budgetary source

- CAMPA (Compensatory Afforestation Fund Management and Planning Authority)
- Forest Fire Prevention and Management Scheme.

Forest Fire Prevention & Management Scheme

| Sl no | Year | Budget released (Rs. in lakh) | Expenditure incurred (Rs. in lakh) |
|-------|---------|----------------------------------|---------------------------------------|
| 1 | 2018-19 | 457 | 331 |
| 2 | 2019-20 | 588 | 115 |
| 3 | 2020-21 | 472 | 217 |

For the year 2021-22 , Rs. 255.59 lakh (central Share : Rs.116.02 lakh+ state share :Rs.139.57 lakh) the fund is not transferred to SNA account .

For the year 2022-23 , central share of Rs 217.27 lakh and state share of Rs 144.84 lakh is indicated.

CAMPA

| Sl. No. | Year | Expenditure incurred (Rs. in lakh) |
|----------------|-------------|---|
| 1 | 2019-20 | 265.74 |
| 2 | 2020-21 | 176.76 |
| 3 | 2021-22 | 399.38 |
| 4 | 2022-23 | 1102.66 (proposed) |

Activities in APFD

- State Monitoring Committee(SMC) is constituted & includes NGOs/SDMA(State disaster Management Authority),PR&RD department along with Forest Dept .
- Involvement of Village & Ward Secretariat staff (15004 no.) for awareness creation.
- Fire Risk Zonation Maps were prepared based on the number of fire occurrences from the year 2012 to 2022 by the IT wing of APFD.
- Enhanced user registration in FSI Fire alert system (2301 no. -from beat level to State level).
- 24*7 State level Forest Fire Monitoring Cell is being operated at State Headquarters/DFO/FRO level.
- MIS module is developed in-house to know the daily status of the forest fire alerts attended, no of people deployed, extent of area affected, time taken by staff to put off the fire etc.

Cont'd

- The deliberations on damage to forests due to fire are invariably taken up in monthly District Forestry Committee meetings to sensitize District Administration on the ill effects of forest fire under the chairmanship of District Collector.
- Nominated one Forest Section Officer for each 1 sq.km beat area for 100 top 1 sq.km most vulnerable forest areas to monitor occurrence of forest fires and to control the fires as identified by the Geomatic Cell.
- In the year 2020-21 , total 876 km of fire line is created and 492 km of existing fire line is maintained.
- Comprehensive State Forest Fire Action Plan is under progress.

Forest Fire Risk Zonation- Compartmentwise

| Sl. No. | Category | Parameter (No. of incidences for last 12 years) | No. of Compartments |
|----------------|-----------------|--|--------------------------------|
| 1 | No Fire | 0 | 2167 |
| 2 | Lowest | 1 | 976 |
| 3 | Low | 2 | 658 |
| 4 | Medium | 3 to 5 | 1422 |
| 5 | High | 6 to 8 | 981 |
| 6 | Highest | 9 or more | 3244 |
| Total | | | 9448 |

Fire Risk Zonation Map of Andhra Pradesh

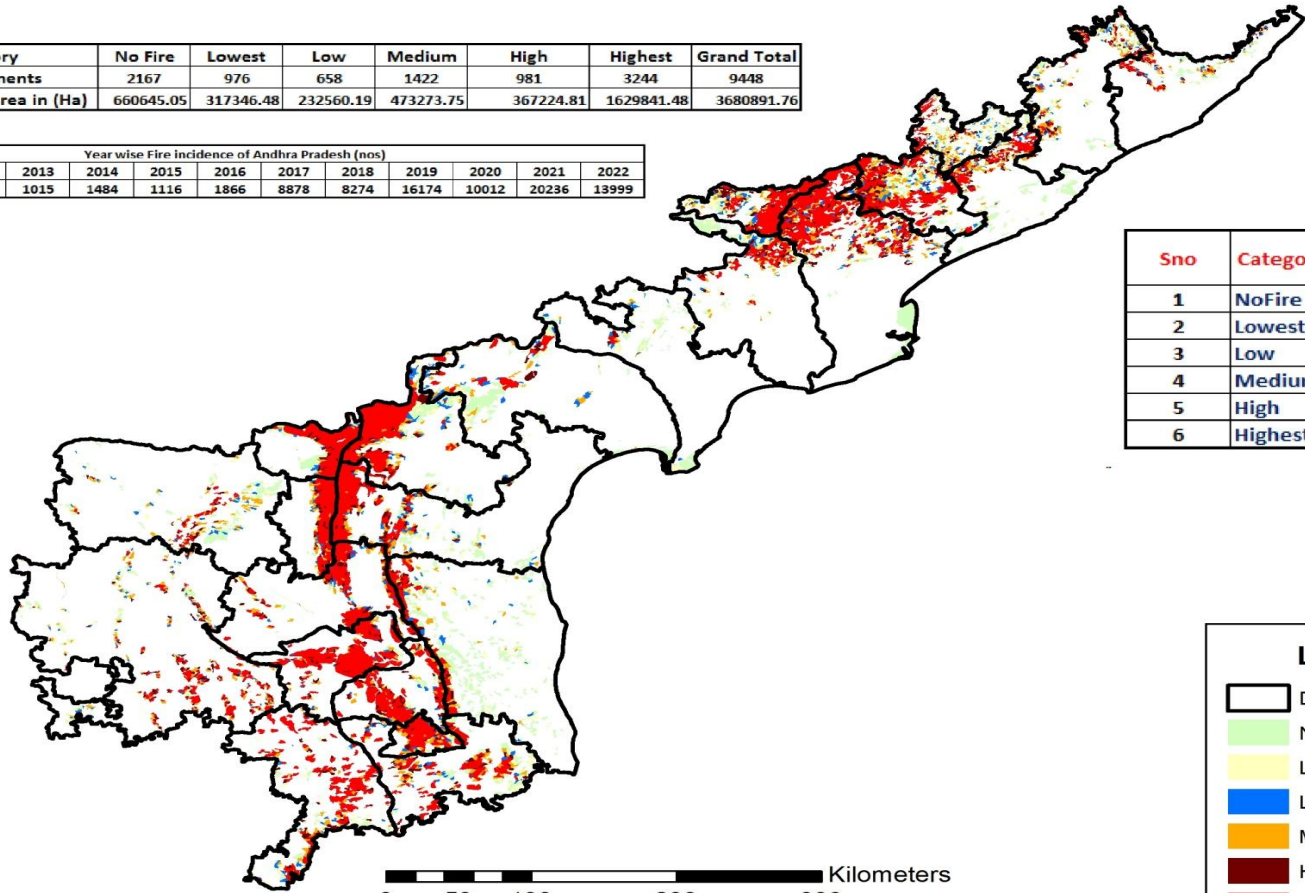


1:4250000

| Category | No Fire | Lowest | Low | Medium | High | Highest | Grand Total |
|--------------------------|-----------|-----------|-----------|-----------|-----------|------------|-------------|
| No of Compartments | 2167 | 976 | 658 | 1422 | 981 | 3244 | 9448 |
| Compartment Area in (Ha) | 660645.05 | 317346.48 | 232560.19 | 473273.75 | 367224.81 | 1629841.48 | 3680891.76 |

| Year wise Fire incidence of Andhra Pradesh (nos) | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|-------|-------|-------|-------|
| Years | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| Andhra Pradesh | 1197 | 1015 | 1484 | 1116 | 1866 | 8878 | 8274 | 16174 | 10012 | 20236 | 13999 |

| Sno | Category | Fire incidents for 11 Years |
|-----|----------|-----------------------------|
| 1 | NoFire | 0 |
| 2 | Lowest | 1 |
| 3 | Low | 2 |
| 4 | Medium | 3 to 5 |
| 5 | High | 6 to 8 |
| 6 | Highest | 9 or More |



| Legend | |
|--------|-------------------|
| | Division Boundary |
| | No Fire |
| | Lowest |
| | Low |
| | Medium |
| | High |
| | Highest |



18°57'30"N
16°46'45"N
14°38'0"N
12°25'15"N

77°8'30"E 79°19'15"E 81°30'0"E 83°40'45"E 85°51'30"E

77°8'30"E 79°19'15"E 81°30'0"E 83°40'45"E 85°51'30"E

PREVENTIVE MEASURES

Controlled Burning



Fire lines



MEASURES

Base camps -193, SF - 52

Maintenance of firelines



Watch tower in Kadapa Division (31 no.)



ALTITUDE
571.8 m

275°W

COURSE N 0° 6P5

LAT 16.125982°
LONG 79.133148°

WEDNESDAY 10.14.2020
LOCAL TIME 13:24:25



**Watch towers in
Markapur WL Division**



Fire Supression



MEASURES

Awareness Programmes



Involvement of Communities/VSS/NGOs



Fire Control Operations in Nandyal(WL) Division



Extinguishing the Ground Fire in Markapur (WL) Division



FIRE LINES



NEEDS

- A standard Operating Procedure.
- Modern Fire extinguishing equipment.
- Fire fighter safety kit.
- Mobile Squads in fire season.
- Infrastructural Support near vulnerable areas during fire season.
- Mock drill training/capacity building.
- Co-operation from line departments viz., SDF, Fire departments.
- Assured Budgetary Support.
- Surveillance network.

CHALLENGES

- Filling up of the vacancies of the frontline staff .
- Reaching the forest fire spots.
- Strengthening of internal forest roads.
- Suppression of fire.
- Minimal infrastructural support during fire season in vulnerable areas.
- Enhancing Communication.
- Involvement of Communities who are residing inside/out side.
- Water sources.



If conservation of natural resources goes wrong, nothing else will go right.

- M.S. Swaminathan

Thank you.

MANA SRISAILAM- CLEAN AND GREEN SRISAILAM

- To avoid improper disposal, as part of new initiative “Mana Srisailam – Clean and Green Srisailam”, Nagarjunasagar Srisailam Tiger Reserve (NSTR) came up with a novel concept of Standardization of Collection, Segregation, and Disposal/ **Recycling of Plastics and Liquor Bottles**, which is implemented methodologically.
- It was initiated on June 5th, 2021, at Sunnipenta, Srisailam.
- The launch date is significant as that day is celebrated as World Environment Day.



Collection & Segregation of plastics



Baling of plastics



Transportation of baled plastics



RECYCLED

