

11.35

LAKSHADWEEP

11.35.1 Introduction

Located in the Arabian Sea, Lakshadweep is a group of 36 islands comprising of 12 atolls, three reefs, five submerged sand banks and 10 inhabited islands. It is the smallest Union Territory of India with a total geographical area of only 30 sq km. The UT lies between 8°15' N to 11°45' N latitude and 72°E to 74°E longitude. The only district of the Union Territory is a tribal district. Lakshadweep islands have a tropical humid, warm and generally pleasant climate. The annual rainfall ranges between 1,000 mm to 2,000 mm and the annual temperature varies from 25°C to 35°C. Though the islands receive high rainfall but lack of surface storage capacity makes fresh water a precious commodity in the UT. As per the 2011 Census, Lakshadweep has a population of 0.064 million. The rural and urban population constitute 21.94% and 78.06% respectively. Tribal population of the UT is 6.99%. The population density is 2,015 per sq km. The 19th Livestock Census 2012 has reported a total livestock population of 0.049 million in the UT.

TABLE 11.35.1 Land Use Pattern

| Land Use Types | Area (in 000' ha) | Percentage |
|--|-------------------|------------|
| Geographical Area | 3 | |
| Reporting area for land utilization | 3.37 | 100.00 |
| Forests | - | - |
| Not available for land cultivation | 1.02 | 30.35 |
| Permanent pastures and other grazing lands | - | - |
| Land under misc. tree crops and groves | - | - |
| Culturable wasteland | - | - |
| Fallow land other than current fallows | - | - |
| Current fallows | - | - |
| Net area sown | 2.35 | 69.65 |

Source: Land Use Statistics, Ministry of Agriculture, GOI, (2014-15)



11.35.1.1 A Brief Overview of Forestry Scenario

The Union Territory of Lakshadweep does not have any notified forests. About 82% of the land mass is covered by privately owned coconut plantations. Being an archipelago consisting of 36 islands with an area of 30 sq km, Lakshadweep has a vast lagoon of 4,200 sq km with sandy beaches and abundance of marine fauna. Lakshadweep also has coral atolls. The livelihood of inhabitants of Lakshadweep is dependent on fishery and tourism. Coastal erosion is a serious concern in the Islands and hence plantations of native species which are present in the seashores, are encouraged. The Union Territory does not have any recorded forest area. As per the information received from the UT during that last two years, 7.7 ha of plantations were raised in the UT.

The protected area network in the Lakshadweep has one Wildlife Sanctuary which covers 0.03% of geographical area of the Union Territory.

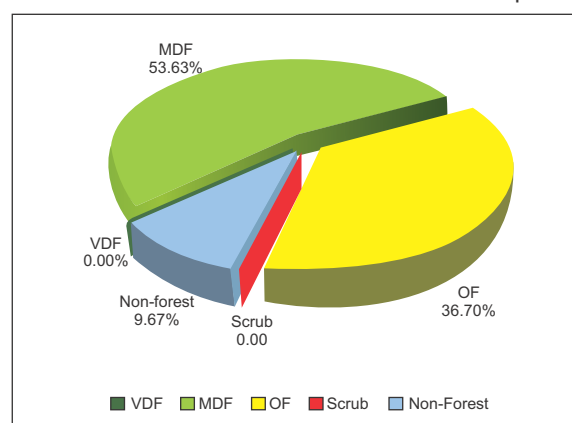
11.35.2 Forest Cover

Based on the interpretation of IRS Resourcesat-2 LISS III satellite data of the period of November 2017 to July 2018. The Forest Cover in the UT is 27.10 sq km which is 90.33% of the UT's geographical area. In terms of forest canopy density classes, the UT has 16.09 sq km under Moderately Dense Forest (MDF) and 11.01 sq km under Open Forest (OF). Forest Cover in the UT has no change as compared to the previous assessment reported in ISFR 2017.

TABLE 11.35.2 Forest Cover of Lakshadweep
(in sq km)

| Class | Area | % of GA |
|--------------|--------------|--------------|
| VDF | 0.00 | 0.00 |
| MDF | 16.09 | 53.63 |
| OF | 11.01 | 36.70 |
| Total | 27.10 | 90.33 |
| Scrub | 0.00 | 0.00 |

FIGURE 11.35.1 Forest Cover of Lakshadweep

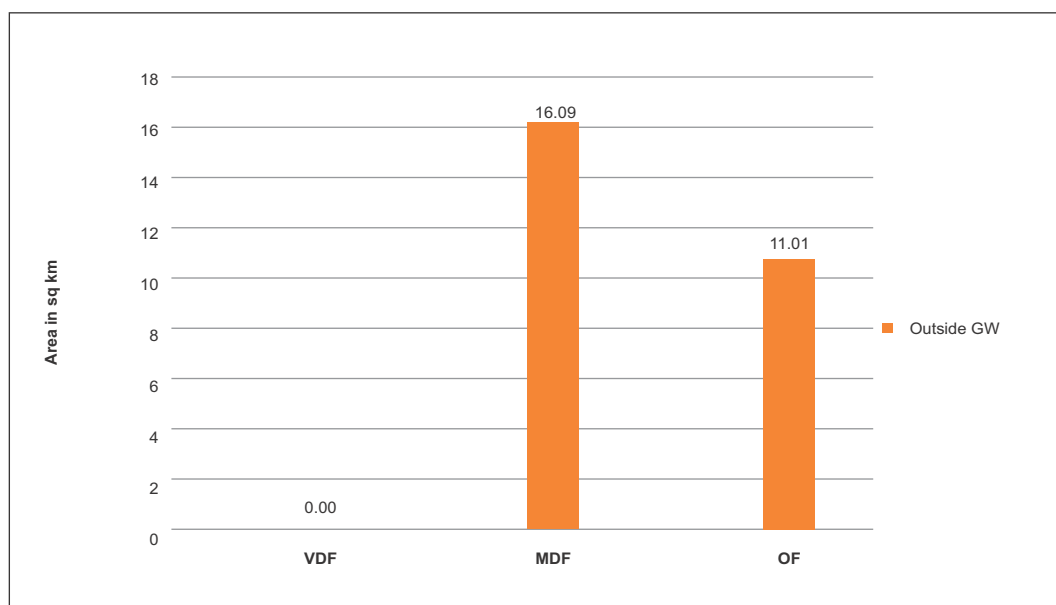


11.35.2.1 Forest Cover inside and outside Recorded Forest Area (or Green Wash)

The UT has not reported any Recorded Forest Area and the Green Wash Area is also not available in Sol toposheets. Therefore, all the forest cover fall outside green wash area.

TABLE 11.35.3 Forest Cover inside and outside Recorded Forest Area or (Green Wash) in Lakshadweep
(in sq km)

| Forest Cover inside the Recorded Forest Area (or Green Wash) | | | | Forest Cover outside the Recorded Forest Area (or Green Wash) | | | |
|---|-------|-------|-------|--|--------|--------|-------|
| VDF | MDF | OF | Total | VDF | MDF | OF | Total |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 16.09 | 11.01 | 27.10 |
| 0.00% | 0.00% | 0.00% | | 0.00% | 59.37% | 40.63% | |

FIGURE 11.35.2 Forest Cover outside Green Wash in Lakshadweep**TABLE 11.35.4** District-wise Forest Cover in Lakshadweep

(in sq km)

| District | Geographical Area (GA) | 2019 Assessment | | | | % of GA | Change wrt 2017 assessment | Scrub |
|--------------------------|------------------------|-------------------|-------------------|--------------|--------------|--------------|----------------------------|-------------|
| | | Very Dense Forest | Mod. Dense Forest | Open Forest | Total | | | |
| Lakshadweep ^T | 30 | 0.00 | 16.09 | 11.01 | 27.10 | 90.33 | 0.00 | 0.00 |
| Grand total | 30 | 0.00 | 16.09 | 11.01 | 27.10 | 90.33 | 0.00 | 0.00 |

TABLE 11.35.5 Forest Cover Change Matrix for Lakshadweep

(in sq km)

| Class | 2019 Assessment | | | | | Total ISFR 2017 |
|-------------------------|-----------------|--------------|--------------|-------------|-------------|-----------------|
| | VDF | MDF | OF | Scrub | NF | |
| Very Dense Forest | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Moderately Dense Forest | 0.00 | 15.85 | 1.19 | 0.00 | 0.00 | 17.04 |
| Open Forest | 0.00 | 0.24 | 9.82 | 0.00 | 0.00 | 10.06 |
| Scrub | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non Forest | 0.00 | 0.00 | 0.00 | 0.00 | 2.90 | 2.90 |
| Total ISFR 2019 | 0.00 | 16.09 | 11.01 | 0.00 | 2.90 | 30.00 |
| Net Change | 0.00 | -0.95 | 0.95 | 0.00 | 0.00 | |

TABLE 11.35.6 Altitude-wise Forest Cover in Lakshadweep

(in sq km)

| Altitude Zone (m) | Geographical Area | VDF | MDF | OF | Total | Scrub |
|-------------------|-------------------|-------------|--------------|--------------|--------------|-------------|
| 0-500 | 30 | 0.00 | 16.09 | 11.01 | 27.10 (100%) | 0.00 |
| Total | 30 | 0.00 | 16.09 | 11.01 | 27.10 | 0.00 |

(based on SRTM, Digital Elevation Model, 30 m, 2016)

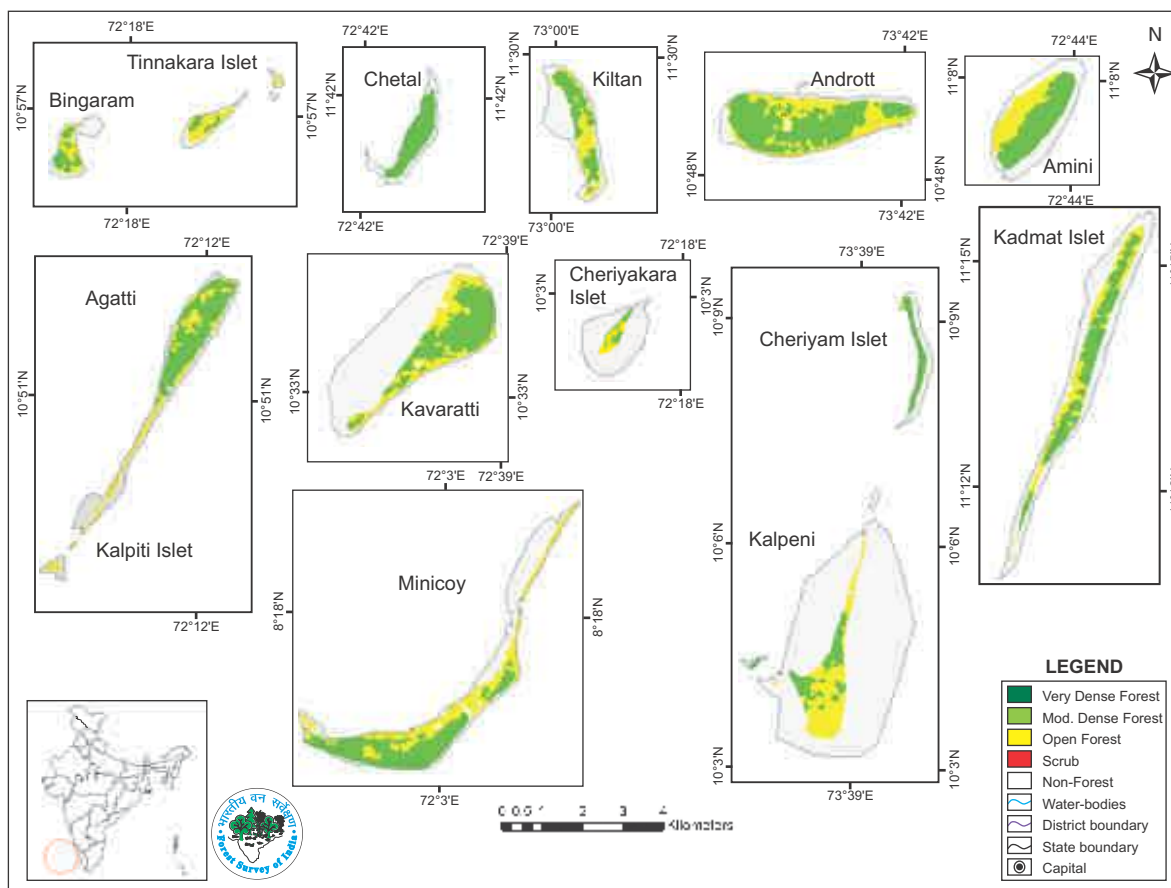
TABLE 11.35.7 Forest Cover in different slope classes in Lakshadweep

(in sq km)

| Slope (in degrees) | Geographical Area | VDF | MDF | OF | Total | Scrub |
|--------------------|-------------------|-------------|--------------|--------------|--------------|-------------|
| 0-5 | 30 | 0.00 | 16.09 | 11.01 | 27.10 (100%) | 0.00 |
| Total | 30 | 0.00 | 16.09 | 11.01 | 27.10 | 0.00 |

(based on SRTM, Digital Elevation Model, 30 m, 2016)

FIGURE 11.35.3 Forest Cover Map of Lakshadweep



11.35.3 Forest Types & Biodiversity

Forest Type Maps of 2011 have been refined in the recently completed exercise by FSI. Percentage area under different forest types of Lakshadweep as per the Champion & Seth classification (1968), according to the latest exercise are presented in the following table.

TABLE 11.35.8 Percentage area under different forest types of Lakshadweep

| Sl.No. | Forest Type | % of Forest cover |
|--------|-----------------|-------------------|
| 1. | Plantation/ TOF | 100.00 |
| | Total | 100.00 |

11.35.4 Tree Cover

Forest cover presented in the section 11.35.2 accounts for tree patches of size 1 ha and more having canopy density more than 10%. However, trees occurring in patches of size less than 1 ha including scattered trees are assessed through sampling based methodology. Tree cover in Lakshadweep has been estimated as given in the table 11.35.9.

TABLE 11.35.9 Tree Cover in Lakshadweep
(in sq km)

| Tree Cover | Area |
|------------|------|
| | 0.29 |

Tree cover of Lakshadweep has decreased by 1.71 sq km as compared to the previous assessment reported in ISFR2017.

11.35.5 Extent of Trees Outside Forest (TOF)

Trees outside Forests (TOF) refer to tree resources found outside the forests as defined in the Government records. FSI maps forest cover using satellite data and assesses tree cover outside forests using sampling based method. Forest Cover outside the recorded forest area is derived using boundaries of RFA or Green Wash. Extent of TOF therefore may be estimated as the sum of extent of forest cover outside the recorded forest areas (RFA) and tree cover as given in the preceding section.

TABLE 11.35.10 Extent of TOF in Lakshadweep
(in sq km)

| Forest Cover outside the RFA/GW | Tree Cover | Extent of TOF |
|---------------------------------|------------|---------------|
| 27.10 | 0.29 | 27.39 |

11.35.6 Growing Stock in Forest

Growing stock in the recorded forest areas (RFA) in Lakshadweep is given in the table 11.35.11.

TABLE 11.35.11 Growing Stock in Lakshadweep
(in m cum)

| Growing Stock (GS) | | % of Country's GS |
|---------------------------------------|------|-------------------|
| Growing Stock in Recorded Forest Area | - | 0.00 |
| Growing Stock in TOF | 0.07 | 0.00 |

11.35.7 Carbon Stock in Forest

The total Carbon stock of forest in the UT including the TOF patches which are more than 1 ha in size is 0.24 million tonnes (0.88 million tonnes of CO₂ equivalent) which is 0.0034% of total forest carbon of the country. Pool wise forest carbon in Lakshadweep is given in the following table

TABLE 11.35.12 Forest Carbon in Lakshadweep in different pools
(in '000 tonnes)

| AGB | BGB | Dead wood | Litter | SOC | Total |
|-----|-----|-----------|--------|-----|-------|
| 67 | 15 | 0.47 | 5 | 149 | 236 |

11.35.8 Dominant tree species in Trees Outside Forests (TOF)

Top five species in numbers in Trees Outside Forests in Lakshadweep in Rural areas are given in the table 11.35.13

TABLE 11.35.13 Top five tree species in TOF (Rural) in Lakshadweep

| Sl. No. | Species | Relative Abundance (%) |
|---------|--------------------------------|------------------------|
| 1. | <i>Cocos nucifera</i> | 85.85 |
| 2. | <i>Thespesia populnea</i> | 4.13 |
| 3. | <i>Artocarpus altilis</i> | 1.18 |
| 4. | <i>Artocarpus hirsute</i> | 1.11 |
| 5. | <i>Mallotus philippinensis</i> | 0.61 |