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**Andaman & Nicobar Islands**

Andaman & Nicobar Islands comes under Agro Ecological Sub Region (AESR 20.1) of Agro Ecological Region 20 (AER 20) of coastal ecosystem covering 0.8 mha in three districts namely Nicobar, North& Middle Andaman and South Andaman. The region is comprising of group of Islands, hot per humid ESR with shallow to medium deep, loamy to clayey Red and Yellow and Red Loamy soils, low to medium AWC and LGP 300 days. The mean annual rainfall and temperature ranges from 1400-1600 mm and 26-27°C respectively.

**AESR 20.1 :** The region is hot per humid ESR with shallow to medium deep, loamy to clayey Red and Yellow and Red Loamy soils, low to medium AWC and LGP 300 days in a year.

**Major NRM issues:**

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Nicobar | Exclusively water erosion &Coastal Salinity | Low in OC, Soil Deficient in S, N, P & K | - | **-** |
| North & Middle Andaman | Exclusively water erosion &Coastal Salinity | Low in OC, Soil Deficient in S, N, P & K | GW Contaminated with F | **-** |
| South Andaman | Exclusively water erosion& Coastal Salinity | Low in OC, Soil Deficient in S, Zn, Cu, N, P & K | Saline, GW Contaminated with F | **-** |

**Andhra Pradesh**

Andhra Pradesh comprises of four Agro Ecological Regions (AER) namely 3,7,12 and 18.

**Agro-Eco Region3 :** AER 3 in Andhra Pradesh comprises of Ananthapur district of Deccan Plateau under Agro Ecological Sub Region (AESR) 3.

**Agro-Eco Region7 :** AER 7 in Andhra Pradesh comprises of Cuddapah, Guntur, Krishna, Nellore, Prakasam, Kurnooland, West Godavari districts of Deccan (Telangana) Plateau and Eastern Ghats under Agro Ecological Sub Regions (AESR) 7.1& 7.3.

**Agro-Eco Region8 :** AER 8 in Andhra Pradesh comprises of Chittoor district of d Eastern Ghats under Agro Ecological Sub Region (AESR) 8.3.

**Agro-Eco Region12 :** AER 12in Andhra Pradesh comprises of East Godavari district of Eastern (Chhotanagpnr) Plateau and Eastern Ghats under Agro Ecological Sub Region (AESR) 12.1.

**Agro-Eco Region 18 :** AER 18 in Andhra Pradesh comprises of Krishna,Nellore, Prakasam, West Godavari, East Godavari,Vishakhapatnam, Srikakulam and Vizianagaram districts of Eastern Coastal Plain under Agro Ecological Sub Regions (AESR) 18.3 and 18.4.

**AESR 3 :** The region is hot arid ESR with deep loamy and clayey mixed Red and Black soils, low to medium AWC and LGP 60-90 days in a year.

**Major NRM issues :**

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Ananthapur | **-** | Low in OC, Soil Deficient in N, Fe & B | Saline, GW Contaminated with F & NO3 | Extreme Drought |

**AESR 7.1 :** The region is hot dry semi-arid ESR with deep loamy to clayey mixed Red and Black soils, medium AWC and LGP 90-120 days in a year.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Cuddapah | Exclusively water erosion | Low in OC | GW Contaminated with Fe | **-** |
| Kurnool | **-** | Low in OC, Soil Deficient in Zn & N | Saline GW Contaminated with F, NO3, As & Fe | **-** |

**AESR 7.3 :** The region is hot moist semi-arid/dry sub humid ESR with medium to deep, loamy to clayey mixed Red and Black soils, medium AWC and LGP 150-180 days in a year.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Guntur | Coastal Salinity | Low in OC ,Soil Deficient in N & B | Saline, GW Contaminated with F, NO3, As, Fe | **-** |
| Krishna | Waterlogged & Coastal Salinity | Low in OC & Soil Deficient in N | Saline, GW Contaminated with F, NO3, Fe | **-** |
| Nellore | Waterlogged & Coastal Salinity | Low in OC, Soil Deficient in Zn & Fe | Saline, GW Contaminated with F, NO3, As, Fe | Moderate Drought |
| Prakasam | Waterlogged & Coastal Salinity | Low in OC ,Soil Deficient in Zn, Fe, N & B | Saline, GW Contaminated with F, NO3, Fe | **-** |
| West Godavari | Waterlogged & Coastal Salinity | Soil Deficient in B & S | Saline, GW Contaminated with F, NO3 | **-** |

**AESR 8.3 :** The region is hot moist semi-arid ESR with deep red loamy soils, low AWC and LGP 120-150 days in a year.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Chittoor | Waterlogged & Coastal Salinity | Soil Deficient in N | Saline, GW Contaminated with F, NO3, Fe | Severe Drought |

**AESR 12.1 :**The region hot moist subhumid ESR with deep loamy Red and Lateritic soils, low to medium AWC and LGP 180-210 days in a year.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| East Godavari | Waterlogged & Coastal Salinity | Soil Deficient in N | Saline, GW Contaminated with NO3 | **-** |

**AESR 18.3 :** The region clayey Coastal and Deltaic alluvium-derived soils, low to medium AWC and LGP 150-180 days in a year.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Krishna | Waterlogged & Coastal Salinity | Low in OC & Soil Deficient in N | Saline, GW Contaminated with F, NO3, Fe | **-** |
| Nellore | Waterlogged & Coastal Salinity | Low in OC, Soil Deficient in Zn & Fe | Saline, GW Contaminated with F, NO3, As, Fe | Moderate Drought |
| Prakasam | Waterlogged & Coastal Salinity | Low in OC, Soil Deficient in S , Zn, Fe & N | Saline, GW Contaminated with F, NO3 | **-** |
| West Godavari | Waterlogged & Coastal Salinity | Soil Deficient in S & B | Saline, GW Contaminated with F, NO3 | **-** |

**AESR 18.4 :** The region is hot dry subhumid ESR with deep, loamy to clayey Coastal and deltaic alluvium derived soils, medium AWC and LGP 180-210 days in a year.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| East Godavari | Waterlogged & Coastal Salinity | **-** | Saline, GW Contaminated with NO3 | **-** |
| Vishakhapatnam | Coastal Salinity | Low in OC, Soil Deficient in Zn & B | Saline, GW Contaminated with F, NO3, Fe | **-** |
| Srikakulam | Waterlogged & Coastal Salinity | Low in OC | Saline, GW Contaminated with F, NO3 | **-** |
| Vizianagaram | - | Low in OC, Soil Deficient in Zn & B | GW Contaminated with F, NO3 | **-** |

**Arunachal Pradesh**

Arunachal Pradesh comprises of two Agro Ecological Regions (AER) namely 16 and 17.

**Agro-Eco Region16 :** AER 16 in Arunachal Pradesh comprises of East Kameng, East Siang, Anjaw, Kurung Kumey, Tawang, Upper Subansiri, West Kameng, West Siang, Upper Siang, DibangValley, Papum-pare, Lower Subansiri, Lohit and Lower Dibang Valley districts of Eastern Himalayas under Agro Ecological Sub Region (AESR) 16.3.

**Agro-Eco Region17 :** AER 17 in Arunachal Pradesh comprises of Changlang and Tirap districts of North-eastern Hills (Purvachal) basin under Agro Ecological Sub Region (AESR) 17.1.

**AESR 16.3 :** The region warm to hot perhumid ESR with deep, loamy to clayey Red Loamy soils, low to medium AWC and LGP 300 days in a year.

**Major NRM issues :**

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Along | Acid Soil under water erosion | **-** | **-** | **-** |
| Anini | Acid Soil under water erosion | **-** | **-** | **-** |
| Anjaw | **-** | Soil Deficient in P & K | **-** | Extreme Drought |
| Bomdila | Acid Soil under water erosion | **-** | **-** | **-** |
| Daporijo | Acid Soil under water erosion | **-** | **-** | **-** |
| DibangValley | **-** | Soil Deficient in S, P & K | **-** | **-** |
| East Kameng | **-** | Soil Deficient in B | - | **-** |
| East Siang | - | Soil Deficient in P & K | GW Contaminated with Fe | Extreme Drought |
| Khonsa | Acid Soil under water erosion | **-** | **-** | **-** |
| Kurung Kumey | **-** | Soil Deficient in B & P | **-** | **-** |
| Lohit | **-** | Soil Deficient in P & K | GW Contaminated with Fe | Extreme Drought |
| Lower Dibang Valley | **-** | Soil Deficient in Zn, P & K | **-** | **-** |
| Lower Subansiri | **-** | Soil Deficient in S, N, P & K | **-** | **-** |
| Papum-pare | **-** | Soil Deficient in B, S P & K | GW Contaminated with Fe | **-** |
| Pasighat | Acid Soil under water erosion | **-** | **-** | **-** |
| Seppa | Acid Soil | **-** | **-** | **-** |
| Tawang | **-** | Soil Deficient in B & P | **-** | Extreme Drought |
| Tezu | Acid Soil under water erosion | **-** | **-** | **-** |
| Upper Siang | **-** | Soil Deficient in Zn & P | **-** | Extreme Drought |
| Upper Subansiri | **-** | Soil Deficient in B , P & K | **-** | **-** |
| West Kameng | **-** | Soil Deficient in S, P & K | **-** | Extreme Drought |
| West Siang | **-** | Soil Deficient in P & K | **-** | **-** |
| Ziro | Acid Soil under water erosion | **-** | **-** | **-** |

**AESR 17.1 :** The region warm to hot moist humid to per humid ESR with medium to deep loamy to clayey Red and Lateritic soils, medium AWC and LGP 270-300+ days in a year.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Changlang | - | Soil deficient in P & Zn | GW Contaminated with Fe | **-** |
| Tirap | Acid soils under open forest | **-** | - | **-** |

**Assam**

Assam comprises of two Agro Ecological Regions (AER) namely 15 and 17.

**Agro-Eco Region15 :** AER 15 in Assam comprises of Baksa, Barpeta, Darrang, Kamrup Metro, Kamrup Rural, Morigaon, Nagaon, Nalbari, Sonitpur, Udalguri, Bongaigaon, Cachar, Dhubri ,Goalpara, Hailakandi, Karimganj, Kokrajhar, Chirang, Dhemaji, Dibrugarh, Golaghat, Jorhat, Lakhimpur, Sibsagar, Tinsukia and Karbi Analog districts of Eastern Himalayas under Agro Ecological Sub Regions (AESR) 15.2, 15.3 and 15.4.

**Agro-Eco Region17 :** AER 17 in Assam comprises of N.C Hills district of North-eastern Hills (Purvachal) basin under Agro Ecological Sub Region (AESR) 17.1.

**AESR 15.2 :** The region warm to hot per humid ESR with deep, loamy to clayey Red Loamy soils, low to medium AWC and LGP 300 days in a year.

**Major NRM issues :**

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Baksa | Exclusively water erosion | Low in OC, Soil Deficient in B, N, P & K | GW Contaminated with As | **-** |
| Barpeta | Exclusively water erosion &Waterlogged | Low in OC, Soil Deficient in B, N, P & K | GW Contaminated with As | **-** |
| Darrang | Exclusively water erosion | Soil Deficient in B, S, P & K | GW Contaminated with As | **-** |
| Kamrup Metro | Waterlogged | Soil Deficient in B, P & K | GW Contaminated with F | **-** |
| Kamrup Rural | Exclusively water erosion |  |  | **-** |
| Morigaon | **-** | Soil Deficient in B, P & K | GW Contaminated with As, Fe | **-** |
| Nagaon | Exclusively water erosion &Waterlogged | Low in OC, Soil Deficient in B, N, P & K | GW Contaminated with F, As, Fe | **-** |
| Nalbari | Exclusively water erosion &Waterlogged | Soil Deficient in B, P & K | GW Contaminated with As, Fe | **-** |
| Sonitpur | Exclusively water erosion | Soil Deficient in P & K | GW Contaminated with As, Fe | **-** |
| Udalguri | Exclusively water erosion | Soil Deficient in B, P & K | **-** | Extreme Drought |

**AESR 15.3 :** The region warm to hot per humid ESR with deep, loamy to clayey Red Loamy soils, low to medium AWC and LGP 300 days in a year.

**Major NRM issues :**

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| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Bongaigaon | Exclusively water erosion | Low in OC, Soil Deficient in B, N, P & K | GW Contaminated with F, As | **-** |
| Cachar | Waterlogged | Soil Deficient in B & P | GW Contaminated with As, Fe | **-** |
| Dhubri | Waterlogged | Soil Deficient in B & P | GW Contaminated with As, Fe | **-** |
| Goalpara | Exclusively acid soils | Soil Deficient in B & P | GW Contaminated with F, As, Fe | **-** |
| Hailakandi | **-** | Soil Deficient in B & P | GW Contaminated with As, Fe | **-** |
| Karimganj | **-** | Soil Deficient in B, P & K | GW Contaminated with F, As, Fe | **-** |
| Kokrajhar | Waterlogged | Low in OC, Soil Deficient in B, N, P & K | GW Contaminated with Fe | **-** |

**AESR 15.4 :**The region warm to hot perhumid ESR with moderately deep to deep loamy, alluvium-derived soils, medium AWC and LGP 300 days in a year.

**Major NRM issues :**

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| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Chirang | Exclusively water erosion | Low in OC, Soil Deficient in B, N, P & K | - | **-** |
| Dhemaji | Waterlogged | Low in OC, Soil Deficient in B, N, P & K | GW Contaminated with Fe, As | **-** |
| Dibrugarh | Acid soils under water erosion &Waterlogged | Low in OC, Soil Deficient in B, N, P & K | **-** | **-** |
| Golaghat | Acid soils under water erosion &Waterlogged | Soil Deficient in B & P | GW Contaminated with Fe, As | **-** |
| Jorhat | Acid soils under water erosion &Waterlogged | Soil Deficient in B, P & K | GW Contaminated with F | **-** |
| Karbi Analog | Exclusively water erosion | Low in OC, Soil Deficient in B, N, P & K | GW Contaminated with F, Fe | **-** |
| Lakhimpur | Exclusively water erosion | Low in OC, Soil Deficient in B, N, P & K | GW Contaminated with Fe, As | **-** |
| Sibsagar | Exclusively acid soils & Waterlogged | Low in OC, Soil Deficient in B, N, P & K | GW Contaminated with F, Fe | **-** |
| Tinsukia | Acid soils under water erosion | Low in OC, Soil Deficient in N, P & K | **-** | **-** |

**AESR 17.1 :**The region warm to hot moist humid to per humid ESR with medium to deep loamy to clayey Red and Lateritic soils, medium AWC and LGP 270-300+ days in a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| N.C Hills | Water erosion under open forest | **-** | - | **-** |