**Madhya Pradesh**

Madhya Pradesh comprises of three Agro Ecological Regions (AER) 4, 5 & 10.

**Agro-Eco Region 4:** AER4 in Madhya Pradesh comprises of Bhind, Gwalior, Morena, Sheopur, Shivpuri and Datia districts of Northern Plain and Central Highlands including Aravall is under Agro Ecological Sub Regions(AESR) 4.3 & 4.4.

**Agro-Eco Region 5:** AER 5 in Madhya Pradesh comprises of Shajapur, Alirajpur, Barwani, Burhanpur, Dewas, Dhar, East Nimar, Indore, Jhabua, Mandsaur, Nimach, Ratlam, Ujjanand West Nirmandistricts of Central (Malwa) Highlandsunder Agro Ecological Sub Region(AESR)5.2.

**Agro-Eco Region 10:**AER 10 in Madhya Pradesh comprises of districts Ashoknagar, Bhopal, Damoh, Guna, Harda, Hoshangabad, Jabalpur, Katni, Narshimapura, Raisen, Rajgarh, Sagar, Sehore, Shajapur, Videsha, Dewas,Betul,Anuppur,Chhatarpur, Panna, Rewa, Satna, Shahdol, Sidhi,Singrauli,Tikamgarh, Umaria, Balaghat, Chhindwara, Dindori, Jabalpur, Mandla and Seoniof Central Highlands under Agro Ecological Sub Regions(AESR)10.1, 10.2 ,10.3& 10.4.

**AESR 4.3:** The region is hot moist semi-arid ESR with deep, loamy alluvium-derived soils (sodic phase inclusion), medium to high AWC and LGP 120-150 dayin a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Bhind | Ravine | Low in OC, Soil deficient in N & P | Saline, GW Contaminated with F, NO3 & Fe |  |

**AESR 4.4:** The region is hot, moist semi-arid ESR with Deep loamy and clayey mixed Red and Black soils, medium to high AWC and LGP 90-120 days in a year.

**Major NRM issues:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Gwalior | Exclusively water erosion & Ravine | Soil deficient in N | Saline, GW Contaminated with F, NO3, Fe & heavy metals |  |
| Morena | Exclusively water erosion & Ravine | Low in OC& Soil deficient in N | Saline, GW Contaminated with F, NO3, Fe & heavy metals |  |
| Sheopur | Exclusively water erosion | Soil deficient in N& P | Saline, GW Contaminated with F & NO3 |  |
| Shivpuri | Exclusively water erosion & Ravine | Soil deficient in N | Saline, GW Contaminated with F, NO3, Fe & heavy metals |  |
| Datia | Exclusively water erosion | Soil deficient in N | GW Contaminated with F, NO3, Fe & heavy metals |  |

**AESR 5.2:**The region is hot moist semi-arid ESR with medium and deep, clayey Black soils (shallow black soils as inclusions), medium to high AWC and LGP 120-150 daysin a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Shajapur | Exclusively water erosion | Soil deficient in N | GW Contaminated with F, NO3, Fe & heavy metals |  |
| Alirajpur | Exclusively water erosion | Soil deficient in N& P | Saline, GW Contaminated with F & NO3 |  |
| Barwani | Exclusively water erosion | Soil deficient in N& P | GW Contaminated with F, NO3, Fe & heavy metals |  |
| Burhanpur | Exclusively water erosion | Soil deficient in N& P | GW Contaminated with NO3 & As |  |
| Dewas | Exclusively water erosion | Soil deficient in N& P | GW Contaminated with F, NO3, Fe & heavy metals |  |
| Dhar | Exclusively water erosion | Soil deficient in N& P |  |  |
| East Nimar | Exclusively water erosion | Soil deficient in N& P |  |  |
| Indore | Exclusively water erosion | Low in OC, Soil deficient in N& P |  |  |
| Jhabua | Exclusively water erosion | Soil deficient in N& P |  |  |
| Mandsaur | Exclusively water erosion & Ravine | Soil deficient in N& P |  |  |
| Nimach | Exclusively water erosion | Soil deficient in N& P |  |  |
| Ratlam | Exclusively water erosion | Low in OC, Soil deficient in N& P |  |  |
| Ujjan | Ravine | Soil deficient in N& P |  |  |
| West Nirman | Exclusively water erosion | Soil deficient in N& P |  |  |

**AESR 10.1:**The region is hot dry semi-arid ESR with shallow and medium loamy Black soils (deep clayey Black soils as inclusion), medium to high AWC and LGP 90-120 days in a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Ashoknagar | Exclusively water erosion | Soil deficient in N& P |  |  |
| Bhopal | Exclusively water erosion | Soil deficient in N& P |  |  |
| Damoh | - | Soil deficient in P |  |  |
| Guna | Exclusively water erosion | Soil deficient in N& P |  |  |
| Harda | Exclusively water erosion | Soil deficient in N |  |  |
| Hoshangabad | Exclusively water erosion | Low in OC &Soil deficient in N |  |  |
| Jabalpur | Exclusively water erosion | Soil deficient in N& P |  |  |
| Katni | Exclusively water erosion | Soil deficient in N |  |  |
| Narshimapura | Exclusively water erosion | Soil deficient in N& P |  |  |
| Raisen | Exclusively water erosion | Soil deficient in N& P |  |  |
| Rajgarh | Exclusively water erosion | Low in OC, Soil deficient in N& P |  |  |
| Sagar | Exclusively water erosion | Soil deficient in P |  |  |
| Sehore | Exclusively water erosion | Soil deficient in N& P |  |  |
| Shajapur | Exclusively water erosion | Soil deficient in N |  |  |
| Videsha | Exclusively water erosion | Soil deficient in N& P |  |  |
| Dewas | Exclusively water erosion | Soil deficient in N& P |  |  |

**AESR 10.2:**The region is hot dry subhumid ESR with shallow and medium loamy to clayey Black soils (deep clayey Black soils as inclusion), medium to high AWC and LGP 150-180 daysin a year.

**Major NRM issues:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Betul | **-** | Low in OC, Soil deficient in N& P |  |  |

**AESR 10.3:**The region is hot dry subhumid ESR with deep loamy to clayey mixed Red and Black soils, medium to high AWC and LGP 150-180 days in a year.

**Major NRM issues:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Anuppur | Exclusively water erosion | Soil deficient in N |  |  |
| Chhatarpur | Exclusively water erosion | Low in OC &Soil deficient in N |  |  |
| Panna | Exclusively water erosion | Soil deficient in N& P |  |  |
| Rewa | Exclusively water erosion | Soil deficient in N& P |  |  |
| Satna | Exclusively water erosion | Soil deficient in N |  |  |
| Shahdol | Exclusively water erosion | Soil deficient in N& P |  |  |
| Sidhi | Exclusively water erosion | **-** |  |  |
| Singrauli | Exclusively water erosion | Low in OC &Soil deficient in N |  |  |
| Tikamgarh | Exclusively water erosion | **-** |  |  |
| Umaria | - | Soil deficient in N& P |  |  |

**AESR 10.4:**The region is hot moist subhumid ESR with shallow to deep loamy to clayey mixed Red and Black soils, low to medium AWC and LGP 180-210 daysin a year.

**Major NRM issues:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Balaghat | **-** | **-** |  |  |
| Chhindwara | Exclusively water erosion | Soil deficient in N& P |  |  |
| Dindori | Exclusively water erosion | Soil deficient in P |  |  |
| Jabalpur | Exclusively water erosion | Soil deficient in N& P |  |  |
| Mandla | Exclusively water erosion | Soil deficient in N& P |  |  |
| Seoni | Exclusively water erosion | Soil deficient in N& P |  |  |

**Maharashtra**

**Argo-Eco Region 5:** AER 5 in Maharashtra comprises of one Nandurbar district of Central (Malwa) Highlands under Agro Ecological Sub Region(AESR)5.2.

**Agro-Eco Region6:** AER 6 in Maharashtra comprises of Ahmadnagar , Bid , Osmanabad , Pune,Sangli ,Satara, Solapur, Ahmadnagar, Aurangabad, Dhule, Hingoli, Jalgaon, Jalna, Latur, Nanded, Nandurbar ,Parbhani, Akola, Amaravati ,Buldhana , Jalgaon , Nasik ,Washim ,Yavatmal,Kolhapur ,Pune ,Sangli and Satara districts of Deccan Plateau under Agro Ecological Sub Regions(AESR)6.1, 6.2, 6.3 & 6.4.

**Agro-Eco Region 10:** AER 10 in Maharashtra comprises of Wardha, Nagpur, Amaravati, Bhandara and Gondiya districts of Central Highlands under Agro Ecological Sub Regions(AESR)10.2& 10.4.

**Agro-Eco Region 12:** AER 12 in Maharashtra comprises of Chandrapur and Gadchiroli districts of Eastern (Chhotanagpnr) Plateau under Agro Ecological Sub Region(AESR)12.1.

**Agro-EcoRegion19:** AER19 in Maharashtra comprises of Raigarh, Ratnagiri, Sindhudurg, Kolhapur, Raigarh, Ratnagiri, Sindhudurg, Suburban Mumbai, Thane and Mumbai City districtsThane of Western Ghats & Coastal Plain under Agro Ecological Sub Regions(AESR)19.1,19.2 & 19.3.

**AESR 5.2:**The region is hot moist semi-arid ESR with medium and deep, clayey Black soils (shallow black soils as inclusions), medium to high AWC and LGP 120-150 days in a year.

**Major NRM issues:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Nandurbar | **-** | Low in OC &Soil deficient in N |  |  |

**AESR 6.1:**The region is hot dry semi-arid ESR with shallow and medium loamy Black soils (deep clayey Black soils as inclusion), medium to high AWC and LGP 90-120 days in a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Districts*** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Ahmadnagar | Exclusively water erosion | Soil deficient in N |  |  |
| Bid | **-** | Low In OC & Soil deficient in N |  |  |
| Osmanabad | **-** | Low In OC & Soil deficient in P |  |  |
| Pune | Exclusively water erosion | Soil deficient in N |  |  |
| Sangli | Exclusively water erosion | Low In OC, Soil deficient in N & P |  |  |
| Satara | **-** | **-** |  |  |
| Solapur | **-** | Soil deficient in N |  |  |

**AESR 6.2 :**The region is hot moist semi-arid ESR with shallow and medium loamy to clayey Black soils (medium land deep clayey Black soils as inclusion), medium to high AWC and LGP 120-150 days in a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Aurangabad | **-** |  |  |  |
| Dhule | Exclusively water erosion | Low in OC & Soil deficient in N |  |  |
| Hingoli | **-** | **-** |  |  |
| Jalgaon | **-** | Low in OC & Soil deficient in N |  |  |
| Jalna | **-** |  |  |  |
| Latur | **-** | Soil deficient in N |  |  |
| Nanded | **-** | Soil deficient in N |  |  |
| Nandurbar | **-** | Low in OC & Soil deficient in N |  |  |
| Parbhani | **-** | Low in OC & Soil deficient in N |  |  |

**AESR 6.3 :**The region is hot moist semi-arid ESR with medium land deep clayey Black soils (shallow loamy to clayey Black soils as inclusion), medium to high AWC and LGP 120-150 daysin a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Akola | **-** | Low in OC & Soil deficient in N |  |  |
| Amaravati | **-** | Low in OC & Soil deficient in N |  |  |
| Buldhana | **-** | Soil deficient in N |  |  |
| Jalgaon | **-** | Low in OC & Soil deficient in N |  |  |
| Nasik | Exclusively water erosion | Soil deficient in N |  |  |
| Washim | **-** | Low in OC |  |  |
| Yavatmal | **-** | Low in OC & Soil deficient in N |  |  |

**AESR 6.4 :**The region hot dry subhumid ESR.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Kolhapur | **-** |  |  |  |
| Pune | Exclusively water erosion |  |  |  |
| Sangli | Exclusively water erosion |  |  |  |
| Satara | **-** |  |  |  |

**AESR 10.2 :**The region is hot dry subhumid ESR with shallow and medium loamy to clayey Black soils (deep clayey Black soils as inclusion), medium to high AWC and LGP 150-180 days in a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Amaravati | **-** |  |  |  |
| Nagpur | **-** |  |  |  |
| Wardha | **-** |  |  |  |

**AESR 10.4 :**The region is hot moist subhumid ESR with shallow to deep loamy to clayey mixed Red and Black soils, low to medium AWC and LGP 180-210 daysin a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Bhandara | **-** |  |  |  |
| Gondiya | **-** |  |  |  |

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

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Chandrapur | **-** |  |  |  |
| Gadchiroli | **-** |  |  |  |

**AESR 19.1 :**The region is hot humid ESR with medium to deep loamy to clayey mixed Red and Black soils, medium to high AWC and LGP 210-240 days in a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Raigarh | Exclusively water erosion |  |  |  |
| Thane | Exclusively water erosion &Waterlogged |  |  |  |

**AESR 19.2 :**The region is hot humid ESR with medium to deep loamy to clayey mixed Red and Black soils, medium to high AWC and LGP 210-240 daysin a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Ratnagiri | Exclusively water erosion |  |  |  |
| Sindhudurg | Exclusively water erosion |  |  |  |
| Kolhapur | **-** |  |  |  |

**AESR 19.3 :**The region is hot humid to per humid transitional ESR with deep, clayey to loamy acidic coastal alluvium-derived soils, low AWC and LGP 240-270 daysin a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Raigarh | Exclusively water erosion |  |  |  |
| Ratnagiri | Exclusively water erosion |  |  |  |
| Sindhudurg | Exclusively water erosion |  |  |  |
| Suburban Mumbai | Exclusively water erosion |  |  |  |
| Thane | Exclusively water erosion &Waterlogged |  |  |  |
| Mumbai City | Exclusively water erosion &Waterlogged |  |  |  |

**Manipur**

Manipur comprises of one Agro Ecological Region (AER) 17.

**Agro-Eco Region17:** AER 17 in Manipur comprises of Bishnupur, Chandel, Churachandpur, Senapati, Tamenglong, Thoubal, Ukhrul, Imphal West and Imphal Eastdistricts of Northern Plain and Central Highlands including Aravall is under Agro Ecological Sub Regions(AESR) 4.3 & 4.4.

**AESR 17.2 :**The region is warm to hot perhumid ESR with medium to deep loamy Red and Yellow soils, low to medium AWC and LGP 300 days in a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Bishnupur | Waterlogged |  |  |  |
| Chandel | Acid soils under open forest |  |  |  |
| Churachandpur | Acid soils under open forest |  |  |  |
| Senapati | Acid soils under open forest &Waterlogged |  |  |  |
| Tamenglong | Acid soils under open forest |  |  |  |
| Thoubal | **-** |  |  |  |
| Ukhrul | Acid soils under open forest |  |  |  |
| Imphal West | Exclusively acid soils |  |  |  |
| Imphal East | Acid soils under water erosion |  |  |  |

**Meghalaya**

Meghalaya comprises of one Agro Ecological Region (AER) 17.

**Agro-Eco Region 17:** AER 17 in Meghalaya comprises of East Garo Hills, East Khasi Hills, Jaintia Hills, West Khasi Hills, RiBhoi and South Garo Hills districts of North-eastern Hills under Agro Ecological Sub Region(AESR)17.1.

**AESR 17.1 :**The region is warm to hot moist humid to perhumid 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*** |
| East Garo Hills | Water erosion under open forest &Waterlogged |  |  |  |
| East Khasi Hills | Acid soils under open forest |  |  |  |
| Jaintia Hills | Acid soils under open forest |  |  |  |
| West Khasi Hills | Acid soils under open forest |  |  |  |
| Ri Bhoi | Acid soils under open forest |  |  |  |
| South Garo Hills | Water erosion under open forest |  |  |  |

**Mizoram**

Mizoram comprises of one Agro Ecological Region (AER) 17.

**Agro-Eco Region 17:**AER 17 in Mizoram comprises of Aizawal, Lawngtali, Lunglei, Kolasib, Mamit, Champhai, Serchhip and Saiha districts of North-eastern Hills under Agro Ecological Sub Region(AESR) 17.1.

**AESR 17.1 :**The region is warm to hot moist humid to perhumid 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*** |
| Aizawal | Acid soils under open forest |  |  |  |
| Lawngtali | Acid soils under open forest |  |  |  |
| Lunglei | Acid soils under open forest |  |  |  |
| Kolasib | **-** |  |  |  |
| Mamit | **-** |  |  |  |
| Champhai | Acid soils under open forest |  |  |  |
| Serchhip | Acid soils under open forest |  |  |  |
| Saiha | Acid soils under open forest |  |  |  |