**Jharkhand**

Jharkahand comprises of four Agro Ecological Regions (AER) 11,12,13 and 15.

**Agro-Eco Region 11 :** AER 11 in Jharkand comprises of Chatra, Garhwal, Gumla, Hazaribagh, Kodarma, Latehar ,Lohardaga, Palamu, Simdega and Ranchi districts of Eastern Plateau under Agro Ecological Sub Region (AESR) 11.

**Agro-Eco Region 12 :**AER12 in Jharkand comprises of Bokaro, Devgarh, Dhanbad, Dumka, Giridih, Jamtara, Pakur, Paschim Singhbhumi, Purbi Singhbhumi, Saraikela, Ramgarh, Kunti, Sahebganj and Ranchi districts of Eastern Plateau under Agro Ecological Sub Region (AESR) 12.3.

**Agro-Eco Region 13 :** AER 13 in Jharkand comprises of Gooda and Sahebganj districts of Eastern Plain under Agro Ecological Sub Region (AESR) 13.1.

**Agro-Eco Region 15 :** AER15 in Jharkand comprises of Pakur and Sahebganj districts of Bengal and Assam Plain under Agro Ecological Sub Region (AESR) 15.1.

**Major NRM issues :**

**AESR 11 :** The region is hot moist/dry subhumid transitional ESR with deep loamy to clayey Red and Yellow 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*** |
| Chatra | **-** | Low in OC &Soil deficient in N | GW Contaminated with NO3 & Fe | **-** |
| Garhwal | **-** |  | GW Contaminated with F & NO3, | Extreme Drought |
| Gumla | **-** | Low in OC &Soil deficient in P | GW Contaminated with F & NO3 | **-** |
| Hazaribagh | **-** | Low in OC,Soil deficient in N & P | - | **-** |
| Kodarma | **-** | Low in OC, Soil deficient in N, P & K | GW Contaminated with F | **-** |
| Latehar | **-** | Low in OC,Soil deficient in N & P | - | **-** |
| Lohardaga | **-** | Low in OC,Soil deficient in N & P | GW Contaminated with NO3 & Fe | **-** |
| Palamu | **-** | Soil deficient in P & K | GW Contaminated with F & NO3 | **-** |
| Ranchi | Exclusively water erosion | Soil deficient in N & P | GW Contaminated with F, NO3 & Fe | **-** |
| Simdega | **-** | Soil deficient in N & P | - | **-** |

**AESR 12.3 :** The region is hot moist/dry subhumid transitional ESR with deep loamy to clayey Red and Yellow 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*** |
| Bokaro | Exclusively water erosion | Soil deficient in P | GW Contaminated with F | **-** |
| Devgarh | Exclusively water erosion | **-** | GW Contaminated with Fe | **-** |
| Dhanbad | Exclusively water erosion | Soil deficient in K | GW Contaminated with F | **-** |
| Dumka | Exclusively water erosion | Low in OC, Soil deficient in N, K & P | - | **-** |
| Giridih | Exclusively water erosion | Low in OC & Soil deficient in P | GW Contaminated with F | **-** |
| Jamtara | Exclusively water erosion | Low in OC & Soil deficient in P | - | **-** |
| Kunti | Exclusively water erosion | Soil deficient in P | GW Contaminated with F | **-** |
| Pakur | Waterlogged | Low in OC & Soil deficient in K | GW Contaminated with F & NO3 | **-** |
| Paschim Singhbhumi | Waterlogged | Low in OC & Soil deficient in K | GW Contaminated with NO3 | **-** |
| Purbi Singhbhumi | Waterlogged | Soil deficient in N, K & P | GW Contaminated with NO3 & Fe | **-** |
| Ramgarh | Exclusively water erosion | Soil deficient P | - | **-** |
| Ranchi | Exclusively water erosion | Soil deficient in N | GW Contaminated with F, NO3 & As | **-** |
| Sahebganj | Exclusively water erosion | Soil deficient in P | GW Contaminated with F, NO3 & Fe | **-** |
| Saraikela | Exclusively water erosion | Soil deficient in N & P | - | **-** |

**AESR 13.1 :** The region is hot dry to moist subhumid transitional ESR with deep, loamy alluvium-derived 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*** |
| Gooda | Exclusively water erosion | Soil deficient in N & P | GW Contaminated with F & NO3 |  |
| Sahebganj | Exclusively water erosion | Soil deficient in P | GW Contaminated with F, NO3 & Fe |  |

**AESR 15.1 :** The region is hot moist subhumid ESR with deep loamy to clayey alluvium-derived soils, medium to high AWC and LGP 210-240 days in a year.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Pakur | Waterlogged | Soil deficient in N & K | GW Contaminated with F & NO3 |  |
| Sahebganj | - | Soil deficient in P | GW Contaminated with F, NO3 & Fe |  |