**Major NRM issues :**

**AESR 2.3 :** The region is hot typic- arid ESR with deep, loamy desert soils (inclusion of saline phase), low AWC and LGP 60-90 days in a year.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Bathinda | **-** | Low in OC, Soil deficient in N & P | Saline GW Contaminated with F, NO3, Fe & heavy metals | **-** |
| Faridkot | - | Low in OC & Soil deficient in P | Saline GW Contaminated with F, NO3, As & Fe | **-** |
| Mansa | **-** | Low in OC, Soil deficient in P & Fe | Saline GW Contaminated with F, NO3, As, Fe & heavy metals | **-** |
| Muktsar | - | Low in OC, Soil deficient in N, P & Mn | Saline GW Contaminated with F, NO3, As, Fe & heavy metals | **-** |

**AESR 4.1:** The region is hot semi-arid ESR with deep loamy alluvium-derived soils (occasional saline and sodic phases), 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*** |
| Amritsar | - | Low in OC, Soil deficient in N, P, Mn & B | GW contaminated with F, NO3, As & heavy metals | **-** |
| Barnala | **-** | Low in OC, Soil deficient in N, P & B | Contaminated with F, NO3 & heavy metals | **-** |
| Faridkot | - | Low in OC & Soil deficient in P | Saline GW contaminated with F, NO3, As & Fe | **-** |
| Firozpur | - | Low in OC, Soil deficient in N & P | Saline GW contaminated with F, NO3, Fe & heavy metals | **-** |
| Jalandhar | **-** | Low in OC & Soil deficient in N, Zn, Mn, B & S | GW contaminated with F, NO3 & heavy metals | **-** |
| Ludhiana | **-** | Low in OC , Soil deficient in N, P & Mn | Saline GW contaminated with F, NO3 & heavy metals | **-** |
| Moga | **-** | Low in OC, Soil deficient in P & Mn | Saline GW contaminated with F & NO3 | **-** |
| Patiala | **-** | Low in OC, Soil deficient in N & P | Saline GW contaminated with F, NO3  & heavy metals | **-** |
| Sangrur | Exclusively sodic soil | Low in OC, Soil deficient in N, P & B | Saline GW contaminated with F, NO3, Fe, As & heavy metals | **-** |
| Tarn Taran | **-** | Low in OC, Soil deficient in N & P | GW contaminated with F, NO3, As & heavy metals | **-** |

**AESR 9.1:** The region hot dry/moist sub humid transitional ESR with deep, loamy to clayey alluvium-derived (inclusion of saline and sodic phases) soils, medium AWC and LGP 120-150 days in a year.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Amritsar | - | Low in OC, Soil deficient in N, P, Mn & B | GW contaminated with F, NO3, As & heavy metals | **-** |
| Fatehgarh Sahib | **-** | Low in OC, Soil deficient in N, P & B | GW contaminated with F, NO3, Fe & heavy metals | **-** |
| Gurdaspur | Exclusively water erosion | Low in OC, Soil deficient in N & P | Saline GW contaminated with F, NO3, As, Fe & heavy metals | **-** |
| Hoshiarpur | Exclusively water erosion | Low in OC, Soil deficient in N, P, K, Zn & S | GW contaminated with NO3, As & Fe | **-** |
| Jalandhar | **-** | Low in OC, Soil deficient in N, Zn, Mn, B & S | GW contaminated with F & NO3 | **-** |
| Kapurthala | - | Low in OC, Soil deficient in Mn & B | - | **-** |
| Ludhiana | **-** | Low in OC, Soil deficient in N & B | Saline GW contaminated with F & NO3 | **-** |
| Nawashahr | Water erosion under open forest | Low in OC, Soil deficient in N & P | GW contaminated with As & heavy metals | **-** |
| Patiala | **-** | Low in OC & Soil deficient in N | Saline GW Contaminated with F & NO3 | **-** |
| Rupnagar | Exclusively Water erosion | Low in OC, Soil deficient in N, P, Mn & S | GW contaminated with NO3 & Fe | **-** |
| SAS Nagar | **-** | Low in OC & Soil deficient in B | GW contaminated with F, NO3 & heavy metals | **-** |
| SBS Nagar | **-** | Low in OC | - | **-** |

**AESR 14.2 :** The region is warm moist to dry subhumid transitional ESR with medium to deep loamy to clayey Brown Forest and Podzolic soils, medium AWC and LGP 150-210 days in a year.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Gurdaspur | - | Low in OC, Soil deficient in N & P | Saline GW Contaminated with F, NO3, As, Fe & heavy metals | **-** |
| Hoshiarpur | Exclusively Water erosion | Low in OC, Soil deficient in N , P, K, Zn & S | GW contaminated with As & Fe | **-** |
| Rupnagar | Exclusively Water erosion | Low in OC, Soil deficient in N, Mn & S | GW contaminated with NO3 & Fe | **-** |