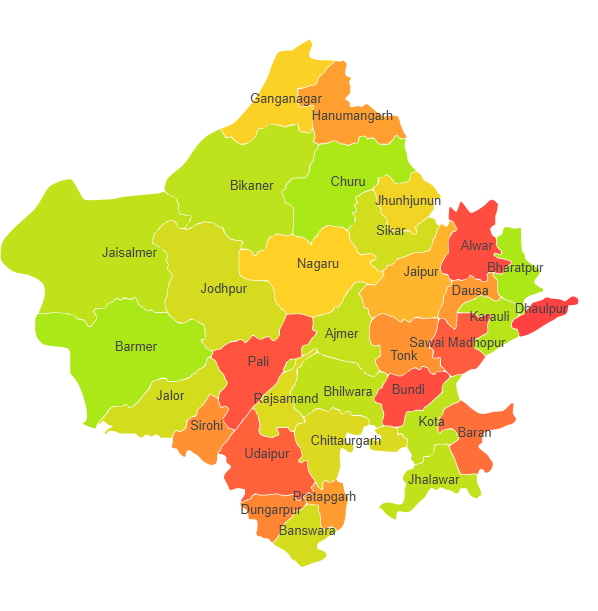
**Rajasthan**

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Rajasthan comprises of two Agro Ecological Regions (AER) 2,4 & 5.

**Agro-Eco Region 2:** AER 2 in Rajasthan comprises of Barmer, Bikaner, Churu, Ganganagar, Hanumangarh, Jaiselmer, Jalor, Jhunjhunun, Jodhpur, Nagpur, Pali, Sikar and Sirohi districts of Western Plain under Agro Ecological Sub Regions (AESR) 2.1 & 2.3.

**Agro-Eco Region 4:** AER 4 in Rajasthan comprises of Alwar, Ajmer, Bharatpur, Bhilwara, Bundi, Chittaurgarh, Dausa, Dholpur, Dungarpur, Jaipur, Karauli, Rajsmand, Swaimadhopur, Tonk and Udaipur districts of Northern Plain and Central Highlands including Aravallis under Agro Ecological Sub Regions (AESR) 4.1 & 4.2.

**Agro-Eco Region 5:** AER 5 in Rajasthan comprises of Banswara, Baran, Bundi, Chittaurgarh, Jhalawar, Kota and Pratapgarh districts of Central (Malwa) Highlands under Agro Ecological Sub Region (AESR) 5.2.

**Major NRM issues :**

**AESR 2.1:** The region is hyper arid ESR with shallow and deep sandy desert soils very low AWC and LGP < 60 days in a year.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Barmer | Exclusively wind erosion | Low in OC, Soil deficient in N, P, Zn & Fe | Saline GW Contaminated with F, NO3 & Fe | Highly prone to Drought |
| Bikaner | Exclusively wind erosion | Low in OC, Soil deficient in Zn, Fe, Mn & S | Saline GW Contaminated with F, NO3 & Fe | - |
| Ganganagar | **-** | Low in OC & Soil deficient in Zn | Saline GW Contaminated with F, NO3, As& Fe | Moderately prone to Drought |
| Hanumangarh | Exclusively wind erosion | Low in OC, Soil deficient in N & P | Saline GW Contaminated with F, NO3 & Fe | Highly prone to Drought |
| Jaiselmer | Exclusively wind erosion | Low in OC, Soil deficient in N, P, Zn, Fe & S | Saline GW Contaminated with F, NO3 & Fe | Highly prone to Drought |
| Jodhpur | Exclusively wind erosion | Low in OC, Soil deficient in N, Zn & Fe | Saline GW Contaminated with F, NO3 & Fe | Highly prone to Drought |

**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*** |
| Churu | Exclusively wind erosion | Low in OC, Soil deficient in N, P, Zn, Fe & S | Saline GW Contaminated with F, NO3 & Fe | Highly prone to Flood |
| Hanumangarh | Exclusively wind erosion | Low in OC, Soil deficient in N & P | Saline GW Contaminated with F, NO3 & Fe | Severe Drought |
| Jalor | Exclusively wind erosion | Low in OC, Soil deficient in N, P & Fe | Saline GW Contaminated with F , NO3 &Fe | Highly prone to Drought & Cyclone |
| Jhunjhunun | Exclusively wind erosion | Low in OC, Soil deficient in N, Zn & Fe | Saline GW Contaminated with F, NO3 & Fe | Highly prone to Drought |
| Jodhpur | Exclusively wind erosion | Low in OC, Soil deficient in N, Zn & Fe | Saline GW Contaminated with F, NO3 & Fe | Highly prone to Drought |
| Nagaur | Exclusively wind erosion | Low in OC, Soil deficient in N, Fe & B | Saline GW Contaminated with F, NO3 & Fe | Highly prone to Flood & Drought |
| Pali | **-** | Low in OC & Soil deficient in N, Zn, Fe, B & S | Saline GW Contaminated with F, NO3 , Fe & heavy metals | Highly prone to Drought |
| Sikar | Exclusively wind erosion | Low in OC, Soil deficient in N, P & Fe | Saline GW Contaminated with F, NO3 & Fe | Highly prone to Drought |
| Sirohi | Exclusively water erosion & Exclusively wind erosion | Low in OC, Soil deficient in N, P, Zn, Fe & B | Saline GW Contaminated with F, NO3 & Fe | **-** |

**AESR 4.1:** The region is hyper arid ESR with shallow and deep sandy desert soils very low AWC and LGP < 60 days in a year.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Alwar | Exclusively water erosion, Exclusively wind erosion & Ravine | Low in OC, Soil deficient in N & B | Saline GW Contaminated with F, NO3 & Fe | **-** |
| Bharatpur | Exclusively water erosion & Ravine | Low in OC, Soil deficient in N, P, Zn & B | Saline GW Contaminated with F, NO3 & Fe | **-** |
| Dholpur | Exclusively water erosion & Ravine | Low in OC, Soil deficient in N & P | Saline GW Contaminated with F, NO3 & Fe | **-** |
| Jaipur | Exclusively water erosion & Ravine | Low in OC, Soil deficient in N, Fe & B | Saline GW Contaminated with F, NO3 , Fe & heavy metals | Highly prone to Drought |

**AESR 4.2:** The region is hyper hot dry semiarid ESR with deep loamy Gray Brown and alluvium-derived 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*** |
| Ajmer | Exclusively water erosion & Ravine | Low in OC, Soil deficient in N, B & S | Saline GW Contaminated with F, NO3 & Fe | Highly prone to Drought |
| Bhilwara | Exclusively water erosion & Ravine | Low in OC, Soil deficient in Zn & Fe | Saline GW Contaminated with F, NO3 & Fe | Moderately prone to Drought |
| Bundi | Exclusively water erosion, Water erosion under open forest & Ravine | Low in OC & Soil deficient in N | Saline GW Contaminated with F, NO3 & Fe | **-** |
| Chittaurgarh | Exclusively water erosion & Water erosion under open forest | Low in OC | Saline GW Contaminated with F, NO3 & Fe | Moderately prone to Drought |
| Dausa | Exclusively water erosion | Low in OC, Soil deficient in N, P, Zn & Fe | Saline GW Contaminated with F, NO3 & Fe | **-** |
| Dungarpur | Exclusively water erosion & Ravine | Low in OC, Soil deficient in N, P, B & S | GW Contaminated with F, NO3 & Fe | Highly prone to Drought |
| Jaipur | Exclusively water erosion & Ravine | Low in OC, Soil deficient in N, Fe & B | Saline GW Contaminated with F, NO3 & Fe | Highly prone to Drought |
| Karauli | Exclusively water erosion, Water erosion under open forest & Ravine | Low in OC & Soil deficient in N | Saline GW Contaminated with F, NO3 & Fe | **-** |
| Rajsmand | Exclusively wind erosion | Low in OC, Soil deficient in N & Fe | Saline GW Contaminated with F, NO3 & Fe | **-** |
| Swaimadhopur | Exclusively water erosion & Ravine | Low in OC, Soil deficient in N, P & Zn | Saline GW Contaminated with F, NO3 & Fe | **-** |
| Tonk | Exclusively water erosion & Ravine | Low in OC, Soil deficient in N, Zn, Fe, B & S | Saline GW Contaminated with F, NO3 & Fe | Moderately prone to Drought |
| Udaipur | Exclusively water erosion & Water erosion under open forest | Soil deficient in N & B | Saline GW Contaminated with F, NO3 & Fe | Moderately prone to Drought |

**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.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Banswara | Exclusively water erosion, Water erosion under open forest & Ravine | Low in OC, Soil deficient in N, Zn & Fe | GW Contaminated with F, NO3 & Fe | Moderately prone to Drought |
| Baran | Exclusively water erosion, Water erosion under open forest & Ravine | Soil deficient in N & S | Saline GW Contaminated with F, NO3 & Fe | **-** |
| Bundi | Exclusively water erosion, Water erosion under open forest & Ravine | Low in OC & Soil deficient in N | Saline GW Contaminated with F, NO3 & Fe | **-** |
| Chittaurgarh | Exclusively water erosion, Water erosion under open forest & Ravine | Low in OC | Saline GW Contaminated with F, NO3 & Fe | Moderately prone to Drought |
| Jhalawar | Exclusively water erosion & Water erosion under open forest | Low in OC | Saline GW Contaminated with F, NO3 & Fe | **-** |
| Kota | Exclusively water erosion & Ravine | Soil deficient in N | Saline GW Contaminated with F, NO3 & Fe | **-** |
| Pratapgarh | Exclusively wind erosion | Low in OC, Soil deficient in Fe & B | GW Contaminated with F, NO3 & Fe | Moderately prone to Drought |

**Organization and Establishments for Technology Backstopping**

***ICAR Research Institutes:***

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| Central Arid Zone Research Institute, Jodhpur with Regional Stations at Bikaner, Jaisalmer and Pali | <http://www.cazri.res.in/index.php> |
| Regional Station of Indian Institute of Soil & Water Conservation , Kota | <http://www.cswcrtiweb.org/index1.html?Kota/Kota_back.html> |
| Regional Station of National Bureau of Soil Survey & Land Use Planning, Udaipur | <https://nbsslup.icar.gov.in/udaipur> |
| Central Institute for Arid Horticulture Bikaner | <https://ciah.icar.gov.in> |
| Directorate of Rapeseed - Mustard Research Bharatpur | <https://www.drmr.res.in> |

***SAUs/CAUs:***

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| Maharana Pratap University of Agriculture & Technology, Udaipur | <https://www.mpuat.ac.in> |
| Swami Keshwan and Rajasthan Agricultural University, Bikaner | <http://raubikaner.org> |
| Rajasthan University of Veterinary & Animal Sciences, Bikaner | <http://rajuvas.org> |
| SKN Agriculture University, Jobner | <http://sknau.ac.in> |
| Agriculture University, Kota | <http://aukota.org> |
| Agriculture University, Jodhpur | <http://aujodhpur.ac.in> |

***List of KVKs:*** <https://icar.org.in/content/rajasthan>

***List of Soil testing Laboratories****:* <https://farmer.gov.in/STLDetails.aspx?State=8>