**Bihar**

Bihar comprises of two Agro Ecological Regions (AER) namely 9 and 13.

**Agro-Eco Region 9 :** AER 9 Bihar comprises of Arwal, Aurangabad, Bhabua, Bhojpur, Buxar, Gaya, Jahanabad, Nalanda, Nawada, Patna, Rohtas and Sheikhpura districts of Northern Plain under Agro Ecological Sub Regions (AESR) 9.2.

**Agro-Eco Region 13 :** AER 13 in Bihar comprises of Arariya, Banka, Begusarai, Bhagalpur, Drabhanga, Gopalganj, Jamui, Katihar, Khagaria, KishanganJ, Lakhisarai, Madhepura, Madubani, Munger, Muzaffarpur, Pachim Champaran, Purba champaran, Purnia, Saharsa, Samastipur, Saran, Sheohar, Sitamarhi, Siwan, Supaul and Vaishali districts of Eastern Plain under Agro Ecological Sub Regions (AESR) 13.1.

**Major NRM issues :**

**AESR 9.2 :** The region 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.

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| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Arwal | **-** | **-** | - | **-** |
| Aurangabad | Waterlogged | **-** | GW Contaminated with F, NO3, Fe | **-** |
| Bhabua | Water erosion under open forest | **-** | GW Contaminated with F, NO3 | **-** |
| Bhojpur | **-** | Soil deficient in N | GW Contaminated with NO3, As, Fe | **-** |
| Buxar | Waterlogged | Soil deficient in P | GW Contaminated with As, Fe | **-** |
| Gaya | **-** | **-** | GW Contaminated with F | **-** |
| Jahanabad | **-** | **-** | GW Contaminated with F | **-** |
| Nalanda | **-** | **-** | GW Contaminated with F | **-** |
| Nawada | **-** | **-** | GW Contaminated with F | **-** |
| Patna | Waterlogged | **-** | GW Contaminated with NO3 | Highly prone to flood & drought |
| Rohtas | **-** | **-** | GW Contaminated with F, NO3 | Highly prone to drought & cyclone |
| Sheikhpura | **-** | **-** | GW Contaminated with F |  |

**AESR 13.1 :** The region warm to 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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| **Districs** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Arariya | **-** | **-** | - |  |
| Banka | Waterlogged | Low in OC & Soil is deficient in N | GW Contaminated with F, NO3 | Highly prone to flood & cyclone |
| Begusarai | Waterlogged | Soil is deficient in N | GW Contaminated with As, Fe | Moderately prone to flood, drought & cyclone |
| Bhagalpur | - | **-** | GW Contaminated with F, NO3, As | Highly prone to flood, drought & cyclone |
| Drabhanga | Waterlogged | Soil is deficient in N | GW Contaminated with NO3, As | - |
| Gopalganj | Waterlogged | Low in OC & Soil is deficient in N | GW Contaminated with Fe | Highly prone to flood, drought & cyclone |
| Jamui | - | **-** | GW Contaminated with F | - |
| Katihar | Waterlogged | Soil is deficient in N | GW Contaminated with As, Fe | - |
| Khagaria | Waterlogged | **-** | GW Contaminated with As, Fe | Highly prone to flood |
| Kishanganj | - | Soil is deficient in N | GW Contaminated with As, Fe | Highly prone to flood |
| Lakhisarai | - | **-** | GW Contaminated with F, As, Fe | - |
| Madhepura | Waterlogged | Low in OC, Soil is deficient in N, P & K | GW Contaminated with As, Fe | Moderately prone to flood & drought |
| Madubani | Waterlogged | Soil is deficient in N | **-** | - |
| Munger | Waterlogged | **-** | GW Contaminated with F, As, Fe | Moderately prone to flood & drought |
| Muzaffarpur | Waterlogged | Soil is deficient in N | GW Contaminated with As, Fe | Moderately prone to flood & drought |
| Pachim Champaran | - | Low in OC, Soil is deficient in N & K | GW Contaminated with As, Fe | - |
| Purnia | Waterlogged | Soil is deficient in N | GW Contaminated with As, Fe | Highly prone to flood |
| Saharsa | Waterlogged | Soil is deficient in N | GW Contaminated with As | Highly prone to flood & drought |
| Samastipur | Waterlogged | **-** | GW Contaminated with As, Fe | Highly prone to flood & drought |
| Saran | Waterlogged | Soil is deficient in N | GW Contaminated with As, Fe | Moderately prone to flood & drought |
| Sheohar | **-** | Soil is deficient in N | GW Contaminated with As | Highly prone to flood, drought & cyclone |
| Sitamarhi | **-** | Soil is deficient in K | **-** | Highly prone to flood & drought |
| Siwan | Waterlogged | **-** | - | - |
| Supaul | **-** | Soil is deficient in N & K | GW Contaminated with NO3, As, Fe | - |
| Vaishali | Waterlogged | Low in OC & Soil is deficient in N | GW Contaminated with Fe | Highly prone to flood & drought |