**Karnataka**

Karnataka comprises of four Agro Ecological Regions (AER) 3,6,8 & 19.

**Agro-Eco Region 3:** AER3 in Karnataka comprises of Bagalkot, Ballari, Koppal and Chitradurga districts of Deccan Plateau under Agro Ecological Sub Region(AESR)3.

**Agro-Eco Region 6:** AER 6 in Karnataka comprises of Vijayapura, Raichur, Bidar, Kalaburagi, Yadgir, Uttar Kannada, Belagavi, Davangere, Dharwad and Gadag districts of Deccan Plateau under Agro Ecological Sub Regions (AESR) 6.1, 6.2 & 6.4.

**Agro-Eco Region 8:** AER 6 in Karnataka comprises of Haveri, Chikkamagaluru, Bengaluru Rural, Bengaluru Urban, Chamarajanagar, Chikballapur, Chitradurga, Hassan, Kolar, Mandhya, Mysuru and Ramnagar districts of Deccan Plateau under Agro Ecological Sub Regions(AESR) 8.2

**Agro-Eco Region 19:** AER 19 in Karnataka comprises of Chikkamagaluru, Daksh in Kannada, Kodagu, Shivamogga, Udupi, Uttar Kannadaand Dakshin Kannaddistricts of Western Ghats & Coastal Plain under Agro Ecological Sub Regions(AESR)19.2&19.3.

**AESR 3:** The region is hot arid ESR with deep loamy and clayey mixed Red and Black soils, low to medium AWC and LGP 60-90 daysin a year.

**Major NRM issues:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Bagalkot | Exclusively water erosion | Soil deficient in P | Saline, GW Contaminated with F, NO3 & Fe | Severe Drought |
| Ballari | Exclusively water erosion | Soil deficient in N | Saline, GW Contaminated with F, NO3 & Fe | Severe Drought |
| Koppal | Exclusively water erosion | Low in OC& Soil deficient in N | Saline, GW Contaminated with F, NO3 & Fe | Extreme Drought |
| Chitradurga | Exclusively water erosion | Low in OC& Soil deficient in N | Saline, GW Contaminated with F, NO3 & Fe | Extreme Drought |

**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*** |
| Raichur | Exclusively water erosion | Soil deficient in N, P & K | Saline, GW Contaminated with F, NO3 & Fe | Extreme Drought |
| Vijayapura | Exclusively water erosion | **-** | - | **-** |

**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 daysin a year.

**Major NRM issues:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Bidar | Exclusively water erosion | Soil deficient in P | GW Contaminated with F, NO3 & Fe | Extreme Drought |
| Kalaburagi | Exclusively water erosion | **-** | - | **-** |
| Yadgir | Exclusively water erosion | Low in OC&Soil deficient in N | Saline, GW Contaminated with F & NO3 | Severe Drought |

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

**Major NRM issues:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Belagavi | Exclusively water erosion | Soil deficient in P & K | - | Moderate Drought |
| Davangere | Exclusively water erosion | Soil deficient in N | Saline, GW Contaminated with F, NO3 & Fe | Severe Drought |
| Dharwad | Exclusively water erosion | Low in OC,Soil deficient in N&P | Saline, GW Contaminated with F & NO3 | Extreme Drought |
| Gadag | Exclusively water erosion | Low in OC,Soil deficient in N&P | Saline, GW Contaminated with F & NO3 | Extreme Drought |
| Haveri | Exclusively water erosion | Soil deficient in N & Low in OC | Saline, GW Contaminated with F, NO3 & Fe | Extreme Drought |
| Uttar Kannada | Waterlogged | Soil deficient in N,P &K | Saline, GW Contaminated with F, NO3 & Fe | **-** |

**AESR 8.2:**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*** |
| Chikkamagaluru | - | Soil deficient in N & Low in OC | Saline, GW Contaminated with F & NO3 | Extreme Drought |
| Bengaluru Rural | - | Soil deficient in N & Low in OC | Saline, GW Contaminated with F, NO3 & Fe | Extreme Drought |
| Bengaluru Urban | - | Soil deficient in N & Low in OC | Saline & GW Contaminated with F | **-** |
| Chamarajanagar | Exclusively water erosion | Low in OC | Saline, GW Contaminated with F & NO3 | Extreme Drought |
| Chikballapur | - | Soil deficient in N & Low in OC | Saline, GW Contaminated with F & NO3 | Extreme Drought |
| Chitradurga | Exclusively water erosion | Soil deficient in N & Low in OC | Saline, GW Contaminated with F, NO3 & Fe | Extreme Drought |
| Hassan | Exclusively water erosion | Low in OC | Saline, GW Contaminated with F & NO3 | Extreme Drought |
| Kolar | Exclusively water erosion | Soil deficient in N & Low in OC | Saline, GW Contaminated with F, NO3 & Fe | **-** |
| Mandhya | - | Soil deficient in N & Low in OC | Saline, GW Contaminated with F & NO3 | Severe Drought |
| Mysuru | - | Soil deficient in N | Saline, GW Contaminated with F, NO3 & Fe | Extreme Drought |
| Ramnagar | Exclusively water erosion | Soil deficient in N,K& Low in OC | Saline, GW Contaminated with F & NO3 | Extreme Drought |

**AESR 19.2:**The region is hot moist subhumid to humid transitional ESR with deep, loamy to clayey Red and Lateritic soils, low to medium AWC and LGP 210-270 days in a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Chikkamagaluru | **-** | Soil deficient in N & Low in OC | Saline, GW Contaminated with F, NO3 & Fe | Extreme Drought |
| Dakshin Kannada | - | Soil deficient in N,P&K | Saline, GW Contaminated with F& Fe | **-** |
| Kodagu | Exclusively water erosion | Soil deficient in P | Saline, GW Contaminated with F, NO3 & Fe | Extreme Drought |
| Shivamogga | - | Soil deficient in N & K | Saline, GW Contaminated with F, NO3 & Fe | **-** |
| Udupi | Waterlogged | Soil deficient in N & K | Saline, GW Contaminated with F, NO3 & Fe | **-** |
| Uttar Kannada | Waterlogged | Soil deficient in N, P & K | Saline, GW Contaminated with F, NO3 & Fe | **-** |

**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 days in a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Dakshin Kannada | - | Soil deficient in N,P& K | Saline, GW Contaminated with F& Fe | **-** |
| Udupi | Waterlogged | Soil deficient in N & K | Saline, GW Contaminated with F, NO3 & Fe | **-** |
| Uttar Kannada | Waterlogged | Soil deficient in N,P& K | Saline, GW Contaminated with F, NO3 & Fe | **-** |

**Major technological Interventions:**

|  |  |
| --- | --- |
| **Districts** | **Major technological Interventions** |
| Dakshin Kannada |  |
| Udupi |  |
| Uttar Kannada |  |

**Relevant Developmental Schemes:**

|  |  |
| --- | --- |
| **Districts** | **Relevant Developmental Schemes** |
| Dakshin Kannada |  |
| Udupi |  |
| Uttar Kannada |  |

**Crop Planning/Farming System:**

|  |  |  |
| --- | --- | --- |
| **Districts** | **Existing Cropping/farming system** | **Alternate Cropping/farming system** |
| Dakshin Kannada |  |  |
| Udupi |  |  |
| Uttar Kannada |  |  |

**Important Links :**

*District Soil nutrient status:*

*District Contingency Plan:*

*District Irrigation Plan:*

*District ground water status:*

*District Vulnerability status:*

***Relevant Research Institutes/SAUs/KVKs/STL for technical backstopping:***

|  |  |
| --- | --- |
| **Districts** |  |
| Dakshin Kannada |  |
| Udupi |  |
| Uttar Kannada |  |

**Kerala**

**Agro-Eco Region 19:** AER 19 in Kerala comprises of Alappuzha, Ernakulam, Idukki, Kannur, Kasargod, Kollam, Kottyam, Kozikod, Malappuram, Palakkad, Pattanamittia, Thiruvananthpuram , Trishur and Wayanad districts of Western Ghats & Coastal Plain under Agro Ecological Sub Regions(AESR) 19.2 & 19.3.

**AESR 19.2:** The region is hot moist subhumid to humid transitional ESR with deep, loamy to clayey Red and Lateritic soils, low to medium AWC and LGP 210-270 days in a year.

**Major NRM issues :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Districts** | ***Land degradation*** | ***Soil health & fertility*** | ***Water related constraints*** | ***Environmental constraints*** |
| Ernakulam | Exclusively acid soils &Waterlogged | Soil deficient in N | Saline, GW Contaminated with F, Fe & heavy metals |  |
| Idukki | Exclusively acid soils | Soil deficient in N &P | GW Contaminated with F, NO3 & Fe |  |
| Kottyam | Exclusively acid soils &Waterlogged | Soil deficient in N & P | Saline, GW Contaminated with NO3 & Fe |  |
| Malappuram | Exclusively acid soils &Waterlogged | Soil deficient in N & P | GW Contaminated with NO3 & Fe |  |
| Palakkad | Exclusively acid soils | Soil deficient in N | GW Contaminated with NO3 & Fe |  |
| Pattanamittia | Waterlogged | Soil deficient in N | GW Contaminated with NO3 & Fe |  |
| Trishur | Exclusively acid soils &Waterlogged | Soil deficient in N | GW Contaminated with NO3 & Fe |  |
| Wayanad | Exclusively acid soils | Soil deficient in N | GW Contaminated with NO3 & Fe |  |

**Major technological Interventions:**

|  |  |
| --- | --- |
| **Districts** | **Major technological Interventions** |
| Ernakulam |  |
| Idukki |  |
| Kottyam |  |
| Malappuram |  |
| Palakkad |  |
| Pattanamittia |  |
| Trishur |  |
| Wayanad |  |

**Relevant Developmental Schemes:**

|  |  |
| --- | --- |
| **Districts** | **Relevant Developmental Schemes** |
| Ernakulam |  |
| Idukki |  |
| Kottyam |  |
| Malappuram |  |
| Palakkad |  |
| Pattanamittia |  |
| Trishur |  |
| Wayanad |  |

**Crop Planning/Farming System:**

|  |  |  |
| --- | --- | --- |
| **Districts** | **Existing Cropping/farming system** | **Alternate Cropping/farming system** |
| Ernakulam |  |  |
| Idukki |  |  |
| Kottyam |  |  |
| Malappuram |  |  |
| Palakkad |  |  |
| Pattanamittia |  |  |
| Trishur |  |  |
| Wayanad |  |  |

**Important Links :**

*District Soil nutrient status:*

*District Contingency Plan:*

*District Irrigation Plan:*

*District ground water status:*

*District Vulnerability status:*

***Relevant Research Institutes/SAUs/KVKs/STL for technical backstopping:***

|  |  |
| --- | --- |
| **Districts** |  |
| Ernakulam |  |
| Idukki |  |
| Kottyam |  |
| Malappuram |  |
| Palakkad |  |
| Pattanamittia |  |
| Trishur |  |
| Wayanad |  |

**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*** |
| Dakshin Kannada |  |  |  |  |
| Udupi |  |  |  |  |
| Uttar Kannada |  |  |  |  |

**Major technological Interventions:**

|  |  |
| --- | --- |
| **Districts** | **Major technological Interventions** |
| Dakshin Kannada |  |
| Udupi |  |
| Uttar Kannada |  |

**Relevant Developmental Schemes:**

|  |  |
| --- | --- |
| **Districts** | **Relevant Developmental Schemes** |
| Dakshin Kannada |  |
| Udupi |  |
| Uttar Kannada |  |

**Crop Planning/Farming System:**

|  |  |  |
| --- | --- | --- |
| **Districts** | **Existing Cropping/farming system** | **Alternate Cropping/farming system** |
| Dakshin Kannada |  |  |
| Udupi |  |  |
| Uttar Kannada |  |  |

**Important Links :**

*District Soil nutrient status:*

*District Contingency Plan:*

*District Irrigation Plan:*

*District ground water status:*

*District Vulnerability status:*

***Relevant Research Institutes/SAUs/KVKs/STL for technical backstopping:***

|  |  |
| --- | --- |
| **Districts** |  |
| Dakshin Kannada |  |
| Udupi |  |
| Uttar Kannada |  |