

Drought Assessment

[DOWNLOAD HERE](#)

1;Title Page;2 2;Copyright Page;3 3;Preface;4 4;Table of Contents;7 5;1 Introduction;10 5.1;1.1 Climate Classification;11 5.2;1.2 Drought, Famine and Desertification;12 5.2.1;Classification of Drought;18 5.3;1.3 Factors Responsible;22 5.3.1;Precipitation;23 5.3.2;Temperature;24 5.3.3;Wind Velocity and Evapo-transpiration;24 5.3.4;Atmospheric Circulation;25 5.3.5;Hemispheric Nature;26 5.4;1.4 Effects of Drought ;26 5.4.1;Social;27 5.4.2;Environment;28 5.4.3;Agriculture;28 5.5;1.5 Drought Forecasting;29 5.6;Traditional Knowledge;30 5.7;References;34 6;2 Meteorology;37 6.1;2.1 Weather;37 6.2;2.2 Tropical Activity;41 6.2.1;Monsoon;42 6.3;2.3 Precipitation Type;45 6.4;2.4 Weather Forecast;46 6.4.1;Methods;47 6.4.2;Forecast Types;48 6.5;2.5 Clouds;50 6.5.1;Cloud Identification;51 6.5.2;Cloud Observation;53 6.6;2.6 Cloud Mapping - Satellite;54 6.6.1;Rainfall Estimation;65 6.6.2;Application;71 6.7;2.7 Precipitation;72 6.7.1;Spot Measurement and Observation;73 6.7.2;Areal Representation and Network Design;75 6.8;2.8 Precipitation Climatology;77 6.9;2.9 Rainfall Reliability Wizard;80 6.10;References;83 7;3 Water Resources;86 7.1;3.1 Water Scarcity;86 7.1.1;Drying Rivers and Lakes;87 7.1.2;Falling Water Table;87 7.1.3;Climate Variation;89 7.2;3.2 Critical Issues in Water Resources;90 7.2.1;Human Activities;91 7.3;3.3 Hydrological Process;91 7.3.1;Rainfall-runoff;92 7.4;3.4 Water Requirement;94 7.5;3.5 Water Balance under Natural Conditions;95 7.6;3.6 Irrigation Water;96 7.7;3.7 Ground Water;97 7.7.1;Aquifer;98 7.7.2;Classification;101 7.7.3;Vulnerability;102 7.7.4;Groundwater Exploitation Status Indicators;103 7.8;3.8 Water Recharge;108 7.9;3.9 Sustainability of Water;109 7.10;3.10 Groundwater Supply Systems;110 7.11;3.11 Crop Yield and Groundwater Abstraction;111 7.12;3.12 Stream Flow Analysis;112 7.13;3.13 Water Balance Method;116 7.14;3.14 Watershed Analysis;117 7.15;3.15 Surface Storage;119 7.15.1;Reservoir;119 7.16;3.16 Lakes Cascade Systems;119 7.16.1;Status of Tank Cascade;121 7.16.2;Tank Cascade Assessment;125 7.17;References;127 8;4 Agriculture;130 8.1;4.1 Soil ;130 8.1.1;Agro-ecological Zone;137 8.2;4.2 Soil Water Irrigation;138 8.3;4.3 Crop Growth;143 8.4;4.4 Crop-water;148 8.5;4.5 Crop Irrigation;149 8.6;4.6 Water Use Efficiency;152 8.7;4.7 Water Stress Situation of Crops;153 8.7.1;Water Quality and Irrigation;156 8.8;4.8 Irrigation Management Practice;157 8.9;4.9 Soil Water Analysis;161 8.10;4.10 Plant

Growth Simulation and Drought Event Analysis;162 8.11;4.11 Drought Forecasting/Prediction of Events;163 8.11.1;Ranking and Weightages;165 8.12;References;166 9;5 Drought indices;169 9.1;5.1 Drought Assessment Parameters;171 9.2;5.2 Indices;176 9.3;5.3 Meteorological Indicators;177 9.4;5.4 Hydrological Indicators;189 9.5;5.5 Agricultural Indicators;193 9.6;5.6 Sociological Indicators;199 9.7;5.7 Environmental indicators;207 9.8;5.8 Indicators and Triggers;208 9.9;References;212 10;6 Satellite Remote Sensing ;214 10.1;6.1 Remote Sensing;214 10.2;6.2 Orbital Satellites;217 10.3;6.3 Satellite Orbit;220 10.4;6.4 Commercial satellite;223 10.5;6.5 Sensors and Products;227 10.6;6.6 Spectral Data Analysis;233 10.7;6.7 Visual Interpretation ;233 10.8;6.8 Digital Image Processing;236 10.8.1;Pre-processing;236 10.9;6.9 Image Enhancement;239 10.9.1;Contrast Enhancement;242 10.9.2;Spatial and Directional Filters;243 10.9.3;Multi-image Manipulation - Arithmetic Operation;246 10.9.4;Principal Components and Canonical Analysis;247 10.9.5;Intensity-Hue-Saturation (IHS) Colour Space Transformation;249 10.10;6.10 Image Classification;249 10.10.1;Unsupervised Classification;251 10.10.2;Supervised Classification;254 10.11;6.11 Post Classification Processes;256 10.11.1;Classification Accuracy;256 10.12;6.12 Multi-sensor Data Merging;257 10.12.1;Change Detection Procedures;257 10.12.2;Data Fusion;257 10.13;6.13 Indices f EAN/ISBN : 9789048125005 Publisher(s): Springer Netherlands, Springer Science & Business Media Format: ePub/PDF Author(s): Nagarajan, R.

[DOWNLOAD HERE](#)

Similar manuals:

[Drought Assessment](#)