

## **Appendix-VIII**

### **SCIENTIFIC STUDIES**

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1. Hydrological studies in forested watersheds in Uttarakhand
2. Development of a DSS for drought mitigation
3. Amelioration of degraded meso-scale watersheds in central India using rainfall-runoff-sediment transport modeling
4. Artificial neural networks for runoff studies
5. Integrated hydrological study for sustainable development of two hilly watersheds in Uttarakhand
6. Development of drought vulnerability indices for preparedness and mitigation
7. Assessment of groundwater quality in metropolitan cities of the country
8. Assessment of environmental flows in Baitarni and Brahmani River systems
9. Development of a DSS for water quality management
10. Integrated hydrological study of Upper Bhopal Lake and its ecosystem
11. Rejuvenation of a dying lake in tropical India: Lake Pichhola, Udaipur
12. Studies for restoration of the Renuka Lake, District Sirmaur (HP)
13. Modelling of a coastal aquifer using FEELOW
14. Stream-aquifer interaction: Flow and water quality modeling
15. Dynamic groundwater storage for the Hindon River
16. Cell-in-series simulation for pollutant transport in river and aquifer
17. Stream flow modelling of the Bhagirathi River: Hydrograph separation using isotopic and geo-chemical techniques
18. Study of recharge characteristics in arid / semi-arid regions using isotopes
19. Surface water - groundwater interaction at selected locations along the Yamuna River in NCT Delhi
20. Regional hydrogeological studies around Kasnau-Matasukh lignite mines (District – Nagaur)
21. Flood hazard mapping and flood risk zoning for a river reach (Ganga between Buxor and Rajendranagar Bridge)
22. Melt runoff characteristics and modeling stream flow for the Gangotri Glacier
23. Climate change and its impact on hydrological regime
24. Development of hydrological modelling software
25. Simulation of reservoir sediment deposition profile
26. Modelling the effect of land use changes on runoff
27. Development of a DSS for surface water planning
28. Real-time flood forecasting modeling
29. Forecasting of stream flow for Sutlej River at Bhakra
30. a. Study of glacier contribution in the stream flow of the Bhagirathi river at Loharinag Pala Power Project site and its influence on long-term sustainability.  
b. Study of glacier contribution in the stream flow of the Dhauliganga at Tapovan Vishnugad Power Project site and its influence on long-term sustainability
31. Development of a DSS for: a) Integrated reservoir management  
b) Conjunctive use of surface water and groundwater
32. Reservoir sedimentation assessment using RS
33. Hydrological assessment of un-gauged catchments
34. Development of a water availability and simulation model
35. Use of remote sensing in soil moisture and water balance estimation– a case study in the Solani Catchment

36. Impacts of dams and diversions on basin hydrology
37. Hydrological studies and multi-reservoir simulation studies for DPR of Ken – Betwa link
38. Hydrological studies of Sabarmati river front development
39. Evolving hazard free optimal utilization of water resources in a meso-scale basin
40. Conjunctive use of surface and groundwater in Malaprabha / Ghataprabha Command Area
41. Hydrological impacts of land use changes in humid tropical watersheds in the Sahayadri Mountains
42. Assessment of sedimentation in Mettur Reservoir using digital image processing technique
43. Integrated water logging and drainage congestion in lower Gandak Basin
44. Urban hydrology of Patna Town
45. Performance evaluation of anti-erosion works at village Arjunpur in Buxar District of Bihar
46. Performance evaluation of flood protection works of Raunahi embankment on the right bank of the Ghaghra River in Faizabad District, UP
47. Irrigation efficiency of Saran main canal system
48. Irrigation efficiency of upper Morhar Irrigation Project
49. Evaluation of water harvesting structures in the Kandi Belt of Jammu Region
50. Integrated water resources management plan for sustainable development of Naoradehi wildlife sanctuary
51. Water quality management plan for rejuvenation of Sagar lake
52. A comprehensive watershed management programme for a degraded watershed in Bundelkhand Region
53. Study of shifting of a typical river (Gabharu) using remote sensing and GIS techniques
54. Flood estimation of Jadukata basin with SCS method
55. Flood inundation mapping and flood risk zoning for a reach of river Barak (Harang)
56. Assessment of groundwater quality in major cities of Northeast India (Agartala and Tezpur)
57. Nitrate transport modeling in the coastal aquifers of Kakinada, A.P.
58. Development of non linear data driven model for flood forecasting for east coastal rivers
59. A study on spatial and temporal hydrological aspects for water resources planning and management of an urban area along the coastal region
60. Paleo channel flow dynamics in Central Godavari Delta, East Godavari Distt., A.P.

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