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| | Title of Entry | |
| 1.1 | Title of Sponsored Work | Modelling for Enhancing Water Quality in Uttarakhand using Geospatial Technology (Annexure 2) |
| 1.2 | Name of TERI SAS Department/ Centre (s) involved | DNR |
| 1.3 | Type | Research Project |
| 2.1 | Sponsoring Agencies | Water Technology Initiative, DST, Govt Of India |
| 2.2 | Location of work/activity | Entire Uttarakhand, India |
| 3.1 | List of partnering Institutions involved | TERI SAS Uttarakhand State Council for Science and Technology (UCOST), DAV (PG) College, Dehradun Uttarakhand Jal Sansthan (UJS), Jal Bhawan |
| 3.2 | Lead Partner | - |
| 4.1 | Begin Date | March, 2016 |
| 4.2 | Completed or Ongoing | September 2020 |
| 4.3 | End Date | September 2020 |
| 5.1 | Principal Investigator(s)-- Internal | Dr. Vinay S P Sinha |
| 5.2. | Principal Investigator(s)-- External | Dr. D.P. Uniyal, Uttarakhand State Council for Science and Technology (UCOST), |
| 5.3 | Co-Principal Investigator(s) --Internal | Dr. Vinay S P Sinha, TERI School of Advanced Studies |
| 5.4. | Co-Principal Investigator(s) --External | Dr. Prashant Singh Department of Chemistry, DAV (PG) College, Dehradun Er. S. K. Sharma, Chief General Manager (CGM) Uttarakhand Jal Sansthan (UJS), Jal Bhawan |
| 5.3 | Associated Researcher(s)-- internal | Ms Sutapa Bhattacharjee, JRF Ms Pradeep Vasistha, JRF & PhD Scholar, TERISAS |
| 6.1 | Amount Sanctioned | 50,464, 00 by DST 16/03/2017 |
| 6.2 | Amount received | First Year – INR 20,60,000 Second Year – INR 05,35,000 Third Year – INR 05,45,2000 Due INR 33,000 as on March 2021 |

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| 6.3 | In Kind support | NA |
| 7.1 | Description of work and activities | <p>Rationale: Unplanned management of water resources at an individual and sectoral level has resulted in poor quality and availability of safe water for drinking especially in water-scarce zones, which enters into humans and animals through food cycles, causing an increased risk of various diseases in rural and urban areas. Of course, poor people have tended to suffer the greatest health burden from inadequate and poor quality water supplies and as a result of poor health, have been unable to escape from the cycle of poverty and waterborne diseases. The major source of drinking water for the hilly area is fresh surface water which is more vulnerable to contamination by various processes of human and natural activities.</p> <p>Objectives: To provide a feasible solution of sustainable quality water availability in the Himalayan state of Uttarakhand, under which various sub-objectives are also included:</p> <ul style="list-style-type: none"> • To undertake modeling of water quality of Uttarakhand by using primary data generated by the Uttarakhand State Council for Science & Technology under different projects using geospatial technologies • To identify the quality vulnerability study of various sources of drinking water. • To quantify water quality at the regional and local levels to provide sufficient quality water. • Provide Spatio-temporal water quality dynamics and trends of future status. • To prepare an action plan for aquifer augmentation and sustainability of life and livelihoods. |
| 7.2 | Project Reach, engagements and beneficiaries, if applicable | State Agency |
| 8.1 | List of Publications including dissemination through social media | NA |
| 8.2 | Links to Events page, if any | NA |
| 9. | Executive Summary and other documents | The findings of the water quality modeling studies, to be presented in the form of technical guidelines especially for hilly terrain conditions, are likely to help in finding solutions to the identified problems either directly or indirectly. The |

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| | | <p>work is linked with various basic and applied sciences including space technology, hydrology, chemistry, environment and human health that would surely provide a platform to disseminate the knowledge to various departments/agencies, and ministries linked with water resources. Moreover, experts/ researchers/ engineers/ water managers/ academicians/ policy planners/ young scientists working in this area will be benefitted. The following respective departments/ stakeholders of Uttarakhand would surely take a decision based on the outcomes presented in the study:</p> <ul style="list-style-type: none"> • Department of Public and Health • Department of Water Resources, • Uttarakhand Jal Sansthan • Department of Environment and Forest • Department of Science and Technology (state level) |
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Note. Per sponsored projects, this document in .doc (and not .docx) and enclosures may be zipped together and sent to iqac@terisas.ac.in, preferably in a single mail per department. Completed Projects between July 1, 2015 and July 2020 may be sent first.