



# THRUST GEOCONSULTANTS PRIVATE LIMITED

## **PROFILE OF J.SARAVANAN**

**Skills :** A Post Graduate in Applied Geology with University Rank and more than two decades of experience in the fields of Geology, Hydrogeology and Geophysical survey. Also involved in natural resources assessment, development and management. His domain and skills are as follows :

### **HYDROGEOLOGY**

- Interaction with government departments, sourcing and creation of secondary database.
- Application of remote sensing techniques in ground water assessment and development. Visual interpretation of Satellite data (False Colour Composites) and preparation of thematic maps used in resource evaluation.
- Analysis of primary data to cull out area specific hydrogeological information.
- Analysis of Survey of India Topographic Sheets to study the topography, establishing surface water divide and recharge sources for the study area.
- Well inventory to study the water table fluctuation, recuperation rate, groundwater flow direction, groundwater quality and extraction rate.
- Selection of site specific drilling techniques to drill and construct borewell; monitoring of borewell drilling to study litholog, time log, first water strike, yield, yielding zones etc., selection of well logging, selection of screen size and length while constructing the borewell.
- Conducting slug test to assess the intake capacity (recharge rate) and pump test to evaluate aquifer parameters. Designing pumping schedule of borewells to avoid well interference and over exploitation for sustainable groundwater management.
- Estimation of Surface and Groundwater resources as per groundwater estimation norms to arrive annual recharge, extraction and balance at micro watershed level.
- Data integration using GIS techniques and preparation of derived maps, report preparation and data base management.

### **RAINWATER HARVESTING**

- Designing area specific rainwater harvesting system based on the local hydrogeological set up. Designed and implemented rainwater harvesting systems in housing colonies, commercial complexes and Industries.
- Developed area specific ASR's (Aquifer Storage cum Recovery structures) for rainwater harvesting and groundwater extraction.

No. 78, O Block, 33<sup>rd</sup> Street, Ganapathy Colony, Anna Nagar East, Chennai – 600 102

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- As part of awareness creation and capacity building involved in establishing an information center – RAIN CENTRE - in Chennai (first of its kind). Designed and implemented variety of working models on rainwater harvesting in Rain centre.
- Research and constant up-gradation of rainwater harvesting designs based on the local hydrogeological set up, documenting and disseminating the same through vernacular media for larger outreach.
- Developed a water harvesting manual covering the technical aspects with “Do your self kits” and maintenance aspects.
- Developed a bi-monthly newsletter in the vernacular media on water. The newsletter is used as a tool to document the success stories, disseminate the same and also to network among water harvesting practitioners.
- Conducted seminars and workshops as part of capacity building to Engineers, Architects and Planners.
- Developed a training module for plumbers and masons (first of its kind) on the design and implementation aspects on rainwater harvesting and conducted on the job training courses.
- As part of a policy research co - authored a background paper covering the status of public water supply system in Chennai city, highlighting the need for water management and conservation.
- Developed a survey module to assess the per capita consumption, consumption pattern for various uses, dependence on various water sources to meet the requirement and cost of water in urban areas. The survey was completed in Chennai city and presently involved in its analysis.
- Technical reporting on water issues in Down to Earth - Science and Environment fortnightly, also in Catch water – bimonthly news letter on water.

### **GEOPHYSICS**

- Organised and conducted geophysical surveys in vast areas and worked in complex hydrogeological environs; Conducted Electromagnetic survey used to scan vast areas in short duration followed by Electrical Resistivity surveys for ground water exploration.
- Experience in handling variety of instruments used in Resistivity survey (Digital SSR MP AT Resistivity meter - IGIS make; Computerised Resistivity meter –Anvic systems make, Resistivity meter – Jackson make and Electromagnetic Survey (EM 34 – 3 - Geo Services make)
- Conducted Resistivity and Strip Resistivity profiling to delineate favourable aquifer zones, Vertical Electrical Soundings to decipher the sub surface. Selection of site-specific configuration and electrode spacing while conducting geo-physical surveys.

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- Analysis of resistivity survey data (apparent resistivity) using both software and visual interpretation techniques. Worked extensively in Zhody – software used for resistivity data analysis. Also used Inverse Slope and Curve break methods to analyse the data.

### **GEOLOGY**

- Field geology mapping for groundwater and mineral exploration
- Analysis of Satellite Imageries and preparation of geology and geomorphology maps.
- Analysis of Survey of India Topographic sheets to decipher topography characteristics.
- Well inventory to study the lithology and attitude of strata; assessment of weathered thickness in case of hard rock terrain and developing basement terrain configuration.

### **PR & MANAGEMENT**

- As Consultant Hydrogeologist handled projects of different magnitudes under complex hydrogeological environs and completed successfully (list of some of the projects executed is enclosed separately)
- Sourcing experts to deal with technical aspects and to get expert opinion in complex situations.
- Interaction with senior administrative officials in government departments– while advocating the concept of rainwater harvesting.

### **ACADEMIC**

ACADEMIC QUALIFICATION : **MSc (APPLIED GEOLOGY) University Rank Holder**

SPECIALISATION : **HYDROGEOLOGY**

### **PAPERS PRESENTED and PRESENTATIONS MADE**

**Delineation of Potential Groundwater Zones for Waste Land Development** in the Seminar on **Role of Agriculture in Dry land Farming** - organized by the Institution of Engineers on October 13, 1995 at Chennai.

**An Appropriate Methodology for Targeting Groundwater in Hard rock Environs** in the workshop on **Challenges in Groundwater Development** – Organized by Central Board of Irrigation and Power from 23 rd to 25 th February, 1996 at Chennai.

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**TV talk on rainwater harvesting aspects in Podhigai ( Doordharshan) and Chennai Live (FM).** Presentation on rainwater harvesting in schools and colleges, civic groups such as Rotary and Exnora, as part of RWH awareness campaign.

### **CLIENTALE BASE - RESIDENTIAL TOWNSHIPS**

- **Fire Luxur Developers Private Limited – 200 Acre Integrate Residential Township “The Emyrean” near White Field, Bangalore.**
- **Om Shakty Fire Realty Private Limited – 200 Acre Integrated Residential Township near Avadi Chennai.**
- **Shantha Towers – residential townships at Thirumudivakkam, Paruthipattu and Padappai.**
- **Hiranandani Upscale – Villas @ Devenahalli, Bangalore.**
- **Tishman Speyer India Private Limited – 120 acre Residential Township near Poonamallee, Chennai.**
- **Marg Swarnabhoomi**
- **Crescent lake Homes promoted by Smart Value Homes Private Limited (TATA Housing) – 25 acre multi storey apartment complex near Padappai, Kancheepuram District, Tamil Nadu.**
- **Pacifica Aurum, Padur – 100 acre residential township.**
- **Heritage Property Development Company Private Limited – 50 acre project, 400 houses gated community project titled – Heritage Pelican Belfort near Pudhucerry.**
- **Integrated Groundwater Surveys for Multi storey apartments projects at Kotturpuram, T.Nagar, Adambakkam and Porur, Nanganallur of M/s. GR Natarajan & Company Chennai.**
- **Integrated Groundwater Surveys for Multi storey apartments projects at Madipakkam, Kovilambakkam and Jalladampettai of M/s. XS Real Properties Private Limited, Chennai.**
- **Groundwater surveys for M/s.Helios Estates Private Limited at Padur, Kelambakkam. Multi story complex with 216 dwelling units**

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### AS CONSULTANT HYDROGEOLOGIST EXECUTED THE FOLLOWING PROJECTS – CONDUCTING GEOPHYSICAL SURVEY FOR GROUND WATER EXPLORATION

- **Mahindra Industrial Park**, Chengleput, Tamilnadu. Total Extent 1200 acres planned for developing an industrial park with a daily water requirement of 2 MGD.
- **Madras Cements India Limited**, Thulukapty Village, Virudhunagar District, Tamilnadu. Total Extent - 100 acres planned for developing Cement Industry (extension).
- **Ramco Industries Limited**, Arakkonam. Total Extent 20 acres. Asbestos sheet manufacturing unit.
- **ISRO – Liquid Propulsion System Centre**, Mahendragiri, Tirunelveli, Tamilnadu, Total Extent 6000 acres. Department of Space, Government of India.
- **Indian Institute of Science, Bangalore**
- **Tamilnadu Industries Captive Power Company Limited (A Unit of BSES)**, Kaattumannargudi taluk, South Arcot District. Total Extent – 1400 acres planned for developing a Lignite Power Plant.
- **TVS Brakes India Limited**, Sholinghur. Total Extent 50 acres.
- **Snowcem India Limited**, Palladam, Tamilnadu. Site developed for Wind Mill.
- **Cauvery Sugars and Chemicals Limited and Cauvery oil Palm Limited**, Tiruchi District, Tamilnadu. Total extent 100 acres developed for Oil Palm Extracting Industry.
- **Incan Pharmaceuticals Limited** (Incan Group) Tirunelveli, Tamilnadu. Total extent 1200 acres planned for growing Neem and Oil Palm.
- **Remote Sensing Centre, Patna**. Village drinking water supply covering 400 Villages in the Southern Districts of Bihar, (**Ranchi, Lohardaga, Gumla and Singhbhum Districts.**)
- **Transworld Garnet India Private Limited**, Tutucorin, Tamilnadu. Total Extent 150 acres, garnet mining and factory site.
- **Reliable Agro Management Company Private Limited**, Tenkasi Taluk, Tirunelveli. Total Extent 400 acres developed for Orchards.
- **SVS Private Limited**, Merlapakka Village, Chittoor District, Andhra Pradesh

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### AS CONSULTANT HYDROGEOLOGIST EXECUTED THE FOLLOWING RAINWATER HARVESTING PROJECTS

- **HITEC Carbon**, Gummidipoondi, - Unit of Aditya Birla Group.
- **EID Parry India Limited**, Alwar District Rajasthan. Total Extent 60 acres.
- **EID Parry India Limited**, Dewas District Madhya Pradesh. Total Extent 40 acres.
- **Park Hotel, Welcome Group**, Adyar, Chennai.
- **Xansa IT Park**, Siruseri Sidco Industrial Estate, Thiruporur, Tamilnadu.
- **Orchid Chemicals Limited**, Alathur, Tamilnadu.
- **St Joseph Engineering College**, Mangalore.
- In addition designed and implemented rainwater harvesting systems in more than 100 residential complexes in Chennai.

### AS GEOLOGIST AND PART OF TECHNICAL TEAM EXECUTED THE FOLLOWING RESOURCE EVALUATION PROJECTS

- **Estimation of Feldspar and Quartz** in 4 mines located at Saidapuram Mandal near Gudur, Andhra Pradesh. Study conducted for **TRIMEX INDIA LIMITED**, Chennai
- **Estimation of quartz** in 2 sites located at Mallasamudram Block, near Salem, Tamilnadu. Study conducted for **Mahendra Engineering College**, Mallasamudram.
- **Estimation of Granite (green material) at Gurramkonda, Madanapalli Andhra Pradesh** Study conducted for **Globenet Enterprises**, Chennai.
- **Estimation of Chromite and Gypsum deposits** in Oman for the Zawawi Minerals LLC, Oman.
- **Estimation of Phosphatic Deposits in Senegal for Hayo, Senegal.**