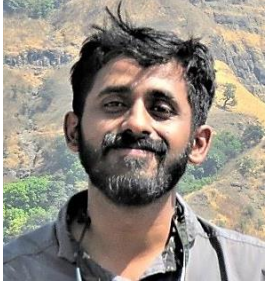


RENIE G THOMAS



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Nationality / domicile: Pune, Maharashtra

Research Interest

Hydrogeology, Ecohydrology, Groundwater Dependent Ecosystems (GDE's), Isotope Hydrology, Geo-cognition, Geo-ethics, Social Hydrology and Physical Volcanology (basaltic lava flow architecture).

About Me

A professional field geologist & ecohydrologist with 11 years of experience in aquifer and groundwater management studies, ecohydrological restoration, groundwater resource vulnerability mapping; with a regional focus on semi-arid and forested ecosystems. I am a researcher and a reflective practitioner who loves to work at the intersection of Groundwater Dependent Ecosystems (GDE's) science, traditional knowledge (anecdotal, local) systems, indigenous tribal & farming communities and Geo-cognitive mental models to address water security & related risks. I am passionate about demystifying science and bridge gaps that exist between field realities and policy for effective management of freshwater resources. I am committed to work with less privileged communities and using my research rigour to help water stakeholders adopt ecological sound paths in restoring freshwater ecosystems.

Education

2011-2012 **Ecological Society, Pune**
PG Diploma: **Sustainable Management of Natural Resources and Nature Conservation**

2008-2010 **Fergusson College, University of Pune.**
Master of Science (MSc.) in Geology
Thesis topic as part of MSc. Geology: Geochemistry and geological mapping – Segregated flow veins of plagioclase in the basaltic lava flows of upper *Dive Ghat* formation of DVP at *Jhendevadi*, Pune.
Performance: **First Class**

2005-2008 **Fergusson College, University of Pune.**
Bachelor of Science (BSc.) (Hons.) in Geology
Performance: **First Class with Distinction**

Work Experience

01.09.2012 – Present **RT's Geological and Environmental (RTGeoEnviron), Consultancy & Research, Pune**
Position: **Principal Geologist | Founder**
At **RTGeoEnviron** my task is to provide technical advice to varied environmental NGO's and firms in context to natural resource management, groundwater management, hydrogeological studies, geophysical surveys (electrical resistivity), ecosystem services, geocognition, climate change studies, ecological studies and landslide mapping, conduct seminars for schools and institutes on Geology & Hydrogeology.
Clientele List – Anandwan Maharogi Seva Samiti - Progressive Alliance - Groundwater-Corpus Alliance (Chandrapur), Lok Biradari Prakalp (Gadchiroli), Ravi & Varsha Gavandi – Landscape Architects (Pune), Onyx Group (Pune), Junglescapes Charitable Trust (Bangalore), Shaswat Trust (Pune), Ecosphere Connect (Pune), Grindmaster India Pvt. Ltd.(Aurangabad), Manavlok (Beed), Pune Knowledge Cluster (Pune), Bonjaee Hospitality Pvt. Ltd. (Mumbai), Thinkthrough Consulting Pvt. Ltd. (New Delhi), Nerudu Valley Meditation & Healing Centre (Anantapur), Maharashtra State Reserve Police (Hingoli), Nirwana Adventures - Native Place (Kamshet), Shristi Adventures (Bangalore), Kodugu Police Department (Kodugu), Journeys

Explore (Pune), Healing Hands (Pune), Yuva Mitra (Nashik), The Golden Spiral School (Mumbai), Earthlings (Pune), Indian Institute of Human Settlements (Bangalore), Watershed Organisation Trust (Pune), Morde Pvt. Ltd. (Pune), Lithosurvey Pvt. Ltd. (Delhi), Amity University (Gurgaon), Ecological Society (Pune), Mercedes – Benz (India) Pvt. Ltd. (Pune), VK:e environmental (Pune), Jnana Prabodhini School (Pune), Vanam Ecologics (Pune), City Corporation (Pune), Kelzai Secrets Pvt. Ltd. (Pune), Yashomala Farming and Tourism Pvt. Ltd. (Raigad), Urdhvam (Pune), Grampari (Panchgani), Oikos - Ecological Services (Pune), Ecological Solutions (Pune), Delta Blue Systems Consultancy (Mumbai), Steiner (India) Pvt. Ltd. (Lavasa), RiskCom GmbH (Germany), GeoPlanet (Pune), Greetude Pvt. Ltd. (Pune), Kimmins High School (Panchgani).

Website link: www.rtgeoenviron.in

01.05.2018 – 30.09.2018 **The Nature Conservancy**, New Delhi

Position: **Applied Freshwater Scientist** (Consultant)

Main tasks:

- ◆ To provide inputs to hydrological scenarios for building drought resilient catchments by carrying out aquifer mapping and setting up groundwater monitoring stations;
- ◆ To design and implement drought resilient projects in Maharashtra;
- ◆ Lead studies on return on investment of watershed interventions in the state of Maharashtra;
- ◆ Develop proposals and author scientific writings to provide evidence for - on ground restoration and conservation projects;
- ◆ Work with partners and local NGO's to design and set up a pilot project under TNC's Water Trust programme.

Website link: www.tncindia.in, www.nature.org

01.07.2015 – 31.04.2018 **Watershed Organization Trust (WOTR) – Centre for Resilience Studies (W-CReS)**, Pune

Position: **Senior Researcher (Hydrogeologist) | Team lead – Water Resources & Ecology** (Consultant)

Main tasks:

- ◆ Manage and lead fellow team researchers on aspects of groundwater research in rural villages of Maharashtra & Telangana under 'Research into Use (RiU) - Water Stewardship' HUF project. Designed and managed seven research projects pertaining to isotopic studies of groundwater, geophysical characterization of aquifers, groundwater quality, eco-hydrology, and groundwater pooling studies for farmer groups;
- ◆ Carry out research on hard rock aquifers and understand its current management practices vis-à-vis to changing climate & anthropogenic activities, quantify future risks and devise strategies to help vulnerable communities in adaptation in the semi-arid regions under the Adaptation at Scale in Semi-Arid Region (ASSAR) project;
- ◆ Provide Monitoring, Evaluation, Learning and Documentation (MELD) services for Integrated Watershed Management Programme, Vasundhara Watershed Development Agency, Department of Water Resources, Government of Maharashtra
- ◆ Collaborate with interdisciplinary team/partners to understand the impacts of climate change on the ecology & people and communicate all the key findings to vulnerable communities/stakeholders;
- ◆ Monitoring a network of observation open wells and boreholes, analysis of geological field data, rainfall, satellite imagery, geophysical surveys, geochemical and water quality studies for delineating potential aquifers in hard rocks and encourage best practices of water management;
- ◆ Impart training on use of hydrogeology in groundwater management and watershed planning;
- ◆ Undertake consultancy projects for various corporate firms in order to offset their water footprint;
- ◆ ALCES simulation (based on system dynamics) software to understand the role of

different land-use types and its ecological footprint.
Website link: www.wotr.org

21.09.2014–30.06.2015

Urdhvam Environmental Technologies Pvt. Ltd., Pune

Position: **Project Officer – Geologist** (Consultant)

Main tasks:

- ♦ Carry out Geological and Hydrogeological field mapping surveys for groundwater management, ecological studies and landslide mapping and perform geophysical surveys – vertical electrical surveys (VES);
- ♦ Creating geological maps and models using standard geological and GIS software's;
- ♦ Carry out aquifer mapping & performance analysis. Assist in proposal and report writing.

Website link: www.urdhvam.com, <http://www.borecharger.com>

22.03.2013 – 03.01.2014

Centre for Science and Environment (CSE) - New Delhi

Position: **Research Associate** – Water Management (Consultant)

Main tasks:

- ♦ Research and documentation of innovative methods and best practices in context to rural drinking water and sanitation in India;
- ♦ Dissemination of efficient, sustainable & low cost practices in management of water through organising and providing technical training sessions and workshop's for Government officers (Under Ministry of Drinking Water and Sanitation);
- ♦ Report writing, copy-editing, rewriting and production of the Centre's scientific publications and training material;
- ♦ To conduct reconnaissance studies on potential areas for groundwater recharge under model projects.

Website link: www.cseindia.org

10.10.2011 – 20.03.2013

Grameen aur Pariyavaran Kendra (Grampari) an Initiative for Rural Development part of **Initiatives of Change, India (IofC)** or formerly known as **Friends of Moral Re-Armament (MRA)** - Panchgani

Position: **Watershed Project Coordinator and Hydrogeologist** (Consultant)

for watershed activities in villages of Wai & Mahabaleshwar, Satara District, Maharashtra.

Main tasks:

- ♦ Assisting with design & overseeing implementation (Spring project), monitoring of watershed development projects, proposal making, hydrogeological mapping, geotechnical surveys and environmental impact assessment studies;
- ♦ Technical, programmatic and administrative support to the senior manager;
- ♦ Support to other aspects of the model village programme, including sanitation (tippytap.org), livelihoods & governance.

Website link: www.in.iofc.org, www.grampari.org

31.01.2011 – 31.07.2011

Watershed Organization Trust (WOTR) - Ahmednagar

Position: **Hydrogeologist** (Consultant)

for the project on **Climate Change Adaptation** in Sangamner Taluka, Ahmednagar District, Maharashtra funded by NABARD & SDC and for **Model Watershed Project** at Dolasane village, Sangamner Taluka, Ahmednagar District., Maharashtra funded by ICRISAT, Hyderabad.

Main tasks:

- ♦ Study the geological setting for delineating potential aquifers in hard rocks and encourage best practices of water management;
- ♦ Develop research methodologies to study aquifers that are resilient to climate change and provide strategies for conservation & management of aquifers;
- ♦ Provide training to village people and agriculturist on the role of groundwater management and water budgeting.

Website link: www.wotr.org

01.10.2010 – 30.01.2011 **Accurate Laboratory Services (ALS), MIDC Bhosari, Pune**
(NABL Accredited ISO:IEC 17025:2005) metallurgical laboratory
Position: Assistant Quality Manager and Laboratory Technician

Main tasks:

- ◆ Perform routine laboratory tests to determine samples' chemical or physical characteristics and perform basic analytical tests from well-defined standards and procedures;
- ◆ Read and understand all analysis and safety standards, including ASTM, ISO and other well-defined analytical standards and procedures;
- ◆ Assist senior laboratory personnel in setting up, adjusting, and operating lab equipment;
- ◆ Conduct internal audits to see that test methods and results conform to benchmarks laid down under ISO standards.

Peer-reviewed Research Publications

- Aug 2019 Bajaj, K., **Thomas, R.**, Yadav, A., Datye, A., Chakraborty, S., (2019). **Hydrological linkages between different water resources from two contrasting ecosystems of western peninsular India: A stable isotope perspective**, *Isotopes in Environmental & Health Studies*, Volume 55, Issue 6, pp. 1 - 18, <https://doi.org/10.1080/10256016.2019.1666121>
- Sep 2018 **Thomas, R.**, Duraisamy, V., (2018). **Hydrogeological delineation of groundwater vulnerability to droughts in semi-arid areas of western Ahmednagar district**, *Egyptian Journal of Remote Sensing and Space Sciences*, Vol. 21, Issue 2, pp. 121 - 137. <http://dx.doi.org/10.1016/j.ejrs.2016.11.008>
- Dec 2015 Buono, J., **Thomas, R.**, Kulkarni, H., Mahamuni, K., Karandikar, M., Ghate, K., Kulkarni, K., Mahesh, N., Ambrale, D., More, A., (2015). **Ecohydrologic description of Springs in the North Western Ghats, Maharashtra**, *Journal of Ecological Society*, Vol. 28 , pp. 8 – 24, <http://dx.doi.org/10.54081/JES.024/02>
- Under review - Moral Geology: Making model villages and model aquifers in western India (Geoforum)
- Under preparation - Hydrogeological response of multi-layered basaltic aquifer system to LULC changes and rainfall variability: A village case insight to reevaluate drought proofing in the semi-arid regions of Maharashtra
- Ecosystem services of natural springs and their significance to environmental flows in the Western Ghats
- Contentious Stocks & Flows: Water Scarcity & the politics of Borewell regulation in India

Non-peer-reviewed Publication

- 2019 Krishnaswamy, J., Bunyan, M., Solomon, D., Duraisamy, V., Bazaz, A., **Thomas, R.**, (+9 co-authors from African region) (2019). Changing ecosystem services are increasing people's vulnerability in semi-arid regions: an ASSAR cross-regional insight. ([Report](#))

Conference Presentations

- Mar 2021 Misquitta, K., **Thomas, R.**, (2021). **Moral Geology: Making model villages and model aquifers in western India**, Envirolab Conference on 'Placing': New engagements with the 'Environment', University of Pennsylvania, Department of Anthropology, [Link](#)
- Jun 2018 **Thomas, R.**, Bendapudi, R., Yadav, A., Chemburkar, S., (2018). **Adaptation or Maladaptation: Case of farm ponds converted into storage tanks in Maharashtra - Implications for groundwater governance**, 5th Adaptations Futures, Cape Town
- Jun 2018 Mascarenhas, K., **Thomas, R.**, Bazaz, A., (2018). **Identifying changing groundwater regimes and ecosystem services of groundwater recharge for a rapidly urbanizing watershed in Bengaluru, India**, 5th Adaptations Futures, Cape Town

Sep 2016 **Thomas, R.,** Thakur, G., Duraisamy, V., (2016). **Ecohydrological status of natural springs in Akole and Sangamner blocks of Ahmednagar district and their significance to environmental flows**, 19th International River Symposium, New Delhi, [Link](#)

Feb 2013 Buono, J., **Thomas, R.,** (2013). **Lateritic springs: A threatened resource**, Conference on Policy for Conservation and Management of Rocky Plateau Biodiversity, Pune

Supervisor for MSc. Students

2019 Ms Fatima Halari
University of Gottingen, Germany
Thesis topic: The application of numerical modelling to investigate a monitoring network for a complex, fractured, porous aquifer system: A case study of Dolasane village, Maharashtra, India

2017 Mr Juzer Nalwala
University of Gottingen, Germany
Thesis topic: Hydrogeological modelling of the semi-arid fractured rock, Sangamner region, Ahmednagar, India

2016 Ms Kalaiarasi Ka Sa
TERI University, New Delhi
Thesis topic: Impacts of rainfall variability and LU/LC change on groundwater level in Dolasane village, Ahmednagar district ([Link](#))

2016 Ms Geetu Thakur
TERI University, New Delhi
Thesis topic: Comparative assessment of natural springs from Akole and Sangamner blocks of Ahmednagar district, Maharashtra and their present ecohydrological status ([Link](#))

2015 Mr Jose George
Savitribai Phule Pune University, Pune
Thesis topic: Hydrogeological investigation involving mapping, qualitative & quantitative water analysis of unconfined aquifers around Loni Kalbhor, Pune (as a field supervisor)

Courses/Certifications

April 2018 **Certificate course on Advances in Aquifer Characterization & Parameter Estimation** conducted under Global Initiatives of Academic Networks (GIAN) by Anna University, Chennai & Freie Universität, Berlin

Jul 2017 **Summer School for Future Leaders in Development** organized by the Center for Development Management, IIM Udaipur and the Sanford School of Public Policy, Duke University, USA.

Aug 2015 Training **Workshop in Field Hydrology** at Sirsi, Heggarni conducted by Ashoka Trust for Research in Ecology and the Environment (ATREE)

Jun 2015 **Interdisciplinary Summer School in Water and Society**, Bengaluru conducted by Ashoka Trust for Research in Ecology and the Environment (ATREE)

Aug 2011 **A basic certificate course on Herpetology – ‘Croaks & Hisses’**, Pune conducted by Aranyavaak.

Jun 2011 **Certificate course on CROPWAT irrigation planning software & AQUACROP yield response software**, Pune conducted by METEODAT, Switzerland.

2000 **Intermediate Grade Drawing Examination** by Government of Maharashtra Drawing Examinations

1999

Elementary Grade Drawing Examination by Government of Maharashtra Drawing Examinations

Peer Reviewer Arabian Journal of Geoscience

Professional Membership

Nov 2016 - Present **International Association for Promoting Geoethics (IAPG)**

Aug 2014 - Present Member (no. 10223496) - **International Association of Volcanology & Chemistry of the Earth's Interior (IAVCEI)**

May 2013 - Present Lifetime Member (no. L00635) - **Maharashtra Pakshimitra (Maharashtra: Friends of Birds)**

Language Proficiency

	Speak	Read	Write
English	Fluent	Fluent	Fluent
Hindi	Fluent	Fluent	Fluent
Marathi	Fluent	Fluent	Fluent
Malayalam	Conversational	-	-
German	Basic	Basic	Basic

Computer Proficiency

Software: ALCES, AQTESOLV, GMS, QGIS, gvSIG, IPI2win, GMS, Rockware – AqQA, ArcMap, MapSource, Surfer, QuikGrid, Stereonet, MS Office suite (Word, Excel, Powerpoint), Google Sketchup, Basic programming (HTML, Visual basic), CorelDraw, GIMP, Inkscape, CROPWAT, AQUACROP

Operating System: Windows, LINUX, MS-DOS

Instruments Handled

Electrical Resistivity Machine (ERT), Energy Dispersive X-Ray Fluorescence (EDXRF) Spectrometer, PMI Machine: Portable XRF (Niton XLt 898 He, Thermo Fisher Scientific), Global Positioning System (Garmin GPS 60, ETRIX, M10), Dumpy level, Electrical Resistivity Meter (Wenner Configuration), Universal Testing Machine (UTM), Flame Photometer, LaMotte Tracer PockeTester (pH, Ec, salinity, TDS, DO, Flouride), Resistivity Meter/ pH Meter, Vickers, Rockwell and Brinell Hardness Tester and Izod & Charpy Impact Tester (used in metal testing)

Hobbies

Trekking, collecting mineral oddities, reading, cycling, swimming, photography, cooking, drawing, observing animal behaviour and science blogging - [The Churning inside the Earth](#)

Professional & Academic Projects

List of professional and academic projects/studies till date as an annexure – Click [here](#)