

Publications – Hydrology

(The articles used data sets and/or were conducted using information gathered from Watersheds in Chamarajanagar district part of SUJALAIII project of KWDD)

1. Goswami, S. and Sekhar, M. (2022). Investigation and evidence of high episodic groundwater recharge events in tropical hard-rock aquifers of southern India. *Frontiers in Water*, 4:960669.
(<https://doi.org/10.3389/frwa.2022.960669>)
[The study was focused in the Gundlupet taluk and microwatersheds of Gopalapura and other microwatersheds in Chamarajanagar district]
2. Bregez, J.E., Baccar, M., Sekhar, M. and Ruiz, L. (2022). NIRAVARI: A Parsimonious Bio-Decisional Model for Assessing the Sustainability and Vulnerability of Rainfed or Groundwater-Irrigated Farming Systems in Indian Agriculture. *Water*, 14, 3211.
(<https://doi.org/10.3390/w14203211>)
[The study and models developed based on the requirements indicated through interactions with Karnataka watershed development officers during SUJALAIII project].
3. Brauns, B., Chattopadhyay, S., Lapworth, D.J., Loveless, S.E., MacDonald, A.M., McKenzie, A.A., Sekhar, M., Nara, S.N.V. and Srinivasan, V. (2022). Assessing the role of groundwater recharge from tanks in crystalline bedrock aquifers in Karnataka, India, using hydrochemical tracers. *Journal of Hydrology*, Vol.15, 100121.
(<https://doi.org/10.1016/j.hydroa.2022.100121>).
[The study used some of the microwatersheds in Gundlupet Taluk of Chamarajanagar part of SUJALAIII project].
4. Bellè, S.L., Riotte, J., Sekhar, M., Ruiz, L., Schiedung, M. and Abiven, S. (2022). Soil organic carbon stocks and quality in small-scale tropical, sub-humid and semi-arid watersheds under shrubland and dry deciduous forest in southwestern India. *Geoderma*, Vol. 409, 115606. (<https://doi.org/10.1016/j.geoderma.2021.115606>).
[The study was carried out in watersheds part of Gundlupet taluk and part of SUJALAIII and REWARD projects].
5. Lagacherie, P., Bui, S., Constantin, J., Dharumarajan, S., Ruiz, L. and Sekhar, M. (2021). Evaluating the impact of using digital soil mapping products as input for spatializing a crop model: The case of drainage and maize yield simulated by STICS in the Berambadi catchment (India). *Geoderma*, Vol. 406, 115503.
(<https://doi.org/10.1016/j.geoderma.2021.115503>).
[The study was carried out in SUJALAIII watersheds in Gundlupet taluk, Chamarajanagar district].
6. Baccar, M., Bergez, J.E., Couture, S., Sekhar, M., Ruiz, L., and Leenhardt, D. (2021). Building climate change adaptation scenarios

with stakeholders for water management: A hybrid approach adapted to the South Indian water crisis. Sustainability, Vol. 13, 8459.

(<https://doi.org/10.3390/su13158459>).

[The study was carried out in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].

7. Gomez, C., Dharumarajan, S., Lagacherie, P., Riotte, J., Ferrant, S. Sekhar, M., Ruiz, L. (2021). Mapping of tank silt application using Sentinel-2 images over the Berambadi catchment (India). Geoderma Regional. (<https://doi.org/10.1016/j.geodrs.2021.e00389>).

[The study was carried out in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].

8. Sharma, A. K., Hubert-Moy, L. Buvaneshwari, S., Sekhar, M., Ruiz, L., Moger, H., Bandyopadhyay, S. and Corgne, S. (2021). Identifying Seasonal Groundwater-Irrigated Cropland Using Multi-Source NDVI Time-Series Images. Remote Sensing, 13, 1960.

(<https://doi.org/10.3390/rs13101960>).

[The study was carried out in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].

9. Upadhyaya, D. B. , Evans, J., Sekhar, M., Tomer, S. K. et al. (2021). The Indian COSMOS Network (ICON): Validating L-Band Remote Sensing and Modelled Soil Moisture Data Products. Remote Sensing, 13, 537.

(<https://doi.org/10.3390/rs13030537>)

[Some parts of the study used data sets from SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].

10. Collins, S., Loveless, S., Sekhar, M., Buvaneshwari, S., Palamakumbura, R., Krabbendam, M., Lapworth, D., Jackson, C., Gooddy, D., Venkat Nara, S. N., Chattopadhyay, S. and MacDonald, A. (2020). Groundwater connectivity of a sheared gneiss aquifer system in the Cauvery River Basin (Peninsular India). Hydrogeology Journal.

<https://doi.org/10.1007/s10040-020-02140-y>

[The study was carried out in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].

11. Buvaneshwari, S., Riotte, J., Sekhar, M., Sharma, A. K., Helliwell, R., Kumar, M. S., Braun, J. J., Ruiz, L. (2020). Potash fertilizer promotes incipient salinization in groundwater irrigated semi-arid agriculture. Scientific Reports. 10:3691.

(<https://doi.org/10.1038/s41598-020-60365-z>).

[The study was carried out in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].

12. Zribi, M., Sekhar, M., Bousbih, S., Al Bitar, A., Tomer, S.K., Baghdadi, N. and Bandyopadhyay, S. (2019). Analysis of L-Band SAR Data for Soil Moisture Estimations over Agricultural Areas in the

Tropics. Remote Sensing, 11(9), 1122.

(<https://doi.org/10.3390/rs11091122>).

[The study was carried out in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].

13. Yeggina, S., Teegavarapu, R.S.V., Sekhar, M. (2019). A conceptually superior variant of Shepard's method with modified neighbourhood selection for precipitation interpolation. International Journal of Climatology. (<https://doi.org/10.1002/joc.6091>).

[Some parts of the study used data sets from SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].

14. Sharma, A.K., Hubert-Moy, L., Buvaneshwari, S., Sekhar, M., Ruiz, L., Bandyopadhyay, S., Shiv Mohan and Corgne, S. (2019). Evaluation of Radarsat-2 quad-pol SAR time series images for monitoring groundwater irrigation. International Journal of Digital Earth. (<https://doi.org/10.1080/17538947.2019.1604834>).

[The study was carried out in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].

15. Gomez, C., Dharumarajan, S., Féret, J.-B., Lagacherie, P., Ruiz, L. and Sekhar, M. (2019). Use of Sentinel-2 Time-series images for classification and uncertainty analysis of inherent biophysical property: Case of soil texture mapping. Remote Sensing, 11, 565, pp.1-20. (<https://doi.org/10.3390/rs11050565>).

[The study was carried out in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].

16. Sharma, A. Hubert-Moy, L., Buvaneshwari, S., Sekhar, M., Ruiz, L., Bandyopadhyay, S., Corgne, S. (2018). Irrigation history estimation using multitemporal Landsat satellite images: Application to an intensive groundwater irrigated agricultural watershed in India. Remote Sensing, 10, 893. (<http://dx.doi.org/10.3390/rs10060893>).

[The study was carried out in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].

17. Robert, M., Thomas, A., Sekhar, M., Raynal, H., Casellas, E., Casel, P., Chabrier, P., Joannon, A. and Bergez, J.-E. (2018). A dynamic model for water management at the farm level integrating strategic, tactical and operational decisions. Environmental Modeling and Software, 100, pp. 123-135. (<http://dx.doi.org/10.1016/j.envsoft.2017.11.013>).

[This study and the model was developed based on the data sets in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].

18. Eswar, R., Sekhar, M., Bhattacharya, B. K., Bandyopadhyay, S. (2017a). Comparison of three remote sensing based models for the estimation of latent heat flux over India. Hydrological Sciences

- Journal, 62(16), pp. 2705–2719. (<https://dx.doi.org/10.1080/02626667.2017.1404067>).
[Some parts of the study used data sets from SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].
19. Eswar, R., Sekhar, M., Bhattacharya, B. K., Bandyopadhyay, S. (2017b). Spatial disaggregation of latent heat flux using contextual models over India. Remote Sensing, 9, 949. (<https://dx.doi.org/10.3390/rs9090949>).
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20. Sreelash, K., Buis, S., Sekhar, M., Ruiz, L., Guerif, M. (2017). Inversion of a crop model for estimating multilayered soil hydraulic properties: effect of crop type and water regime. Journal of Hydrology, 546, pp.166–178. (<http://dx.doi.org/10.1016/j.jhydrol.2016.12.049>).
[The study was carried out in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].
21. Subash, Y., Sekhar, M., Tomer, S.K., Sharma, A.K. (2017). A framework for assessment of climate change impacts on the groundwater system. (In: Sustainable Water Resources Management, Editors: C.S.P Ojha, S. Y.Rao, A. Bardossy, T. Zhang and Kao, C-M.). Chapter 14, ASCE Book Chapter, pp.375–397. ISBN: 9780784480908. (<http://www.asce.org/templates/publications-book-detail.aspx?id=25740>).
[The study was carried out in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].
22. Tomer, S.K., Al Bitar, A., Sekhar, M., Zribi, M., Bandyopadhyay, S., Kerr, Y. (2017). MAPSM: A Conceptual Spatio-temporal Algorithm to Merge Active and Passive Soil Moisture. Remote Sensing, 8, 990. (<https://dx.doi.org/10.3390/rs8120990>).
[The study was carried out in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].
23. Buvaneshwari S., Riotte, J., Sekhar, M., Mohan Kumar, M. S., Sharma, A. K., Duprey, J.-L., Audry, S., Giriraj, P.R., Praveen, Y., Hemanth, M., Durand, P., Braun, J.J., Ruiz., L. (2017). Groundwater resource vulnerability and spatial variability of nitrate contamination: insights from high density tubewell monitoring in a hard rock aquifer. Science of Total Environment, 579, pp.838–847. (<http://dx.doi.org/10.1016/j.scitotenv.2016.11.017>).
[The study was carried out in SUJALAI III watersheds in Gundlupet taluk, Chamarajanagar district].
24. Robert, M., Thomas, A., Sekhar, M., Badiger, S., Ruiz, L., Willaume, M., Leenhardt, D. and Bergez, J.-E. (2017). Farm typology in the

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27. Robert, M., Thomas, A., Sekhar, M., Badiger, S., Ruiz, L., Raynal, H., Bergez, J.-E. (2016). Adaptive and dynamic decision-making processes: A conceptual model of production systems on Indian farms. *Agricultural Systems*, (<http://dx.doi.org/10.1016/j.agsy.2016.08.001>).

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28. Narvekar, P.S., Tomer, S.K., Sekhar, M., Shiv Mohan, Bandyopadhyay, S., Jackson, T. and Entekhabi, D. (2016). High Resolution Land Surface Geophysical Parameters Estimation from ALOS PALSAR data. *Journal of The Remote Sensing Society of Japan*, 37(2):105-111
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