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SCAN ME

Experience

01 August 2022 – present
Researcher • Junior Researcher • National Research and Innovation Agency

01 October 2015 – 31 July 2022
Researcher • Junior Researcher • Ministry of Agriculture

01 October 2011 – 01 October 2015
Researcher • Assistant Researcher • Ministry of Agriculture

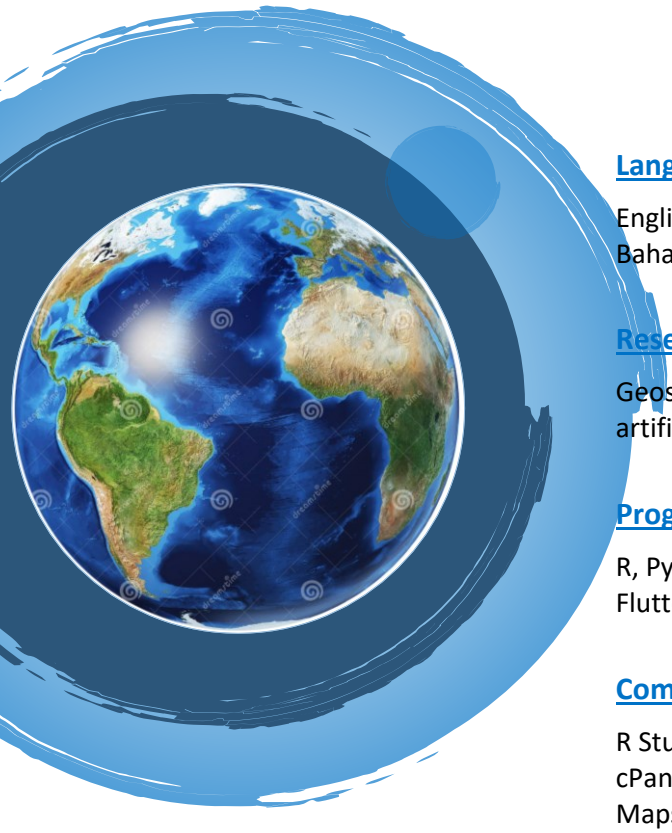
Developing an integrated system of cropping calendar for adapting to climate change at the farmer level with geospatial technologies.

Education

Massey University, Palmerston North – New Zealand, 2022
- Doctorate level by research
- Major: Earth Science
- Thesis: Mapping of multitemporal rice (Oryza sativa L.) growth stages using remote sensing with multi-sensor and machine learning

Asian Institute of Technology, Pathum Thani – Thailand, 2011
- Master-level by coursework – GPA: 3.58
- Major: Nanotechnology
- Thesis: Desalination With Capacitive Deionization (CDI) By Layer-By-Layer Electrode

Universitas Gadjah Mada, Yogyakarta – Indonesia, 2003
- Undergraduate level by coursework – GPA: 3.26
- Major: Computer Science
- Thesis: Implementation of Microsoft Message Queue (MSMQ) as middleware in distributed application to communicate asynchronously.



Language profiency

English: Proficient
Bahasa Indonesia:Fluent

Research interest

Geospatial applications using remote sensing, machine learning, artificial intelligences, climate change adaptation, deep learning

Programming language and framework

R, Python, ArcPy, PHP, Laravel, JavaScript, HTML, VB.NET, SQL, Kotlin, Flutter

Computer software

R Studio, ArcGIS, QGIS, Office 365, Visual Studio, MySQL, SQL Server, cPanel, Android Studio, Visual Code, Google Docs, Windows 10, Google Maps API, Google Earth Engine

Previous and Current Projects

- Integrated cropping information system (http://katam.litbang.pertanian.go.id/)
- Pesticide information system (https://pestisida.id/)

Awards

Indonesian pioneer of Agriculture sector as a researcher (2016) by Ministry of Agriculture.

Copyrights and Patents

1. Web-Based Research and Agricultural Innovation Collaboration Acceleration Application (SI AKIRA) Version 1.0 (21 Oct 2021)
2. Web Application for Monitoring Rice Growth Phase in Lowlands Using Google Earth Engine Platform (FusionGEE - Rice Standing Crop) Version 1.0 (23 Feb 2021)
3. Automation System for Making Rice Growth Phase Classification Maps Using Satellite Imagery and Machine Learning (Dec 30, 2020) – Registered Patent
4. Sentinel-2 Based Standing Crop Monitoring Android Application (AndroidSC Sentinel-2) Version 1.0 (14 Jul 2020)
5. Sentinel-2 Based Standing Crop Web Application (WebSC Sentinel-2) Version 1.0 (14 Jul 2020)
6. Integrated Planting Calendar Information System version 3.1 (11 Jun 2020)
7. Integrated Planting Calendar Information System Version 2.0 (11 Jun 2020)
8. Rice Drought Risk Prediction Information System (30 Apr 2020)
9. Integrated Planting Calendar Web App (21 Mar 2017)
10. Aceh Planting Calendar Atlas Volume 2 (16 Oct 2014)
11. Bengkulu Province Planting Calendar Atlas Volume 2 (16 Oct 2014)
12. Lampung Province Planting Calendar Atlas Volume 2 (16 Oct 2014)
13. Planting Calendar Atlas of West Sumatra Province Volume 2 (16 Oct 2014)
14. Planting Calendar Atlas P. Kalimantan (West Kalimantan) Scale 1:250.000 Volume 3 (24 Apr 2014)
15. Planting Calendar Atlas of Sulawesi Island (Central Sulawesi) 1:250.000 Scale Volume 4 (24 Apr 2014)
16. Planting Calendar Atlas of Sumatra Island (Jambi) 1:250.000 Scale Volume 2 (24 Apr 2014)

Publications

1. Mulyaqin, Tian; Kardiyono, Kardiyono; Hidayah, Ismatul; **Ramadhani, F**; Yusron, Muchamad; *Detection of Rice Field Land Transfer Using Sentinel-2 and Google Earth Engine in Serang City*, Provinsi Banten, Jurnal Ilmu Pertanian Indonesia, 27-2 (226-236), 2022 (in Indonesian)
2. **Ramadhani, F**; Misnawati, M; Syahbuddin, H; *An early investigation of spatial correlation between Sentinel-2 based rice growth stages maps with satellite-based precipitation data to support digital agriculture development in Indonesia*, IOP Conference Series: Earth and Environmental Science, 648-1 (12002), 2021
3. Apriyana, Y; **Ramadhani, F**; *The projected water availability on paddy rice based on climate change scenario in Indonesia*, IOP Conference Series: Earth and Environmental Science, 648-1 (12162), 2021
4. **Ramadhani, F**; Koswara, MRS; Apriyana, Y; *The comparison of numerous machine learning algorithms performance in classifying rice growth stages based on Sentinel-2 to enhance crop monitoring in national level*, IOP Conference Series: Earth and Environmental Science, 648-1 (12212), 2021
5. **Ramadhani, F**; Pullanagari, Reddy; Kereszturi, Gabor; Procter, Jonathan; *Mapping a cloud-free rice growth stages using the integration of PROBA-V and Sentinel-1 and its temporal correlation with sub-district*

statistics, Remote Sensing, 13-8 (1498), 2021

6. Apriyana, Yayan; Surmaini, Elza; Estiningtyas, Woro; Pramudia, Aris; **Ramadhani, F**; Suciantini, Suciantini; Susanti, Erni; Purnamayani, Rima; Syahbuddin, Haris; *The Integrated Cropping Calendar Information System: A coping mechanism to climate variability for sustainable agriculture in Indonesia*, Sustainability, 13-11 (6495), 2021
7. **Ramadhani, F**; *Mapping the vegetative stage of rice cultivation using deep learning*, 2021 7th Asia-Pacific Conference on Synthetic Aperture Radar (APSAR), - (44566), 2021
8. Surmaini, E; **Ramadhani, F**; Syahputra, MR; Dewi, ER; Apriyana, Y; *Development of a paddy drought hazard forecasting system to cope with the impact of climate change*, IOP Conference Series: Earth and Environmental Science, 484-1 (12050), 2020
9. **Ramadhani, F**; Pullanagari, Reddy; Kereszturi, Gabor; Procter, Jonathan; *Mapping of rice growth phases and bare land using Landsat-8 OLI with machine learning*, International Journal of Remote Sensing, 41-21 (8428-8452), 2020
10. **Ramadhani, F**; Pullanagari, Reddy; Kereszturi, Gabor; Procter, Jonathan; *Automatic mapping of rice growth stages using the integration of SENTINEL-2, MOD13Q1, and SENTINEL-1*, Remote Sensing, 12-21 (3613), 2020
11. Apriana, Yayan; Susanti, Erni; **Ramadhani, F**; Surmaini, Elza; *Analysis of the Impact of Climate Change on Food Crops Production on Dry Land and Design of Information Systems*, Sekretariat Badan Penelitian dan Pengembangan Pertanian, 2016 (in Indonesian)
12. **Ramadhani, F**; *Rapid Method of Identification of Tertiary Irrigation Networks In Irrigation Improvement Process*, Sekretariat Badan Penelitian dan Pengembangan Pertanian, 2016 (in Indonesian)
13. **F. Ramadhani**, Haris Syahbuddin, E. Runtunuwu, *Android Application for Integrated Cropping Calendar*, Jurnal Informatika, Sistem Kendali, dan Komputer (INKOM), Volume IX No. 1, Januari 2015, ISSN: 1979-059. (in Indonesian)
14. Fahmi, Muhammad Alwi, **F. Ramadhani**, D. Nursyamsi, *The Role of organic Matter Management and Typology of Tidal Swampland on Decision Support System of Rice Fertilization*, Proceedings of 11th International Conference The East and Southeast Asia Federation of Soil Science Societies 21-24 October 2014, IPB Bogor, Page 498-499, ISBN: 978979-19904-1-7.
15. **F. Ramadhani**, E. Runtunuwu, H. Syahbuddin, Technology in integrated cropping calendar information system, Pengembangan Inovasi Pertanian, Informatika Pertanian, Volume 22 No.2, Tahun 2013, Page 103-112, ISSN: 0852-1743. (in Indonesian)
16. N. Heryani, **F. Ramadhani**, Kharmilasari, Management for Climate And Hydrology Resources to Support Development of Dry Land Agriculture, Buletin Hasil Penelitian Agroklimat dan Hidrologi, Vol. 10, 2014, Page 71-82. ISSN: 0852-1743. (in Indonesian)
17. E. Susanti, Suciantini, **F. Ramadhani**, G.A. Putranto, Chapter 8: Potential hazard (flood, drought, pests) in Indonesian paddy field area, Book : Integrated Cropping Calendar (Research, Assessment, Development, and Application), IAARD Press, Printed in 2013, Page 295-350, ISBN: 978-602-128-07-2. (in Indonesian)
18. E. Runtunuwu, H. Syahbuddin, **F. Ramadhani**, Budi Kartiwa, A. Pramudia, et al, Chapter 6: Development of Integrated Cropping Calendar Information, System, Book : Integrated Cropping Calendar (Research,

Assessment, Development, and Application), IAARD Press, Printed in 2013, Page 217-259, ISBN: 978-602-128-07-2. (in Indonesian)

19. E. Runtunuwu, H. Syahbuddin, **F. Ramadhani**, A. Pramudia, et al, Institutional Innovation of Integrated Cropping Calendar Information System to support Climate Change Adaptation for National Food Security, Pengembangan Inovasi Pertanian, Volume 6 No.1, Maret 2013, Page 44-52, ISSN : 1979-5378. (in Indonesian)
20. E. Runtunuwu, H. Syahbuddin, **F. Ramadhani**, A. Pramudia, et al Information System of Integrated Cropping Calendar: Current Status and Future Challenges, Jurnal Sumberdaya Lahan,, Vol 6 No 2, 2012, Page 67-78, ISSN : 1907-0799. (in Indonesian)
21. E. Runtunuwu, H. Syahbuddin, **F. Ramadhani**, W.T. Nugroho, The Dynamics of Paddy Planting Time in Sulawesi, Pangan Media Komunikasi dan Informasi, Vol. 21 No. 2 Juni 2012, Page 113-124, ISSN : 0852-0607 (in Indonesian), 2010, Page 17-25, ISSN : 1979-4673
22. E. Susanti, **F. Ramadhani**, T. June, L.I Amien, Utilization of Climate information for development of early warning system for brown plant hopper, Indonesian Journal of Agriculture, Volume 3 Number 1,
23. Woro Estiningtyas, **F. Ramadhani**, E. Aldrian, Correlation analysis of rainfall and temperature of the sea surface area in Indonesia, and the implications for forecasts of rainfall (A case study Cilacap Regency), Journal Agromet Indonesia, Volume XXI No. 2, Desember 2007, ISSN: 0126-3633. (in Indonesian)
24. Popi Rejekiningrum, **F. Ramadhani**, Y. Apriana, Haryono, Identification and characterization potential ground water for irrigation development in The Sugar Factory Rendeng and Trangkil, Central Java, Journal Agromet Indonesia, Volume XIX No. 1, Juli 2005, ISSN: 0126-3633. (in Indonesian)
25. Gatot Irianto, E. Runtunuwu, **F. Ramadhani**, S.H. Adi, Information System Food Security as Decision Support Tools, Berita Inderaja Vol III No. 6, December 2004, ISSN 1412-4564, Indonesian Aeronautics and Space Agency (in Indonesian)
26. Woro E. **F. Ramadhani**, G. Irianto, Utilization of Sea Surface Temperature Nino 3, 4 for predicting monthly rainfall , Buletin Hasil Penelitian Agroklimat dan Hidrologi Vol. 2, No. 1, 2005, ISSN 0216-3934 (in Indonesian)
27. Eleonora Runtunuwu, Gatot Irianto, Adang Hamdani, Setyono Hari Adi, **F. Ramadhani**, Utilization of Natural Resources Information System as Decision Support Tool for Food Security: Case Study Middle Java, Buku Sistem Informasi Sumberdaya Iklim dan Air, ISBN 979-98237-1-4, Balitklimat, 2005 (in Indonesian)
28. Eleonora Runtunuwu, **F. Ramadhani**, Setyono Hari Adi, Applying the remote sensing in a Decision Support Tool for Food Security, Proceedings of the CERES International Symposium on Remote Sensing, Chiba, Japan, 2005
29. Woro, Elza, **F. Ramadhani**, Validation rainfall prediction with kalman filter method, Forum-HIBRID, Indonesian Meteorology and Geophysics Agency, 2006 (in Indonesian)
30. Woro, Suci, **F. Ramadhani**, Time lag Analysis for developing rainfall prediction model: case study East Java, Prosiding seminar nasional sumberdaya lahan pertanian BUKU II, ISBN 979-9474-53-1, ISBN 979-9474-55-8, 2006 (in Indonesian)
31. Woro, **F. Ramadhani**, Kharmila Sari, Correlation rainfall with Sea Surface Temperature Nino 3, 4 along with utilizes for rainfall prediction in Yogyakarta Province, Technical meeting in 2007, (in Indonesian)

32. Runtunuwu E., H. Syahbuddin, **F. Ramadhani**, Rice Planting Time Dynamics in Borneo Island, Jurnal Agronomi 40(1):8-14 in 2012 (in Indonesian)
33. Runtunuwu E., H. Syahbuddin, **F. Ramadhani**, Rice Planting Calendar dynamics in Sulawesi Island, Majalah Pangan 21(2):113-124 in 2012 (in Indonesian)
34. Runtunuwu E., H. Syahbuddin, **F. Ramadhani**, A. Pramudia, D. Setyorini, K. Sari, Y. Apriyana, E. Susanti, Haryono, P. Setyanto., I. Las, M. Sarwani, Planting Calendar Integrated Information Systems: Current Status and Future Challenges, Jurnal Sumber Daya Lahan 6(2):67-78 in 2012 (in Indonesian)
35. Runtunuwu E., H. Syahbuddin, **F. Ramadhani**, A. Pramudia, D. Setyorini, K. Sari, Y. Apriyana, E. Susanti, Haryono. Institutional Innovation Planting Calendar Information System Integrated Support Climate Change Adaptation for Food Security, Jurnal Pengembangan Inovasi Pertanian 6(1):44-52 in 2013 (in Indonesian)
36. Ramadhani F., E. Runtunuwu, Assembling the Air Humidity Sensor Using Nanotechnology, Submitted to Jurnal Meteorologi dan Geofisika in 2013 (in Indonesian)