

Curriculum Vitae

Yuli Suharnoto

PH.D. / HYDROLOGIST



Summary of competencies

Yuli has more than 30 years' experience in the field of hydrology, irrigation, drainage, geohydrology, water resources assessment, and geographic information system (GIS). Over the years, Yuli has been involved in many projects concerning water resources mapping and evaluation of national/sub national importance, either sponsored the Government of Indonesia or foreign donors. Yuli has also written numerous publications for the international scientific community.

Project experience related to peat land and other water projects

1. Environmental Impact Assessment of Mega Rice Project in Blok A, Central Kalimantan, Indonesia

Year: 1996

Client: Ministry of Public Works, GOI

Role: hydrologist. In this study, the hydrologist and the team (lead by Dr. Rokhmin Dahuri) recommended the project to redesign the canal layout, especially the primary canal in Blok A which crossing peat dome. However, the project insisted that the primary canal that connect Barito River to Kahayan River will break geographic isolation of the region and the economic benefit will overcome the ecosystem losses. Because of that, the project proposed the environmental impact assessment should be extended covering the whole project area and the study should also consider the regional development.

2. Regional Environmental Impact Assessment of Mega Rice Project in Central Kalimantan, Indonesia

Year: 1997

Client: Ministry of Public Works, GOI

Role: hydrologist. The team consisted of more than 50 experts. In this study the hydrologist has predicted that the crossing canal will cause peatland degradation due to excessive drainage. This will make peatland sensitive to forest fire. Further, the drainage will make peat losses through peat oxidization and peat subsidence.

3. Topographic and Drainage System Mapping in Ex-Mega Rice Project in Central Kalimantan, Indonesia

Year: 2009

Client: Wetland International Indonesia Programme

Role: Team Leader and hydrologist. The work covered the desk study of peatland degradation of Ex-Mega Rice Project. For the base line, the peat depth and the existing canals will be mapped. The team consisted of 10 surveyors/groups and 50 local labors. Besides, there are other teams from BAKOSURTANAL (now: Badan Informasi Geospasial) who established BM (Bench Mark) using Geodetic GPS. The field work took more than three months to cover Blok A, B, C and D.

4. Master Plan of Peat Restoration in Ex-Mega Rice Project in Central Kalimantan, Indonesia

Year: 2009

CURRENT POSITION

Hydrologist

QUALIFICATIONS

Post Doc., Biological and Agricultural Engineering, Texas A&M University, US. 2002-2005.

Ph.D., Environmental Hydraulics Engineering, EHIME University, Japan. 1994.

M.Sc., Irrigation Engineering, Katholieke Universiteit Leuven (KUL), Belgium. 1990.

B.Sc., Agricultural Engineering, Bogor Agricultural University, Indonesia. 1985.

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

Member of Indonesian Society of Agricultural Engineers

Member of Indonesian Society of Soil and Water Conservation

EXPERTISE

- Water Adaptation Specialist
- Environmental impact and sustainability assessment
- Hydrogeological Investigations
- Assessments of groundwater and surface water interactions

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Client: Wetland International Indonesia Programme

Role: Hydrologist. Processing and analyzing hydrology data to support peat restoration design. Studying the stream flow circulation in the area. Proposing blocking canals to avoid peat-land drainage.

5. Topographic Survey and Flood Study in Agro Prima Sejahtera Banana Plantation, East Lampung, Lampung Province

Year: 2017

Client: PT Agro Prima Sejahtera (APS)

Role: Team Leader and Flood specialist. Conducted topographic survey using GPS RTK (Real Time Kinematic). The topographic map is used in flood study using SWAT hydrology model and HEC RAS. Flood inundations are evaluated for some flood scenarios. Based on the evaluations, some alternatives are suggested to overcome the inundation threats.

6. Hydro Topographic Survey and Water Management in Umbul Mas Wisesa Plantation and Toton Usaha Mandiri, Labuhan Batu, North Sumatera

Year: 2013

Client: PT Umbul Mas Wisesa and PT Toton Usaha Mandiri

Role: Team Leader and Irrigation Specialist. Conducted hydro topographic survey and designing water management for oil palm plantation in peat land area.: Lead a group of four scientists to conduct hydro topographic survey and designing water management. Reviewed existing water management. Discussed the preliminary concept with the clients. Carried out field survey. Designed Standard Operation Procedure for water management in peat land. Handled project management activities (scheduling, budgeting, reporting, conducting meeting with clients).

7. Development and Application of DSS (Decision Support System) for Irrigation Management in Cidurian Irrigation Project, West Java, Indonesia

Year: 1997

Client: Ministry of Research and Technology, Government of Indonesia

Role: Principal Investigator. Lead a group of five scientists to develop a DSS to manage irrigation water management. Reviewed existing irrigation management. Carried out field survey for project prototyping. Designing the user interface. Designing the modules for crop water requirements, water distribution, water losses calculation along the channel. Designing spatial database of irrigation scheme. Handling project management activities (scheduling, budgeting, reporting, conducting meeting with line-agencies).

8. Interactive Irrigation Management using GIS and SMS (Short Message Services), Indonesia

Year: 2011

Client: Ministry of Agriculture, Government of Indonesia

Role: Principal Investigator and Irrigation specialist. Designed Decision Support System (DSS) for Irrigation Water Management using GIS and SMS technology. Lead a group of four scientists to develop a tool to manage irrigation water management. Reviewed existing irrigation

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management. Discussed the preliminary concept with government agencies. Carried out field survey for project prototyping. Designed the user interface. Designing the modules for crop water requirements, water distribution, water losses calculation along the channel. Designed spatial database of irrigation scheme. Designed the SMS input-output procedures. Handled project management activities (scheduling, budgeting, reporting, conducting meeting with line-agencies).

9. ADB 7189 INO Package E, Citarum River Basin, West Java

Year: 2011 - 2015

Client: Asian Development Bank (ADB)

Role: Deputy Team Leader, Project Coordinator and Water Adaptation specialist in Mainstreaming Climate Change Issues in Water Resource Management Project in Citarum River Basin. Together with the Team Leader, led a group of 8 scientists in mainstreaming the climate change issues in water resources management. Reviewed existing water resources management. Implementing two climate change mitigation pilots: solid waste management for urban area and Biogas for rural areas, three climate change adaptation pilots: Climate proof water infrastructure, water conservation, and sustainable agriculture. Development of operational guidelines to mainstreaming climate change concern into water resource management plan at national, provincial and local level, Discussed the preliminary concept with government agencies. Carried out field survey for pilot project selections. Handling project management activities (scheduling, budgeting, reporting, conducting meeting with line-agencies).

10. Source Vulnerability Assessment (SVA) of Coca Cola Bottling Indonesia (CCBI) at seven plants: Cibitung, Padang, Lampung, Semarang, Cikedokan, Pandaan, Cibirong, Bali, Surabaya, Medan

Year: 2011 – 2015

Client: ERM (Environmental Resource Management) for CCBI Cibitung, CCBI Padang, CCBI Lampung, CCBI Semarang, CCBI Cikedokan

Role: Hydrologist Expert. Provide a conceptual and water balance analysis for SVA CCAI (Coca Cola Amatil Indonesia) locations, Provide a vulnerability assessment in regards with water balance (and or water scarcity) in CCAI locations, Provide a full report writing for above mentioned analysis and assessment.

11. Financial Reform of 20 PDAMs Stage 4, Indonesia

Year: 2014

Client: Indonesia Infrastructure Initiative, supported by AusAID

Role: Hydrologist Expert. Assess the source water options available for PDAMs in Kabupaten Garut, Kabupaten Purwakarta, Kabupaten Sukabumi, Kota Pontianak, and Kota Palembang; for developing a technically and financially feasible service expansion development program for each PDAM. Analyse the long term sustainability of the source water from the hydro geological perspective as well as assisting PDAMs in coordinating with relevant water resources authorities.

12. Feasibility Study of Oil Palm, Cacao, and Rubber Tree in Sorong District, West Papua Province

Year: 2011

Client: PT Toba Lestari

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Role: Principal Investigator and Irrigation specialist. Conducted feasibility study and land evaluation for Oil Palm, Cacao, and Rubber Tree Plantation in Sorong District, West Papua Province. Lead a group of six scientists to conduct feasibility study and land evaluation for Oil Palm, Cacao, and Rubber Tree Plantation. Discussed the preliminary concept with clients. Carried out field survey. Analyzing financial analysis for Oil Palm, Cacao, and Rubber Tree Plantation based on its suitability classes. Handled project management activities (scheduling, budgeting, reporting, conducting meeting with line-agencies).

13. Marine and Coastal Mapping for Raja Ampat Regency, Papua Province, Indonesia

Year: 2007

Client: Local government of Kabupaten Raja Ampat

Role: Team Leader and GIS specialist. Conduct desk study of Raja Ampat. Designing and planning mapping work. Conduct field survey mapping. Supervise the work of specialists. Processing survey data. Reporting, documenting and producing maps/atlas Handling project management activities (scheduling, budgeting, reporting, conducting meeting with line-agencies).

14. WebGIS for Catalog of Spatial Data, Indonesia

Year: 2007

Client: Agency for National Survey and Mapping, Government of Indonesia

Role: Team Leader. Lead a group of specialists and programmers to develop a digital catalogue of maps to enable web access. Planning the schedule, supervise the work of specialists and programmers, presenting the results to the client, handling project management activities (scheduling, budgeting, reporting, conducting meeting with line-agencies).

15. WebGIS for Environmental Bank Data, Indonesia

Year: 2007

Client: Directorate General of Oil and Gas, Ministry of Energy and Mineral Resources, Government of Indonesia

Role: Team Leader. Lead a group of specialists and programmers to develop an information system for oil and gas industries. Planning the schedule, supervise the work of specialists and programmers, presenting the results to the client, handling project management activities (scheduling, budgeting, reporting, conducting meeting with line-agencies).

16. Oil Spill Modeling Studies in Banyu Urip Project, East Java, Indonesia

Year: 2002

Client: Mobil Cepu Ltd. (an Exxon-Mobil Subsidiary Company)

Role: Team Leader and environmental hydraulics specialist. Conduct the transport and fate of oil spill along Bengawan Solo River (from Oil wells to coastal areas). Led a group of specialists to conduct oil spill trajectories for various scenarios. Planning the schedule, conduct field study, supervise the work of specialists, presenting the results to the

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client, handling project management activities (scheduling, budgeting, reporting, conducting meeting with line-agencies).

17. Development of Model-Based for Coastal and Marine Resource Management, Indonesia

Year: 2002

Client: Bakosurtanal (Agency for National Survey and Mapping)

Role: Team Leader. Lead a group of specialists and programmers to develop conceptual model for coastal and marine resource management. Planning the schedule, supervise the work of specialists and programmers, presenting the results to the client, handling project management activities (scheduling, budgeting, reporting, conducting meeting with line-agencies).

18. Decision Support System for Managing Coastal and Marine Resources, Indonesia

Year: 2001

Client: Ministry of Marine Affairs and Fisheries, Government of Indonesia

Role: Team Leader. Lead a group of three scientists to develop a DSS for Managing Coastal and Marine Resources. Reviewed existing management practices for coastal areas. Carried out field survey for project prototyping. Designing the user interface. Designing the modules for planning and decision making. Coupling the program with existing hydrodynamic program. Handling project management activities (scheduling, budgeting, reporting, conducting meeting with line-agencies).

Paper in International and National Journals:

1. OHASHI, G. and Y. SUHARNOTO (1994): Hydraulic characteristics of two-layered tidal flows in the Hiji River -Analysis on the characteristics of stratification based on field data-. Trans.JSIDRE, 174, pp.83-93 ([肱川感潮域における 2 成層密度流の水理特性--観測資料に基づく成層特性の解析](#) [in Japanese], 大橋 行三, **Suharnoto Yuli**, Transactions of the Agricultural Engineering Society, Japan, (174) p83~93, 1994/12)
2. OHASHI, G. and Y. SUHARNOTO (1994): On the Hydraulics of Two-layer Flows through the Gradual Constriction in Open-channel. Trans.JSIDRE, 173, pp.111-126 ([水路の漸変狭窄部を越える 2 成層密度流の水理について](#) [in Japanese], 大橋 行三, **Suharnoto Yuli**, Transactions of the Agricultural Engineering Society, Japan, (173) p111~126, 1994/1)
3. Setiawaty, M., Nurisjah, S. and Y. Suharnoto. 2010. Developing touring plan using geographic information system based on visual, natural, and cultural qualities in parangtritis coastal area, yogyakarta, Indonesia. Jurnal lanskap indonesia Vol. 2, No. 2.
4. Sari, N., Zawawi, M. A. M., Prastowo and Y. Suharnoto. 2014. Effects of Soil Moisture Content on Groundwater Electrical Resistivity Values in Irrigation Paddy Scheme, Tanjong Karang, Malaysia. International Journal on Advanced Science, Engineering and Information Technology Vol 4, No 5

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5. Dasanto, B. D., Boer, R., Pramudya, B. and Y. Suharnoto. 2014. Simple Method for Assessing Spread of Flood Prone Areas under Historical and Future Rainfall in the Upper Citarum Watershed. *Environment Asia* 7(2) (2014) 79-86
6. Sampurno, R. M., Seminar, K. B. and Y. Suharnoto. 2014. Weed Control Decision Support System Based on Precision Agriculture Approach. *TELKOMNIKA*, Vol.12, No.2, June 2014, pp. 475~484
7. Dasanto, B. D., Boer, R., Pramudya, B. and Y. Suharnoto. 2014. Effects of Forest Cover Change on Flood Characteristics in the Upper Citarum Watershed. *Journal of Tropical Forest management*. Vol 20, No 3
8. Stiyanto, E., Suharnoto, Y., Sapei. A. and Sutoyo. 2015. Development of Paddy Field Module for Analysis Water Yield by using SWAT Program. *Asian Journal of Applied Sciences* (ISSN: 2321 – 0893) Volume 03 – Issue 05,
9. Febriyanti, M. S., Boer, R. and Y. Suharnoto. 2015. Pemodelan Banjir dan Analisis Kerugian Akibat Bencana Banjir di DAS Citarum Hulu. *Jurnal Tanah dan Iklim* Volume : 39, Nomor : 2
10. Edi Susanto, B.I. Setiawan, Yuli Suharnoto and Liyantono. 2017. Evaluation of Water Debit in Oil Palm Plantation Watershed Using the Soil Water Assessment Tool (SWAT). *International Journal of Civil Engineering and Technology*, 8(6), 2017, pp. 332–341.

Paper presented in International Seminar/Workshop:

1. Boer, R. and Y. Suharnoto. 2013. Climate change and its impact on Indonesia's food crop sector. the Sixth Executive Forum on Natural Resource Management: Water & Food in a Changing Environment on 11-13 April 2012 at SEARCA headquarters, Los Baños, Philippines.
2. Mulyana, N. and Y. Suharnoto. 2009. Swat Model Calibration for Predicting Diurnal Water Yield at Cisadane Upper Watershed, West Java, Indonesia. *SWAT SEA Conference*, January 5-8, 2009, Chiang Mai, Thailand.
3. Susetyo, B., K. B. Seminar, Y. Suharnoto. 2007. The Development of Spatial Decision Support System for Industrial Waste Water Monitoring (A Case study: Upper Citarum River Basin, West Java). *Geomarine Research Forum*, November 6-7, 2007, Bogor, Indonesia.
4. Suharnoto, Y., C. Munster, B. Wilcox, L. Shen. 2004. The Effects of Land Cover, Geology, and Groundwater Levels on Spring Discharge in Pedernales River Basin. Poster Session in the Workshop Edwards Water Resources in Central Texas: Retrospective and Prospective, South Texas Geological Society and Austin Geological Society, May 21, 2004, San Antonio, TX.
5. Putri, E., Mediana, M., and Y. Suharnoto. 2003. Oil Spill Modeling Study for Banyu Urip Oil Field Development Project in Cepu Block, East Java Province, Indonesia. *Proceedings of the 29th Annual Convention and Exhibition of Indonesian Petroleum Association*, Jakarta, Indonesia.
6. Pertiwi, S. and Y. Suharnoto (2001). Decision Support on Management of Conservation Upland Farming Through Internet.

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- Proceeding of South East Asia – German (SEAG) Symposium-cum-Workshop. Los Banos, Philippines, 27 – 31 August 2001.
7. Suharnoto, Y. 2001. Environmental Sensitivity Mapping and Database Development: The Case of Indonesia Coastal and Marine Areas. Proceeding of International Workshop on the Environmental Sensitivity Index (ESI) Mapping for Oil Spills, Tokyo, Japan, March 23, 2001.
 8. Pertiwi, S., Y. Suharnoto, S. Sukartaatmadja, W. Hermawan (2001). Development of a Decision Support System for Management of Conservation Upland Farming. Proceeding of International Seminar on Harmonization between Development and Environmental Conservation in Biological Production. Tokyo, Japan, 20 – 22 February 2001.
 9. Baba, A., Tsuyuki, S., and Y. Suharnoto. 2000. Landuse Classification of Cidanau Watershed using Satellite Remote Sensing Data. Proceeding of International Seminar on Environmental Management for Sustainable Rural Life, Bogor, Indonesia, February 19, 2000.
 10. Suharnoto, Y. and S. Tsuyuki. 1999. Remote Sensing and Geographic Information System (GIS) in Water-Related Environmental Planning and Management. Proceeding of Sustainable Resource Management of Cidanau Watershed. Bogor, Indonesia, July 26, 1999.
 11. Suharnoto, Y. 1998. Modeling Atmospheric Dispersion using GIS. Proceeding of the 10th International Symposium of Acid Rain and Snow on the Japan Sea Rim, Kanazawa, Japan, September 24-25, 1998
 12. Suharnoto, Y. 1996. Status of Air Pollution in Indonesia and Strategy for Controlling it. Proceeding of Air Pollution Control Technologies, Guiyang, China, November 29, 1996.
 13. Suharnoto, Y., H. Suharsono, R. Boer. 1996. Acid Rain Problems in Indonesia. Proceeding of the 8th International Symposium on Acid Rain and Snow on the Japan Sea Rim, Kanazawa, Japan, September 25-27, 1996.