

[< Back to results](#) | [< Previous](#) 2 of 2[Download](#) [Print](#) [Save to PDF](#) [Add to List](#) [Create bibliography](#)

IOP Conference Series: Earth and Environmental Science • [Open Access](#) • Volume 896, Issue 1 • 12 November 2021 • Article number 012021 • 3rd International Conference on Environment, Sustainability Issues, and Community Development, INCRID 2021 • Semarang, Virtual • 9 September 2021 • Code 174583

Document typeConference Paper • [Bronze Open Access](#)**Source type**

Conference Proceedings

ISSN

17551307

DOI

10.1088/1755-1315/896/1/012021

[View more](#)

Effect of leachate recirculation and bulking agent on leachate quality

Oktiawan W.^a; Priyambada I.B.^a; Purwono P.^b [Save all to author list](#)

^a Department of Environmental Engineering, Faculty of Engineering, Diponegoro University, Jl. Prof. Soedarto, SH, Tembalang, Semarang, 50275, Indonesia

^b Center for Science and Technology, UIN Raden Mas Said Surakarta, Jl. Pandawa, Pucangan, Kartasura, 57168, Indonesia

1 80th percentile
Citation in Scopus1.46
FWCI 5
Views count [View all metrics](#) [Full text options](#) [Export](#) **Abstract**

Sustainable Development Goals 2023

SciVal Topics

Metrics

Abstract

The purpose of leachate processing is to reduce pollutants in leachate without using equipment that requires high investment and complicated maintenance. This research aims to determine the impact of leachate recirculation and bulking agents on leachate quality. Fresh solid waste recirculated using artificial leachate with a continuous flow of 1 L/h. The study is conducting for 14 days on a laboratory scale. On the 14th day, combination recirculation and bulking accelerate the increased pH value.

Leachate recirculation increases the potential for contact between methanogenic bacteria and dissolved organic matter and contributes to buffering pH during the hydrolysis process. R3 produces a higher Electric Conductivity (EC) value than other reactors since the 7th day. This increase is probably due to the addition of dissolved salts from solid waste decomposition. The role of the bulking agent may not be too significant for changes in the EC value. On day 14, TDS at R1 was 11,748 mg/L, R2 was 12.144 mg/L, and R3 was 14.916 mg/L. © Published under licence by IOP Publishing Ltd.

Cited by 1 document

Leachates Recirculation Impact on the Stabilization of the Solid Wastes – A Review

Hussein, O.A. , Ibrahim, J.A.-A. (2023) *Journal of Ecological Engineering*

[View details of this citation](#)

Inform me when this document is cited in Scopus:

[Set citation alert >](#)**Related documents**

Utilization of Solid Waste from Landfill Passive Zone to Treat Leachate Through A Combination of Leachate Recirculation and Bulking Agent | Využití pevného odpadu z pasivní zóny skládky do upraveného výluhu kombinací recirkulace výluhu a objemového činidla

Oktiawan, W. , Priyambada, I.B. , Purwono, P. (2022) *Waste Forum*

How the Perception of Employees Can Help to Address Management and Operation Challenges Towards More Sustainable Sanitary Landfills: A Case Study of Curitiba and Metropolitan Area

Latocheski, E.C. , Lofhagen, J.C.P. (2021) *World Sustainability Series*

Impact of thermal pre-treatment on anaerobic co-digestion of sewage sludge and landfill leachate

Bonu, R. , Anand, N. , Palani, S.G. (2023) *Materials Today: Proceedings*

[View all related documents based on references](#)

Find more related documents in Scopus based on:

[Authors](#)

Table of contents

Volume 896

2021

◀ Previous issue Next issue ▶

The 3rd International Conference on Environment, Sustainability Issues, and Community Development 9 September 2021, Semarang, Indonesia (Virtual)

Accepted papers received: 13 October 2021

Published online: 12 November 2021

Open all abstracts

Preface

OPEN ACCESS 011001

Preface

+ Open abstract  View article  PDF

OPEN ACCESS 011002

Photographs

+ Open abstract  View article  PDF

OPEN ACCESS 011003

Peer Review Declaration

+ Open abstract  View article  PDF

Papers

OPEN ACCESS 012001

Stability performance of demolition waste composite as landfill liner



M A Budihardjo, M Hadiwidodo, I W Wardhana, E G Praptomo, B P Samadikun, A S Puspita and B S Ramadan

+ Open abstract  View article  PDF

OPEN ACCESS 012002

The effect of demolition waste composition on the landfill liner physical characteristic

M A Budihardjo, M Hadiwidodo, I W Wardhana, M R N A Tuasykal, B P Samadikun, I S Arumdani and B S Ramadan

+ Open abstract  View article  PDF

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our Privacy and Cookies policy.



-
- OPEN ACCESS** 012003
MSW handling of top 5 leading waste-producing countries in Southeast Asia
I S Arumdani, A S Puspita and M A Budihardjo
[+](#) Open abstract [View article](#) [PDF](#)
-
- OPEN ACCESS** 012004
Analysis of biodiversity in the Pamotan Mudal spring area, Rembang Regency
S Rachmawati, H H A Matin, S Suhardono, P Setyono, L Kusumaningrum, S Rinawati and D S Wijaya
[+](#) Open abstract [View article](#) [PDF](#)
-
- OPEN ACCESS** 012005
An inventory of the biodiversity of Kare Caves for the development of ecotourism karst district Pamotan Rembang
H H A Matin, S Rachmawati, S Suhardono, M F Wiratmaja, H A Zaky and R Helmi
[+](#) Open abstract [View article](#) [PDF](#)
-
- OPEN ACCESS** 012006
Biodiversity of Rambut Cave Sale Central Java
S Rachmawati, H H A Matin, S Suhardono, P Setyono, L Kusumaningrum, S Rinawati and M Sholiqin
[+](#) Open abstract [View article](#) [PDF](#)
-
- OPEN ACCESS** 012007
Technical and economic feasibility analysis of solar power plant design with off grid system for remote area MSME in Semarang City
J Windarta, S Handoko, T Sukmadi, K N Irfani, S M Masfuha and C H Itsnareno
[+](#) Open abstract [View article](#) [PDF](#)
-
- OPEN ACCESS** 012008
Holistic perspective to knowledge integration for performance of renewable and sustainable energy business
V Yadwad, S R Bharamnaikar and U Bhushi
[+](#) Open abstract [View article](#) [PDF](#)
-
- OPEN ACCESS** 012009
The development of waste to energy in Semarang, Indonesia
S P Hadi, B Prabawani and R S Hamdani
[+](#) Open abstract [View article](#) [PDF](#)
-
- OPEN ACCESS** 012010
Hydraulic analysis of Semarang River in supporting the drainage channel as water
This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our [Privacy and Cookies policy](#)
A Sarminingsih, M Hadiwidodo, A Rezagama, K S Sausan and Nurullah



[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS 012011
Producing biogas from cow manure, chicken manure, and organic waste by batch system
M Taufiq, E Kusdiyantini and J Windarta

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS 012012
Environmental disclosure on agricultural and mining sector
Sukirman, U Yaisah, R Hidayah, D Suryandari and D Patrisia

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS 012013
Fast composting of food waste using thermal composter
B Zaman, N Hardyanti and P Purwono

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS 012014
Temporal variations in the water quality of beton spring, Gunungsewu karst area, Indonesia

A Cahyadi, I A Riyanto, T N Adji, E Haryono, M Widyastuti and A P K Aji

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS 012015
Adequacy measurement of public green open space (GOS) in absorbing carbon dioxide (CO₂) emissions from transportation activities in Tampan district, Pekanbaru

MS A P Permata, I Buchori and R Kurniati

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS 012016
A study of the clean water supply system in Pemalang regency water supply company
I D Komalasari, B P Samadikun and A Sarminingsih

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS 012017
Optimization of organic waste processing using Black Soldier Fly larvae Case study: Diponegoro university

I B Priyambada, S Sumiyati, A S Puspita and R A Wirawan

[+ Open abstract](#) [View article](#) [PDF](#)

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our Privacy and Cookies policy.

012018 

The effect of environmental management disclosure and green innovation on the Indonesian food and beverages industry's sales growth

A K Widiatami, B Solikhah, R Setiyani and A Yanitama

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012019

The use of banana peels as raw materials of bio-alcohol production

I Munfarida, M Munir and A Rezagama

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012020

Effectiveness of combined up-flow roughing filter and up-flow slow sand filter to reduce turbidity in Citarum water as a source of drinking water

G H Cahyana, A R Firdaus and T Mulyani

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012021

Effect of leachate recirculation and bulking agent on leachate quality

W Oktiawan, I B Priyambada and P Purwono

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012022

Distribution and soil carbon stocks of agroforestry vegetation on dry land in Aceh Besar regency

H A Umar, Endiyani, S Agustina, Irhami, C Anwar and E Rosa

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012023

Citric Acid and EDTA as chelating agents in phytoremediation of heavy metal in polluted soil: a review

Y C Shinta, B Zaman and S Sumiyati

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012024

Optimization of recycled polyethylene terephthalate plastic bottle fibers in grasscrete

A Etyangat, P Tiboti, M Kayondo and H Bakamwesiga

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012025

Effect of electrode configuration and voltage variations on electrocoagulation process in phosphate removal of laundry wastewater

B P Samadikun, W Oktiawan, Junaidi, A K Rais, T A Taqiyya, M R Amrullah and C Basyar

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our [Privacy and Cookies policy](#).



[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012026

Application of local microorganisms from tuna fish and shrimp waste as bio activator for household organic waste composting by Takakura method

Y Dewilda, R Aziz and F Rahmayuni

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012027

The effect of time and velocity variation in sequencing batches reactor on TSS and nitrogen removal in tofu waste

S Sudarno, N Hardyanti, B Zaman, A Arihta and R Putri

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012028

The effect of time and velocity variation in sequencing batches reactor on cod and bod, removal efficiency in tofu waste

N Hardyanti, S Sudarno, B Zaman, A Arihta and R Putri

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012029

A review on a machine learning approach of an intelligent irrigation monitoring system with edge computing and the internet of things

L R Loua, M A Budihardjo and S Sudarno

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012030

Potential of local plant *Eleocharis dulcis* for wastewater treatment in constructed wetlands system: review

L F Santosa, Sudarno and B Zaman

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012031

Comparative study between conventional and mechanical technology on fecal sludge treatment plants (FSTP) in Indonesia

A M Stevani and P Soewondo

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012032

Solid waste characterization and reducing potential at Faculty of Engineering, University of Surabaya

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our [Privacy and Cookies policy](#).



[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012033

The effect of land subsidence on the selection of raw water sources in hotel and apartment buildings in Semarang city

B Syahputra, B F T Kiono and Sudarno

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012034

Utilization of yellow velvetleaf and water spinach to reduce copper ion in surface water of the estuary of babon river Semarang

B Syahputra and Nafiah

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012035

Risk analysis-based reliability assessment approach under epistemic uncertainty using a dynamic evidential network

M Bougofa, A Bouafia, A Baziz, S Aberkane, R Kharzi and A Bellaouar

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012036

Renewable energy policy and governance in West Sumatera Province: an overview

H Fajri, A D Akmal, B Saputra, Q P Ilham and N Wahyuni

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012037

Integration of renewable energy policies between central and regional governments

H Fajri, A D Akmal, B Saputra, N Wahyuni, Q P Ilham and K D Maani

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012038

Agree or disagree: local youth's perception of renewable energy development

B Saputra, H Fajri, A D Akmal, N Wahyuni and H S Halawa

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012039


Optimization of water treatment process performance of Duren Seribu Water Treatment Plant in Depok City: water quality and design parameters

R Hanifa, S Adityosulindro and N P S Wahyuningsih

[+ Open abstract](#) [View article](#) [PDF](#)

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our Privacy and Cookies policy.



-
- OPEN ACCESS** 012040
Rainwater harvesting as an alternative of freshwater supply in Balikpapan city – a case study of Institut Teknologi Kalimantan
E T Mamangkey, R B Sukmara and Ariyaningsih
[+ Open abstract](#) [View article](#) [PDF](#)
-
- OPEN ACCESS** 012041
Biosurfactant and chemical surfactant effectiveness test for oil spills treatment in a saline environment
M Leslie, E Kardena and Q Helmy
[+ Open abstract](#) [View article](#) [PDF](#)
-
- OPEN ACCESS** 012042
Application of leachate recirculation on the concentration of landfill gases
I B Priyambada, B Widianarko, S B Sasongko and A S Puspita
[+ Open abstract](#) [View article](#) [PDF](#)
-
- OPEN ACCESS** 012043
COD removal, decolorization, and energy consumption of electrocoagulation as a wastewater treatment process
E Marlina, P Purwanto and S Sudarno
[+ Open abstract](#) [View article](#) [PDF](#)
-
- OPEN ACCESS** 012044
Comparison of wastewater treatment in oil and gas industry using conventional methods (chemical, physical and biological)
M Hamdy, Sudarno and H S Huboyo
[+ Open abstract](#) [View article](#) [PDF](#)
-
- OPEN ACCESS** 012045
The challenges of Malay Kampung infrastructure as an Old Semarang cultural heritage area
M Rahdriawan, H Wahyono, S F Arief, F Amadeo and A Oktavian
[+ Open abstract](#) [View article](#) [PDF](#)
-
- OPEN ACCESS** 012046
Environmental impact evaluation of crumb rubber industry production process by life cycle assessment (LCA) method (case study: PT FRP)
A Yerdianti and R Aziz
[+ Open abstract](#) [View article](#) [PDF](#)
-
- This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our Privacy and Cookies policy. 
- OPEN ACCESS** 012047

Dry filtration technology application with activated carbon media to remove odor ammonia emissions from production process feed mill industry

N Harihastuti, S Djayanti and I R J Sari

[+](#) [Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012048

Total mercury pathways from artisanal and small-scale gold mining in Sukabumi using system dynamics model

A Sunaryani and Y S Ridwan

[+](#) [Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012049

Effect of electrode configuration and voltage variations on electrocoagulation process in surfactant removal from laundry wastewater

W Oktiawan, B P Samadikun, Junaidi, I G N Bramahesa, T A Taqiyya, M R Amrullah and C Basyar

[+](#) [Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012050

Environmental impact of tofu production in West Jakarta using a life cycle assessment approach

I P Sari, W Kuniawan and F L Sia

[+](#) [Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012051

Assessing enablers to a circular economy in Indonesian furniture industry using Fuzzy-DEMATEL

P A Wicaksono, T R Naufal, S Saptadi and A Susanty

[+](#) [Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012052

Nitrate concentration and accumulation on vegetables related to altitude and sunlight intensity

H Agusta, J G Kartika and K R Sari

[+](#) [Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012053

Urban river water quality improvement in Bandung City, Indonesia

Y M Yustiani and T Alfiah

[+](#) [Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012054

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our Privacy and Cookies policy.



Estimation of greenhouse gas emission from household activities during the COVID-19 pandemic in Binjai City, North Sumatera

I Suryati, A Hijriani and I Indrawan

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012055

The potential and prospect of biomass as primary energy in Indonesia

A I D Lantasi, Syafrudin and Budiyono

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012056

The cellulose of *Boehmeria nivea* as natural flocculants: synthesis, modification, and flocculation analysis

D Fauzani, S Notodarmojo, M Handajani, Q Helmy and T Kardiansyah

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012057

Spatial distribution change of groundwater quality in deep aquifer of Semarang alluvial plains area in past five years

Susanto, Syafrudin and T T Putranto

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012058

A selection method of municipal solid waste reduction in East Lombok, West Nusa Tenggara Province

S Septarini, H S Huboyo and Sudarno

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012059

Proposing a new strategy to minimize domestic wastewater under the influence of human factor in Antananarivo, Madagascar

F F F V F Rasolonjatovo, H S Huboyo and Sudarno

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012060

The influence of bootstrapping in testing a model of motivation and visit intention of generation Z to the attractive building architecture destinations

R Purwaningsih, D A Sekarini, A Susanty and S N W Pramono

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012061

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our Privacy and Cookies policy.



Research trend on sustainable architecture: a bibliometric analysis emphasizing on building, material, façade, and thermal keywords

P U Pramesti, M I Hasan and M Ramandhika

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012062

Bioefficacy of microbial antagonists against *Zymoseptoria tritici* on wheat

I Barakat, N Chtaina, M E Guilli and B Ezzahiri

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012063

Analysis of waste composition as a source of refuse-derived fuel in Cilacap

D I Mustia, S Edy and A Nurul

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012064

Technical evaluation of ultrafiltration unit in Siwalanpaji's water treatment plant, PDAM Sidoarjo

F Rachmawati, B D Marsono, A Masduqi and A Purnomo

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012065

Environment carrying capacity of Pandawa Beach ecosystem and how to optimize it to support sustainable development

K Sumantra and I M W Wijaya

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012066

Eco-efficiency analysis of waste cooking oil recycling into liquid dish soap using life cycle assessment

S Hartini, Y Widharto, S R Indarto and G Murdikaningrum

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012067

Reduction of waste generation to extend the lifetime of landfill: review

R A Prasasti, M A Budihardjo and B P Samadikum

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012068

The Sendai Framework for disaster risk reduction: Insight from Covid-19 in Balikpapan City, Indonesia

Ariyandingsih, R B Sukmara and L Pradita

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our [Privacy and Cookies policy](#).



[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012069

Performance evaluation of waste management in MRF-3R (case study Sukoharjo District)

L S Wangi, S Sumiyati and A Sarminingsih

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012070

Effect of seawater intrusion on groundwater in the Demak coastal area Indonesia: a review

A W Pramita, S Syafrudin and D N Sugianto

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012071

Dynamic model of municipal solid waste management from households in Sukuta Nema, The Gambia

B Jassey, B Zaman and Syafrudin

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012072

Evaluation of river water quality by using hierarchical clustering analysis

B Warsito, S Sumiyati, H Yasin and H Faridah

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012073

Brackish water treatment for small community by using membrane technology

V R Auliya, B D Marsono, A Yuniarto and E Nurhayati

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012074

Comparative study on thermal comfort responses and sleep quality between Indonesian and Japanese students during summer in Japan

W Budiawan, K Tsuzuki and H Sakakibara

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012075

Removal of cyanide from alumina smelter wastewater using precipitation and filtration technique

M F Huda and Q Helmy

[+ Open abstract](#) [View article](#) [PDF](#)

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our Privacy and Cookies policy.



OPEN ACCESS

012076

Organic, nitrogen, and phosphorus removal in hospital wastewater treatment using activated sludge and constructed wetlands

V Hanny, A M Rizal and Nasuka

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012077

Process improvement design at PT URW using failure mode and effect analysis

A Bakhtiar, I W Nurwidanto, S Hartini and P A Wicaksono

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012078

Treatment of textile industry wastewater by electrocoagulation technology

A Rezagama, D S Handayani, B A Rahardjo, S Ashifa and M Y Wafa

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012079

Characteristic differences between breeding places with and without *Culex sp.* larvae on lymphatic filariasis patient surroundings in an endemic area

A Siwiendrayanti, S Anggoro and Nurjazuli

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012080

The impacts of economic freedom on the environment: The case of carbon dioxide emissions in seven ASEAN countries

A Setyadharma, S I Nikensari, S Oktavilia and I F S Wahyuningrum

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012081

Public issues in waste affairs in the pandemic era as a challenge for agile bureaucracy

D Indiahono

[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS

012082

Study on waste bank capacity building plan and development strategies in Semarang City

M L A Sinaga, F R Madaningrum, R T Siagian, B P Samadikun and S Sumiyati

[+ Open abstract](#) [View article](#) [PDF](#)

JOURNAL LINKS

[Journal home](#)

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our [Privacy and Cookies policy](#).



Information for organizers

Information for authors

Contact us

Reprint services from Curran Associates

This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our [Privacy and Cookies policy](#).

