

LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
KARYA ILMIAH : PROSIDING

Judul karya ilmiah (paper) : Problems and Challenges in Sustaining Rural Land Resources
 Jumlah Penulis : 3 orang
 Status Pengusul : Tia Dianing Insani, **Iwan Rudiarto**, Holi Bina Wijaya

Identitas prosiding : a. Judul Prosiding : IOP Conference Series: Earth and Environmental Science
 b. ISBN/ISSN : 1755-1315
 c. Tahun Terbit/tempat pelaksanaan : 2019
 d. Penerbit/organiser : IOP Publishing
 e. Alamat repository PT/web : <https://iopscience.iop.org/article/10.1088/1755-1315/328/1/012054>
 f. Terindeks di (jika ada) : SJR 0,175 (2019) dan SNIP 0,514 (2019)

Kategori Publikasi Makalah : ☒ *Prosiding* Forum Ilmiah Internasional
 (beri ✓ pada kategori yang tepat) ☐ *Prosiding* Forum Ilmiah Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal <i>Prosiding</i>		Nilai Akhir Yang Diperoleh
	Internasional	Nasional	
	30	<input type="text"/>	
a. Kelengkapan unsur isi paper (10%)	3		2,5
b. Ruang lingkup dan kedalaman pembahasan (30%)	9		6,0
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	9		7,0
d. Kelengkapan unsur dan kualitas terbitan/prosiding (30%)	9		7,5
Total = (100%)	30		23,0
Nilai = (40% x 23 : 2)			4,6

Catatan Penilaian paper oleh *Reviewer*:

- a. Unsur isi paper cukup dan penulisan sudah mengacu kepada petunjuk penulisan dalam prosiding. Benang merah judul dan IMRaD terletak pada pembahasan permasalahan dan tantangan keberlanjutan sumber daya lahan di pedesaan.
- b. Pembahasan cukup mendalam tentang adanya fenomena perubahan guna lahan di wilayah pedesaan dan tantangan petani dalam tetap menjaga lahan sebagai peruntukan pertanian. Paper sesuai dengan bidang ilmu penulis untuk perencanaan dan pengembangan desa. Pembahasan hasil menggunakan 6 pustaka (43%) dari total 14 pustaka yang digunakan.
- c. Makalah didukung oleh 14 pustaka dimana 6 diantaranya merupakan terbitan 10 tahun terakhir dan hanya 6 yang dari artikel jurnal. Metode cukup dengan menggunakan teknik SWOT untuk merumuskan permasalahan dan tantangan sumber daya lahan pedesaan dalam konteks perkembangan wilayah perkotaan.

- d. Prosiding terindeks Scopus (IOP Series – *earth and environmental science*) dengan SJR 0,175 tersedia *online* dan *open access*. Prosiding dilengkapi dengan ISBN dengan tautan DOI dan terkategori prosiding internasional.

Semarang, 20-07-2020

Reviewer 1,



Prof. Dr.rer.nat. Imam Buchori, ST
NIP. 197011231995121001
Departemen PWK, FT. Undip

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b. Ruang lingkup dan kedalaman pembahasan (30%)	9		7,0
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	9		7,0
d. Kelengkapan unsur dan kualitas terbitan/prosiding (30%)	9		6,5
Total = (100%)	30		23,0
Nilai = (40% x 23 : 2)			4,6

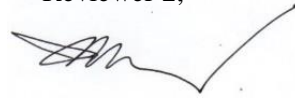
Catatan Penilaian paper oleh *Reviewer*:

- Artikel cukup lengkap dan penulisan substansi sudah merujuk kepada petunjuk penulisan yang disediakan. Pembahasan paper menekankan pada tantangan di wilayah pedesaan terkait dengan tingginya tingkat konversi lahan. Pembahasan dalam IMRaD dan judul yang diangkat sudah sesuai.
- Isi artikel berkaitan dengan *Sustaining Rural Land Resources* dibahas cukup baik namun kurang komprehensif. Paper sesuai dengan bidang ilmu penulis terutama dalam konteks perencanaan dan pengembangan pedesaan yang fokus pada ketersediaan sumber daya lahan. Makalah menggunakan 43% sumber pustaka dari total 14 pustaka yang dipakai.
- Artikel memiliki kebaruan cukup dimana didukung oleh referensi dengan 43% diantaranya merupakan terbitan di bawah 10 tahun terakhir dengan *Turnitin Similarity Index* 7%. Pembahasan tentang permasalahan dan tantangan dirumuskan dari FGD yang dilakukan dari sumber utama dengan menggunakan metode SWOT dan cukup terbaru.

d. Prosiding diterbitkan oleh IOP Publishing dan terindeks scopus dengan SJR 0,17 dan ber-ISBN. Prosiding internasional dan tersedia *online* dengan system *open access* yang dilengkapi dengan tautan DOI.

Semarang, 29-07-2020

Reviewer 2,



Prof. Dr. Ir. Nany Yulastuti, MSP
NIP. 195407171982032001
Departemen PWK, FT. Undip

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HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
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Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Reviewer		Nilai Rata-rata
	Reviewer I	Reviewer II	
a. Kelengkapan unsur isi paper (10%)	2,5	2,5	2,5
b. Ruang lingkup dan kedalaman pembahasan (30%)	6,0	7,0	6,5
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	7,0	7,0	7,0
d. Kelengkapan unsur dan kualitas terbitan/prosiding (30%)	7,5	6,5	7,0
Total = (100%)	23,0	23,0	23,0
Nilai = (40% x 23 : 2)			4,6

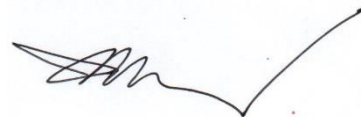
Semarang, 30-07-2020

Reviewer 1,



Prof. Dr. rer. nat. Imam Buchori, ST
 NIP. 197011231995121001
 Departemen PWK FT. Undip

Reviewer 2,



Prof. Dr. Ir. Nany Yuliastuti, MSP
 NIP. 195407171982032001
 Departemen PWK FT. Undip



Certificate of Participation

This is to certify that

IWAN RUDIARTO

Has successfully participated at The 4th International Conference of Planning in The Era of Uncertainty (ICPEU)
Bridging The Rural-Urban Development: Strengthening Sustainability Goals
as **PRESENTER**

Malang, 12 - 13th March 2019

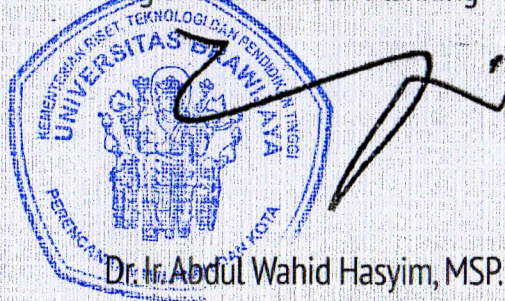
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Volume 328, Issue 1, 24 October 2019, Article number 012054
4th International Conference in Planning in the 2019 Era of Uncertainty, ICPEU 2019; Universitas BrawijayaMalang City; Indonesia; 12 March 2019 through 13 March 2019; Code 153114

Problems and Challenges in Sustaining Rural Land Resources (Conference Paper) [\(Open Access\)](#)

Insani, T.D. , [Rudiarto, I.](#), Wijaya, H.B. 

Department of Urban and Regional Planning, Diponegoro University, Semarang, Indonesia


Abstract [View references \(14\)](#)



The discussion in this paper brings up issues on how the land resources utilization is done mainly as a respond to socioeconomic development instead of achieving sustainability. Delanggu sub-district of Klaten Regency and Kledung sub-district of Temanggung Regency were chosen as the study areas. We collected data and information by conducting Focus Group Discussion in each study area with relevant stakeholders and analysed the issues further using SWOT and problem analysis approach. The result showed that even though land use change is a common issue shared by both study areas, the drivers as well as the approaches taken by the community and stakeholders from each sub-district are different. Kledung sub-district as a rural mountain area appears more sustainable in term of land resource utilization than urbanized Delanggu sub-district which is a plain area. The findings call more challenges for future adaptive approaches to answer the notion of sustainable agriculture in rural area. © 2019 IOP Publishing Ltd. All rights reserved.

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PREFACE: The 4th International Conference in The Era of Uncertainty (ICPEU)

To cite this article: 2019 *IOP Conf. Ser.: Earth Environ. Sci.* **328** 011001

View the [article online](#) for updates and enhancements.

PREFACE: The 4th International Conference in The Era of Uncertainty (ICPEU)

The honourable Vice Dean of General Affairs at Faculty of Engineering: Dr. Muhammad Ruslin Anwar, Department Head of Regional and Urban Planning, Dr. Abdul Wahid Hasyim, the honourable keynote speakers – Dr. Kakuya Matsushima from Kyoto University – Japan, Dr. ONG Ghim Ping Raymond from the National University of Singapore – Singapore, Dr. Hadid Subki from the International Atomic Energy Agency (IAEA). Vienna – Austria, Dr. Surjono from Universitas Brawijaya – Indonesia and Dr. Emil Elestianto Dardak, M. Sc. – Vice Governor of East Java Province – Indonesia, and ladies and gentlemen.

Assalamualaikum Wr Wb,

I would like to thank everyone in this room today for your enthusiasm and participation in the 4th International Conference on Planning in the Era of Uncertainty at Universitas Brawijaya

ICPEU is a biennial event that we have organized since 2013. We have focused on the discussion of sustainable development since the very beginning, as we truly believe that this topic is very relevant to what we, in the field of planning, face at the moment and in the future.

In 2013 we started off the discussion with the big question, does planning theory can be applied thoroughly in practice? It was a very memorable discussion as we explored many interdisciplinary problems and solutions in planning. We then developed our topic to sustainable development in 2015 as we considered this as an underlying topic for all relevant problems and solutions. Again, the discussion was remarkable. Papers from different countries participated at the event. In 2017, we started publishing our papers on IOP Proceedings, which is a Scopus-indexed form of publication. We published 67 papers from different universities in different countries. And we believe that this event at this moment, will be more successful than our predecessors. The topic Strengthening Rural Urban Sustainability Goals is yet another situation that we all can relate to. A problem that requires collective attention to achieve equality and sustainability in the future development.

Looking back at the events that we have organized so far, we learned that the pursuit of achieving sustainability has attracted ever-growing global interest. We have received papers from Australia, Thailand, Malaysia, Singapore, Japan, Sweden, France, and also Indonesia, discussing and showcasing multi-level efforts in achieving sustainable development from different perspectives. In short, the response that we received has been overwhelmingly positive.

I would like to thank our dearly sponsors, Universitas Brawijaya, the Faculty of Engineering, ESRI, Institut Atsiri, Persada Printing, UB Press, RRI, UB TV for their support that have allowed us to organize this event. We received a number of 163 extended abstracts for this event, and unfortunately, we could only accept a number of 76 selected ones to be published on our upcoming IOP Proceeding and Jurnal Tata Loka. Therefore, I would like to congratulate all authors that have made it this far.

To close this speech, I would like to once again welcome you to Malang, I wish you a wonderful two-day seminar, and I look forward to learning new insights. Thank you very much.

Wassalamualaikum Wr Wb.



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Table of contents

Volume 328

2019

[◀ Previous issue](#) [Next issue ▶](#)

The 4th International Conference in Planning in the 2019 Era of Uncertainty 12–13 March 2019, Malang City, Indonesia

Accepted papers received: 09 August 2019

Published online: 24 October 2019

Preface

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[Photographs](#)

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A E Sebastian

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A Husin

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

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[The Performance of BRT Trans Semarang Services to Achieve Sustainable Transportation](#)

A N Adibah

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

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012006

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A Rosalin, B Kombaitan, D Zulkaidi, P Dirgahayani and I Syabri

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012007

Performance Evaluation and Crack Repair in Building Infrastructure

A S Dermawan, S M Dewi, Wisnumurti and A Wibowo

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012008

Toward Inclusive Development Through Smart Economy in Malang Regency

A Yudono, Dias Satria and Angga Erlando

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012009

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Adistirani, B Riyanto and B H Setiadji

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012010

The Influence of The Distribution of Public Green Space on The Health of The Residential Environment in Balikpapan City

Ariyaningsih, A N Dewanty and M Ulimaz

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012011

Study of Intermittent-Irrigation Technique to Cropping Patterns and Water Availability at Pemali Kanan Irrigation Area in Brebes Regency

B B Kusumo, S A Pranoto and I Sriyana

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012012

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B S Waloejo, I W Agustin and W Ramadhan

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012014

Effectiveness and Efficiency as a Tool of Measurement of Waste Bank's Performance

C Meidiana, Y A Pamungkas and K E Sari

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OPEN ACCESS 012015

Land Development Recommendation of Bunguran Island as One of the National Border Areas Based on Level of Land Suitability and Land Capability

D I Shofarini, R K Arruzzi and B E N Firdauz

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E Yuniastuti and H S Hasibuan

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Child Pedestrian Friendly Design Principle for the Settlement and Housing area

F P Makalew

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Development of Road Network Traffic Model in Bandung City

H M Pakpahan and I Adriant

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

OPEN ACCESS 012020

The Flexibility of Parking Space of Traditional Market in the City Center (Case Study: Pasar Gede Of Surakarta, Indonesia)

I Aliyah and S A S Aulia

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

OPEN ACCESS 012021

Effect of Land Use Change to the Increasing Land-Based Emission and Urban Heat Island Phenomenon in Bandung City

I B Puspita and F A Saputra

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

OPEN ACCESS 012022

Expansive Clay Soil Stabilization Using White Soil Material and Sulfuric Acid Solution (H₂SO₄) For Subgrade in Godong Area - Grobogan District

I K Suwantara, S P R Wardani and Y A Priastiwi

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

OPEN ACCESS 012023

Analysis of Car Accident at the Location of Black-Spot and Rating for Accident-Prone Roads in Surabaya

I W Agustin

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

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012024

Exploring the Role of Transportation Demand Omotenashi (TDO) in the City Center Plaza of Batu

I W Agustin, R A C Adhianti, Fikriyah, N F Shakia and I A Maulidiah

[+ Open abstract](#) [View article](#) [PDF](#)**OPEN ACCESS**

012025

Fairness Of Intensity of Energy Consumption for Cooling Targets

P Satwiko, V S C Widarji, A D Istiadji and N Sekarlangit

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012026

ICT-Based Innovation in the Smart City Masterplan and Its Relation to Regional Planning

R Rachmawati

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012027

Planning for Urban Green Area and Its Importance for Sustainability: The Case of Jakarta

R Setiowati, H S Hasibuan, R H Koestoer and R Harmain

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012028

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R Y Sandi and M Ismail

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012030

Natural Lighting System to Provide Visual Comfort in Library Reading Room at Universitas Budi Luhur, Jakarta

S Kurniasih and O Saputra

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012031

Sustainable Coastal Protection in Pasuruan City : Jetty Structure in Rejoso Estuary

A L Rakhmawati

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012032

Community service facilities and infrastructure improvement in remote areas of East Kalimantan (Case study : Conflict in Batoq Kelo Village, Mahakam Ulu Regency)

A R T Hidayat and R A Vidiанти

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

-
- OPEN ACCESS** 012033
Transborder Movements of Borderland People in Indonesia – Papua New Guinea (Case Study: Iwur District, Pegunungan Bintang Regency)
A Subagiyo, U S Adam and A D Wicaksono
[+ Open abstract](#) [View article](#) [PDF](#)
-
- OPEN ACCESS** 012034
Sustaining Innovation on Public Health Service by Building Creative Culture in Rural Areas: Case on Program of *Pemburu-Bumil-Resti* at Banyuwangi Regency - Indonesia
A Y Asmara and A Y S Rahayu
[+ Open abstract](#) [View article](#) [PDF](#)
-
- OPEN ACCESS** 012035
The Analysis of Landslide Vulnerability in Settlement of Citizenship Association VI, Sukorejo Village, Semarang
B Rahman, R Fimanasari and U C Sari
[+ Open abstract](#) [View article](#) [PDF](#)
-
- OPEN ACCESS** 012036
Urbanization Phenomena of Small Inland City: Case of Parakan, Central Java
B Septiarani, W Handayani and S Ma'rif
[+ Open abstract](#) [View article](#) [PDF](#)
-
- OPEN ACCESS** 012037
Effects of Coal Freight Road Policy Reforms on Transportation and Environmental Economics
D Yuniar, A Wicaksono, L Djakfar and A Efendi
[+ Open abstract](#) [View article](#) [PDF](#)
-
- OPEN ACCESS** 012038
Geographical Pattern of Economic Activities: an Evidence from Large and Medium Manufacturing Industries in Indonesia
E Santoso, M Ismail, I Noor and M Ekawaty
[+ Open abstract](#) [View article](#) [PDF](#)
-
- OPEN ACCESS** 012039
Determining the Location of Shelters for Tsunami Evacuation Based on Service Area Analysis in Paseban Village, Kencong Sub-District, Jember District
F Usman and I C Sari
[+ Open abstract](#) [View article](#) [PDF](#)
-
- OPEN ACCESS** 012040
Outer Island Development in Crossborder Cooperation Framework: Cooperation or Exploitation? (Study Case: Natuna Island in Singapore – Johor-Riau Cooperation)
H M Putri and W Salim
[+ Open abstract](#) [View article](#) [PDF](#)

OPEN ACCESS	012041
Analysis of Flood Vulnerability Using GIS Method (Case Study : Beringin Watershed, West Semarang)	
H Nugroho, Suharyanto, T Ariyanto and R Arnadi	
+ Open abstract View article PDF	
OPEN ACCESS	012042
Architectural Concept for Homestay in Rural Area-A Case Study of Homestay Design in Summersari Village - Malang	
H Sufianto, M Baskara, B Sugiarto, A Citraningrum and M S Adhitama	
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3rd World Development Model in Indonesia: How to deal with the issues of decreasing public finance and overcoming the demands for public participation in Industrial Revolution 4.0 era?
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Bauhäusle as a Cohousing Project
M Nasution and B K Napitupulu
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- OPEN ACCESS** 012071
Impacts of Urban Consolidation Centres for Sustainable City Logistics Using Adaptive Dynamic Programming Based Multi-Agent Simulation
N Firdausiyah, E Taniguchi and A G Qureshi
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-
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Problems and Challenges in Sustaining Rural Land Resources

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Abstract. The discussion in this paper brings up issues on how the land resources utilization is done mainly as a respond to socioeconomic development instead of achieving sustainability. Delanggu sub-district of Klaten Regency and Kledung sub-district of Temanggung Regency were chosen as the study areas. We collected data and information by conducting Focus Group Discussion in each study area with relevant stakeholders and analysed the issues further using SWOT and problem analysis approach. The result showed that even though land use change is a common issue shared by both study areas, the drivers as well as the approaches taken by the community and stakeholders from each sub-district are different. Kledung sub-district as a rural mountain area appears more sustainable in term of land resource utilization than urbanized Delanggu sub-district which is a plain area. The findings call more challenges for future adaptive approaches to answer the notion of sustainable agriculture in rural area.

Keywords: *rural resources, land use, land resource utilization*

1. Introduction

Rural areas have a great diversification in terms of physical environment, ecology, and pattern of land use as well as their socioeconomic characteristics [1],[1], although it is common to find that agricultural activities are where the big part of its community's income share is generated from. However, the increasing agricultural activities in rural areas has caused direct and indirect impacts on the decreasing rural resources. Several key issues at regional level that threaten the existence of natural resources include land degradation, water availability, and loss of biodiversity [3]. At the local level, the problems that arise around rural area's agricultural activities are shown through the socioeconomic impacts on its community. From time to time farmers' families are constantly adapting to the stresses on environment and socioeconomic conditions that influence the existence and availability of natural resources and biodiversity [4].

Many rural areas in Indonesia, especially on Java, have experienced a transition process in a long period of time that was determined and influenced by the activities of their rural communities [5]. This long transition process has helped shape the pattern of rural resource utilization. Resources in rural contexts are mostly used as inputs for agricultural production and closely related to environmental conditions. With such context, agricultural activity is considered an effort in managing interactions between resources and environment for output optimization [6]. Resource utilization in the rural area indicates the relationship between economic and environmental aspect. Income gain by the farming family represents the economic aspect while land resource utilization represents the environmental aspect. Farming families are the main player between those two aspects where the decision on how to



Bauhäusle as a Cohousing Project

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Abstract. In recent years, housing prices in many countries constantly increased followed by limited availability of land. How to meet the demand for development with increasing number of population and city growth, particularly rapid development in cities, become one of main issues of housing supply. The effects lead to several problems, one of which is adequate housing with a strong social interaction. To fulfil the demand and improve social well-being in the neighbourhood can be achieved by applying cohousing concept in the neighbourhood. This study aims to analyse whether cohousing can be such a coherent solution in tackling issue of housing problems, furthermore, it is also a way to promote social inclusion. Bauhäusle is located on campus in Vaihingen, Stuttgart. It is designed with ecological construction concept which uses readily available raw materials generally donated by DIY firms, companies and also discarded materials. In disguise, the concept of Bauhäusle also initiated other similar projects for example: Construction of the student dormitory ESA in Kaiserslautern or the mound houses in Stuttgart-Hohenheim. This concept applied according to social relationship which can fulfil the aims of sustainability through an inclusive community. Method used in this research are literature reviews, on-site visitation, interview, and descriptive analysis. The results of this research is to give advantageous and disadvantageous Bauhäusle cohousing by providing stakeholder analysis, action plan, SWOT analysis, and potential period of implementation to upscale the project.

1. Introduction

Sustainability development agenda is now commonly evolved in urban development. This concept concerns to improve inclusiveness, sustainable and resilient future for development. Sustainability elements should be promoted for reducing inequalities, increasing standards of living, maintaining social development and inclusion [8]. However, how to meet the demand for development with increasing number of population and city growth, especially the rapid development in cities, become one of the main issues to implement sustainability. The effects lead to several problems such as adequate housing, basic infrastructures, transportation, and also affect to social relation. To fulfil the demand and improve social well-being in the neighbourhood can be achieved by applying cohousing concept in the neighbourhood. Cohousing is one of the solutions which offer people not only to have an access and share the ownership, but also create a strong bond and build great responsibility within a community [9]. Cohousing was established in the middle 1960s by a Denmark architect and it started to spread to other countries. This concept applied according to social relationship which can fulfil the aims of sustainability through an inclusive community.

Inclusiveness is a way to enhance participation within development processes and goals [5]. These are elements which are taken into account for enhancing inclusion.



Impacts of Urban Consolidation Centres for Sustainable City Logistics Using Adaptive Dynamic Programming Based Multi-Agent Simulation

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Abstract. This paper aims at evaluating the impacts of Urban Consolidation Centers (UCC) for sustainable city logistics using Adaptive Dynamic Programming (ADP) based multi-agent simulation (MAS-ADP). Economic efficiency and environment friendliness criteria were used to evaluate the sustainability of UCC. The results proved that the implementation of UCC as a sustainable city logistics scheme is efficient in reducing 8% of the total delivery cost for freight carrier and reducing 36% of the total emissions released to the environment. It is also showed that the use of learning agents is essential to demonstrate the successful implementation of the UCC, as it is only in the learning-based simulation, UCC operator could get a profit. Our simulation analysis also confirmed that compared to widely used reinforced learning algorithms (Q-learning), MAS-ADP brought increased accuracy to the evaluations' outcomes of UCC.

Keywords: sustainability, city logistics, urban consolidation centre, adaptive dynamic programming, multi-agent system

1. Introduction

Sustainable city logistics has become an important issue in urban and transportation planning due to high population density in urban areas as well as due to the social, economic, and environmental problems associated with it. City logistics is defined as the process of fully optimizing the logistics and transport activities with the support of advanced information systems in urban areas considering the traffic environment, the traffic congestion, the traffic safety, and the energy savings within the framework of a market economy [1]. The harmonization of economic efficiency and environmental friendliness in city logistics is essential for ensuring sustainable development in urban areas [2], which faces two difficult problems. First is the efficiency of goods delivery within the uncertain environment (due to the parking issues, traffic congestion, and other restrictions in the urban area) that directly effects the operational cost as well as the action selection in presence of optional solutions or policies. The second issue is the involvement of multiple agents in city logistics system, such as freight carriers, shippers, customers, and administrator. All these key stakeholders in urban freight transport have their own specific objectives and tend to behave in a different manner to any urban freight policy [3]. These stakeholders also interact and influence each other in the city logistics environment, which makes the

