



THE GOVERNMENT OF CENTRAL JAVA PROVINCE
REGIONAL PLANNING, RESEARCH, AND
DEVELOPMENT BOARD

DIPONEGORO UNIVERSITY
FACULTY OF ENGINEERING



CERTIFICATE

This certificate is awarded in appreciation to:

Dr. Wiludjeng Roessali

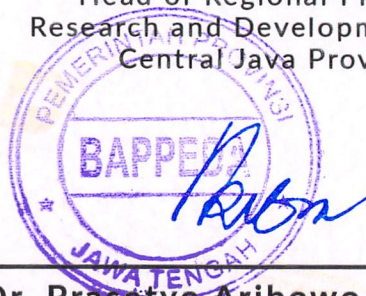
as
PRESENTER

**The 4th International Conference on
Regional Development 2019**

**Rural Development in Urban Age: Do Rural-Urban Linkages Matter?
in Semarang, Indonesia 6-7 August 2019**

Certificate ID : 073.2/20851
Certificate Date : 6 August 2019

Head of Regional Planning,
Research and Development Board
Central Java Province



Dr. Prasetyo Aribowo, SH, M.Soc.Sc

Dean of Engineering Faculty
Diponegoro University



Ir. M. Agung Wibowo, MM, M.Sc., Ph.D.

Consumers' Intention to Purchase Organic Vegetable Product in Semarang City Central Java

W Roessali, ED Purbajanti... - International ..., 2020 - proceedings.undip.ac.id

The purpose of this study was to determine the consumers' intention to purchase organic vegetable products in Semarang City, Central Java Province. Primary data were collected ...

☆ Save  Cite Related articles 

the 4th
international conference
on regional development
2019



Rural Development in Urban Age: Do Rural-Urban Linkages Matter?

PROCEEDING

Semarang, 6-7 August 2019

Department of Urban and Regional Planning
Faculty of Engineering
Diponegoro University



Supported by:



BAPPEDA
PROVINSI JAWA TENGAH



Inter-University Research Institute Corporation National Institutes for the Humanities
Research Institute for Humanity and Nature



Biro Penerbit Media Plano

PROCEEDING

The 4th International Conference on Regional Development

Rural Development in Urban Age: Do Rural-Urban Linkages Matter?

Editors:

**Artiningsih
Rukuh Setiadi
Mada Sophianingrum
Zahra Nur Hasanah**

**Biro Penerbit Planologi UNDIP
Fakultas Teknik, Universitas Diponegoro
Semarang**

**Proceeding of The 4th International Conference on Regional Development
Rural Development in Urban Age: Do Rural-Urban Linkages Matter?**

Editors:

**Artiningsih
Rukuh Setiadi
Mada Sophianingrum
Zahra Nur Hasanah**

Layout : Zahra Nur Hasanah
Cover Design : Nediana Sarasanti

©2020, Biro Penerbit Planologi UNDIP Hak cipta dilindungi
undang-undang Diterbitkan pertama kali oleh
Biro Penerbit Planologi UNDIP
ISBN: 978-623-92841-2-1

INVITED SPEAKERS

1. Prof. Lee Young Sung
Graduate School of Environmental Studies, Seoul National University, **South Korea**
2. Maximilian Spiegelberg, Ph.D
Research Institute for Humanity and Nature, **Japan**
3. Dr.sc.agr. Iwan Rudiarto
Department of Urban and Regional Planning, Diponegoro University, **Indonesia**
4. Dr. Christine Cabasset
Research Institute on Contemporary Southeast Asia - IRASEC, **Thailand**

STEERING COMMITTEE

Prof. Agung Wibowo
Dean of Faculty of Engineering, Diponegoro University

Dr. Prasetyo Aribowo
Head of Bappeda Central Java Province, Indonesia

REVIEWERS

Tri Yuni Atmojo
Eny Hari Widowati
Mursid Zuhri
Alfina Handayani
Wiwin Widiastuti
Rachman Djamil
Arif Sofianto
Tri Risandewi

Agung Sugiri
Jawoto Sih Setyono
Prihadi Nugroho
Wiwandari Handayani
Fadjar Hari Mardiansjah
Joesron Alie Syahbana
Artiningsih
Maya Damayanti
Rukuh Setiadi
Mada Sophianingrum
Mohammad Muktiali
Samsul Ma'rif

ORGANIZING COMMITTEE

Tri Yuni Atmojo
Sri Hestningsih
Eko Nugroho
M. Sakdi
Mursid Zuhri
Rachman Djamal
Senen Budi P
Arif Sofianto
Wiwin Widiastuti
Alfina Handayani
Tri Risandewi
S. Lis Handani
Erika Sulistiyawati
A. Dono Wijanarko
Bayu Agus Widagdo
Erna Muji Setiyoningsih
Ratnaning Ayu P
Retno Widayati

Artiningsih
Rukuh Setiadi
Mada Sophianingrum
Reny Yesiana
Bintang Septiarani
M. Indra Hadi
Dwi Lestari
Tia Dianing Lestari
Minawati Widiastuti
Zahra Nur Hasanah
Nediana Sarasanti
Mega Febrina Kusumo Astuti
Santi Mardotillah
Intan Hapsari
Mega Anggraeni
Leoni Dwi Agitha
Fakhryza Nabila Hamida

CONTENTS

FOREWORD.....	vi
CONTENTS.....	viii
Agricultural Development	
Incorporating Biotechnology for Sustainable Farming: Case Study on Developing and Developed Country (Indonesia-Australia).....	1-6
<i>Anggri Hervani</i>	
Greenhouse Gas Emissions in Long-Term Fertilization and Rice Varieties in Irrigated Rice Field	7-14
<i>Eni Yulianingsih, Ali Pramono, Rina Kartikawati</i>	
Consumers' Intention to Purchase Organic Vegetable Product in Semarang City Central Java.....	15-20
<i>Wiludjeng Roessali, Endang Dwi Purbajanti, Tutik Dalmyatun, Kadhung Prayoga</i>	
The Strategy of Farmer Cooperatives in Marketing and Maintaining the Stability of Prices of Agricultural Products (Lesson Learned from Japan)	21-25
<i>Alfina Handayani</i>	
A Study on the Utilization of Local Purple Sweet Potato (<i>Ipomea Batatas</i> L.) in Making Ice Cream which Potentialize as an Antioxidant.....	26-33
<i>Sudjatinah Sudjatinah, Hari C. Wibowo, S Aldila, P.R Irawan</i>	
Analysis of Development Factors Of Jasmine Flower (<i>Jasminum sambac</i> L.) Commodity in Batang Regency, Central Java	34-40
<i>Mukson Mukson, T. Ekowati, E. Prasetyo, S. Gayatri</i>	
Utilization of Agricultural Machinery to Support Rice Farming in Grobogan District	41-47
<i>Eny Hari Widowati</i>	
Food Security	
The Economic Factors Affecting Food Security in Central Java.....	48-56
<i>Dwi Sulihati Sri Sugiharti</i>	
Developing of Catfish Cultivation at Lereng Merbabu (Cepogo) using an Independent Feed Aid Method the Central for Brackish Water Aquaculture, Jepara	57-60
<i>Damang Suryanto, Iwan Sumantri, Sugeng Raharjo</i>	
Analysis of Rural and Urban Household Food Security in Kendal District.....	61-66
<i>Riyan Zulmaniar Vinahari</i>	
Land Management	
Soundscape and Smellscape Analysis in Desa Wisata Penteng Sari	67-76
<i>Amandus Jong Tallo, Nami Fitriicia Pasaribu, Asep Syaiful Bahri, Choirul Mubarak</i>	
Diversity of Geological and Non-Geological Sites in Spatial Planning of the North Geopark Karangsambung-Karangbolong Area	77-87
<i>Chusni Ansori, Puguh Dwi Raharjo, Indraya Kusyumiadi</i>	
Study of Planning and Management of Good Transport in Rural Areas.....	88-91
<i>Fedrickson Haradongan, Widyoko Darmadji, A Arbie</i>	

Study of the Wadas Malang Hot Spring as Non-Volcanic Geothermal Potential, Kebumen Central Java.....	92-96
<i>Eko Puswanto, Puguh Dwi Raharjo, Fitriany Amalia Wardhani, and Mohammad Al Afif</i>	
Spatial Analisis Using Multitemporal Remote Sensing to LULC Identify, Case Study in Semarang City 1992 - 2019	97-103
<i>Puguh Dwi Raharjo, Chusni Ansori, Eko Puswanto, Edi Hidayat</i>	
The Potency of Jatibungkus Geosite as One of Geotourism Destination of Karangsambung – Karangbolong National Geopark.....	104-110
<i>Fitriany Amalia Wardhani, Eko Puswanto, Muhammad Al Afif</i>	
Geosite and Geomorphosite Assesment of Parang Hill for Geotourism Development and Spatial Planning in Karangsambung-Karangbolong National Geopark	111-121
<i>Nandian Mareta, Chusni Anshori, Edi Hidayat</i>	
Livelihood	
Study of Changes in the Community Quality of Life after the Slum Upgrading: A Case Study in Tirto Urban Village, Pekalongan City.....	122-129
<i>Maya Chairida Chairul, S. Sunarti</i>	
Peri-Urban Development	
The Estimation of Waste Generation in Palangka Raya City, Central Kalimantan	130-134
<i>H Herianto, M Maryono, Mochamad Arief Budihardjo</i>	
Comparative Study of the Regional Competitiveness of Semarang City and Surakarta City in Central Java Province	135-141
<i>Wiwin Widiastuti</i>	
Rural and Regional Governance	
Strategy of Institutional Reinforecement to Overcome Regional Disparities in Siak Regency	142-154
<i>Ade Wahyudi</i>	
Economic Growth: Analysis of Health, Education and Standard of Living in East Java 2012-2016	155-158
<i>Afaqa Hudaya, F Firmansyah</i>	
Optimization of Marine and Fisheries Resources in Central Java: A Challenge to Contribute in Realizing Indonesia as a Maritime Axis.....	159-162
<i>K Kundori, R.A. Y Hadi Susilo Wibowo, Fitri Kensiwi, Dimas Pratama, D Daryanto, M Mustholiq, R Riyanto</i>	
Analysis Program and Institutions Inter-Regional and Health Cooperation Based on Social Capital in Isolated Village of Sungai Benuh, Tanjung Jabung Timur Regency	163-168
<i>Novia Susianti, Ali Fahrudin, Ahmad Subhan</i>	
Impact of Policy and Economy on Market Aspects in Regional Competitiveness in Central Java	169-177
<i>Andjar Prasetyo, A Asrori, Hotnir Sipahutar</i>	
Small-Medium Industries, which should be Labeled First-Rate?	178-183
<i>Kemala Febrihadini</i>	
The Analysis of Labor and Economy in Central Java in 2010-2018 Priorities in Central Java	184-189

Lilis Anisah, Esza Qoirul Nazula

Effect of Productive Business Loans on Increasing Small Business Income 190-193
Adi Rahman, K Kuswanto

Planning of Rikrok Education Tourism Around Borobudur Area in Strengthening Rural
Economic Competitiveness of Magelang Regency, Central Java 194-199
Nina Mistriani, Dyan Triana Putra

Rural Infrastructure

Strong Coastal Village Development Program: An Evidence of Contribution in
Development of Coastal Areas Perspective of Coastal Area in Central Java..... 200-203
Ali Imran Ritonga, S Suwiyadi, Agus Hendro, S Sumardi, Eko Murdiyanto, S Sukrisno

Creation of a New Electronic Reporting Management System “SIMPLE” and Its Effect
on the Quality of Financial Report and User Satisfaction within the Office of Regional
Secretary, Sumbawa 204-210
Hayatun Nufus, Farit M. Afendi, M. Budi Setiawan, Dedy Heriwibowo, Arief Budi Witarto

Rural Resilience

The Condition of Poverty in Central Java, Indonesia (Case Study in Kabupaten
Grobogan and Wonosobo) 211-214
Alfina Handayani, S. Budi Prasetyo

The Role of the Regional Government of Yogyakarta City in Building the Capacity of
Adaptation of Communities 215-220
Teti Deliany Putri, S Sunarsih, Fuad Muhammad

Strong Coastal Village Development Program: An Evidence of Contribution in Development of Coastal Areas Perspective of Coastal Area in Central Java

Ali Imran Ritonga¹, Suwiyadi¹, Agus Hendro¹, Sumardi¹, Eko Murdiyanto¹, Sukrisno^{1*}

¹Politeknik Ilmu Pelayaran (PIP) Semarang

Abstract: Indonesia is a country that has an area of ocean 70% greater than the land area. Indonesia's huge potential is inversely proportional to the condition of the people living in it. Coastal communities live below the line of poverty and vulnerability to disasters. The government in this case provides a program to develop coastal strong villages to coastal areas in several regencies / cities to overcome these problems. The development of coastal area empowerment programs often experiences obstacles in terms of program mismatches with the characteristics and needs of program beneficiaries, so that the allocation of programs is not on target. In this case, strengthening the participation of coastal communities is very important so that empowerment programs are in line with the needs of the community. This study seeks to examine the role of the strong Coastal Village Development program in increasing the development of coastal areas in Central Java. This study uses a qualitative approach with a descriptive method of sample taken by taking samples on coastal areas in Central Java, among others in the districts (Pati, Rembang, Demak, Pekalongan, Tegal) Based on the results of data analysis conducted by researchers, the findings that the Program implementation. The development of the strong Coastal Village in the coastal area of Central Java shows that the three focuses of the development activities have been well implemented. The development activities are building resources, building environment / infrastructure, and building disaster preparedness. Whereas activities that are not implemented are human development and business development. The recommendation given in this study is that the implementation of the program must be supported by sufficient funds, need coordination and cooperation with other relevant stakeholders, and the need for effective supervision and evaluation.

Keywords: Central Java; coastal region development; coastal village; program implementation

1 Introduction

Indonesia is a country that has an area of the sea 70% greater than the land area. Indonesia's huge potential is inversely proportional to the condition of the people living in it. Coastal communities live below the poverty line and vulnerability to disasters. The government in this case provides a Tangguh Coastal Village Development program to coastal areas in several Regencies / Cities to overcome these problems. The development of coastal area empowerment programs often experiences problems in terms of program mismatches with the characteristics and needs of program beneficiaries, so that the allocation of programs is not on target. In this case, strengthening the participation of coastal communities is very important so that empowerment programs are in line with the needs of the community. This study seeks to examine the role of the Tangguh Coastal Village Development program in increasing the development of coastal areas in Central Java. This study uses a qualitative approach with a descriptive method of sampling taken by taking samples in coastal areas in Central Java, among others in the districts (Pati, Rembang, Demak, Pekalongan, Tegal, Cilacap) Based on the results of data analysis conducted by researchers, the findings obtained that the implementation of the Tangguh Coastal Village Development Program in the coastal area of Central Java shows that the three focuses of the development activities have been well implemented. The development activities are building resources, building environment / infrastructure, and building disaster preparedness. While activities that are not implemented are human development and business development. The recommendation given in this study is that the implementation of the program must be supported with sufficient funds, need coordination and cooperation with other relevant stakeholders, and need effective monitoring and evaluation.

* Corresponding Author: harlinokris@gmail.com

The Condition of Poverty in Central Java, Indonesia (Case Study in Kabupaten Grobogan and Wonosobo)

Alfina Handayani^{1*}, S. Budi Prasetyo¹

Regional Planning Research and Development Agency of Central Java, Semarang, Indonesia

Abstract: This paper intends to study the condition of poverty in Central Java, particularly in Kabupaten Grobogan and Wonosobo). The data was collected by focus group discussion (FGD) and indepth interview. The results show that Kab. Grobogan is more faced with infrastructure problems that affect access to basic facilities. The low level of education and sanitation of the people in Kab Wonosobo is influenced by cultural-influenced community behaviour. A lot of programs are not on target, it needs the strong commitment of the Government to update the poverty data. Empowerment-based poverty reduction is constrained by incompatibility with the potential of the local community and environment, product marketing, capital and infrastructure.

Keywords: capital; infrastructure; poverty

1 Introduction

Poverty has been important problem in Indonesia especially in Central Java. Poverty in Central Java is likely to decline consistently between 14, 44 % in September, 2013 and 12, 23 % in September 2017 by average at 0, 55 % each year (Bappeda JawaTengah, 2018). In 2017, the proportion of poor families in Central Java reached 12, 23%, that is 4, 19 million out of the total population of 34 million people (BPS, 2017). Therefore, in accordance with the direction of national and regional development policies as stated in both the national mid-term development plan (RPJMN) and RPJMD, poverty is still the main priority to be resolved. Poverty is also the UN's first Sustainable Development Goals (SDG1) to end poverty in all its forms everywhere in 2030 (UNDP, 2015).

To improve coordination of poverty reduction, the government issued Presidential Regulation No 15 of 2010 on the Acceleration of Eradication of Poverty. The Regulation mandated the formation of the National Team to Accelerate Poverty Eradication (TNP2K) at national level, followed by the Provincial and Regency/Municipality Poverty Coordination Teams (TKPKD). In these efforts, the strategy being pursued was to integrate poverty into four cluster approach: (1) Based on assistance and social Protection, (2) Empowerment of community, (3) Empowerment of micro and small enterprises, and (4) pro-poor people program (Widianto, 2013).

However, according to TKPKD (2017), there were various problems to achieve government efforts in poverty eradication, such as uncoordination between government institutions that caused of poverty eradication programs had not fully targeted to the group of poorest families. In addition, poverty program should be designed to regard characteristic of the poorest.

Until fairly recently, discussions of poverty have largely dwelt on assessments of income and expenditure. Frequently, poverty is defined in either relative or absolute terms. Absolute poverty measures poverty in relation to the amount of money necessary to meet basic needs such as food, clothing, and shelter. While, relative poverty defines poverty in relation to the economic status of other members of the society: people are poor if they fall below prevailing standards of living in a given societal context. Poverty represents a deprivation of essential assets (physical, social, and psychological) to which every human being is entitled (ADB 1999).

According to (BPS, 2017), 14 regencies in Central Java were categorized as the poorest areas which lived below the national and regional poverty line. Furthermore, there are 115 villages based on absolute poverty data that have been prioritized to alleviate (Department of Government, Social and Cultural, Bappeda Jateng, 2018). Regarding those data, Grobogan and Wonosobo both have the majority of poorest villages (more than 10 villages). Hence, this study aim to explore the condition of poverty in those areas.

2 Methods

The research was conducted in Grobogan and Wonosobo Regency. Both locations were chosen as regard the number of poorest villages, and agriculture as the main live hood for the most people who live in that areas. Grobogan represents agricultural areas in the lowlands, whilst Wonosobo is plateau. Three villages were appointed as sample. This research used descriptive qualitative approaches. Data collected by Focus Group

* Corresponding Author: alfinahandayani16@gmail.com

Creation of a New Electronic Reporting Management System “SIMPLE” and Its Effect on the Quality of Financial Report and User Satisfaction within the Office of Regional Secretary, Sumbawa

Hayatun Nufus^{1*}, Farit M. Afendi², M. Budi Setiawan³, Dedy Heriwibowo⁴, Arief Budi Witarto⁵

¹Master Program on Management of Innovation, Sumbawa University of Technology (UTS), Sumbawa Regency, West Nusa Tenggara Province

²Regional Secretary (SETDA), Sumbawa Regency, West Nusa Tenggara Province

³Department of Statistics, Faculty of MIPA, IPB University, West Java Province

⁴Center for Technology and Safety of Nuclear Reactor, Nuclear Energy Agency (BATAN), PUSPIPTEK, Banten

⁵Regional Planning and Development Agency (BAPPEDA), Sumbawa Regency, West Nusa Tenggara Province

Abstract: The use of the SIMDA application program at the Sumbawa Regional Secretariat has several problems due to the weaknesses of the application. The weakness of the SIMDA application causes weak in control, delay in reporting, and decreased user satisfaction. The use of the SIMPLE application program is expected to provide solutions of the problems that arise in the SIMDA application program. This study aims to determine the effect of system quality and quality of information produced by SIMPLE on the level of satisfaction of application users. This research uses a quantitative approach. The population in this study was Government Civil Servants (PNS) in the Sumbawa Regional Secretariat and other Regional Device Organizations. The sample was chosen by purposive sampling technique. The method of data collection is done by questionnaire. The results of multiple linear regression tests obtained a regression quality coefficient of 0.265, while the quality of information is 0.706. The partial test results of each variable obtained a significant value (p) of 0.005 for system quality and 0.000 for the quality of information produced by the system. The value of $p < 0.05$, which means that the quality of the system and the quality of SIMPLE information partially affect to the level of the application user satisfaction. Simultaneous test results (Test F) obtain a significant value (p) of 0.000. Where the value of $p < 0.05$, which means that together the quality of the system and the quality of SIMPLE information affect to the level of application users satisfaction in the Regional Secretariat of Sumbawa Regency.

Keywords: information quality of SIMPLE; SIMPLE; system quality of SIMPLE; users satisfaction

1 Introduction

In Regulation Number 17-year 2003 concerning State Finance requires regional governments and regional work units as budget users to prepare financial reports as financial management accountability. Quality and comprehensive financial reports are influenced by various technical aspects including the use of technology or information systems. In order to facilitate the regional government, the State Development Audit. Agency (BPKP) through the Deputy for Supervision of Regional Financial Management composes an application program that can be used by regional governments to manage their regional finances. The intended application program is the SIMDA computer application program or Regional Management Information System. The SIMDA computer application is able to produce financial reports and other financial information in a more comprehensive manner which includes information on regional financial position, financial performance conditions, and accountability of regional government.

The Regional Secretariat of Sumbawa Regency, in order to improve the quality of financial statement information, also implemented the SIMDA application program. However, as long as the use of the SIMDA application program is felt there are some problems that affect the level of satisfaction of the application users Weak control of the Acting Technical Executing Officer (PPTK) in each division within the Sumbawa Regency Secretariat within the implementation of disbursement of the activity budget because the control system is still

* Corresponding Author: annufus@gmail.com

The Role of Yogyakarta City Government in Building Communities Adaptation Capacity

Teti Deliany Putri^{1*}, S Sunarsih², Fuad Muhammad²

¹Master's Program in Environmental Science, School of Postgraduate Studies, Universitas Diponegoro, Semarang, Indonesia

²Department of Mathematics and Natural Sciences, Universitas Diponegoro, Semarang, Indonesia

Abstract: According to the United Nations Economic and social institutions data in 2011. Climate change has emerged as one of the main problems at the beginning of the 21st century. The long history of Yogyakarta City as the center of government and center of activity has resulted in demographic pressures that have an impact on increasing GHG emissions. Human activities that tend to prioritize economic and social needs and exclude ecology can increase the potential for disasters due to the effects of climate change. This climate disaster requires attention because it can cause damage and if it is not addressed it will cause a greater loss of the new paradigm of Good Governance and Good Environmental Governance in the concept of sustainable development needs to be integrated into environmental planning. Furthermore, the role of local governments in improving community adaptability on a community scale through the Climate Village Program (ProKlim) is expected to succeed in the national GHG emission reduction target by adjusting to the potential and problems in their respective regions. The method used in this study with an analysis that is descriptive qualitative, in-depth interviews were carried out to several selected key persons. Based on the research, it is known that the stages carried out by the Yogyakarta City Government by the guidelines for implementing ProKlim include preparation, planning, implementation, development, and strengthening of actions that can increase adaptive capacity in the community. Through the implementation of ProKlim activities, the success of the activities is evidenced by the emergence of new villages that implement climate change adaptation and mitigation in each village every year.

Keywords: climate change; climate village program; role of regional government

1 Introduction

According to data from the United Nations economic and social institutions that in 2011, climate change has emerged as one of the main problems at the beginning of the 21st century. NASA's Goddard Space Studies Institute found that global surface temperatures in the past decade were 0.8°C higher than in the early 20th century, with two-thirds of this warming occurring since 1975 (Hansen et al., 2010). Based on observations observed on several indicators of climate change there has been an increase in trends during the 21st century, such as increasing heat waves and high rainfall events (IPCC, 2001). Weather events and extreme climates must be anticipated to reduce significant risks due to the impact of climate change on society and ecosystems (IPCC, 2012).

Given the increasing role of urban areas globally and various internal processes and constraints (in contrast to rural areas) which have major challenges (but also opportunities) for adaptation to urban climate change, further progress of urban adaptation strategies is a major necessity (Birkmann, J., Garschagen, M., Kraas, F., Quang, 2010). Special attention must be given to urban areas for the following reasons:

1. The concentration of population, infrastructure and other assets in the city results in the potential for higher exposure and damage (Romero-lankao & Renewable, 2015).
2. Cities play a key role in a larger scale economic and social system (Hughes, 2013). Urban damage related to climate change will lead to crises on a wider scale (Garschagen & Kraas, 2011).
3. New economic growth such as in Asia, Southeast Asia and Latin America can have a negative impact on the initial resilience of urban systems, for example, social vulnerability, poverty, inequality, social and political instability or ecological risks and health related threats (Pelling, 2003; Satterthwaite, 2004) so that it has a negative impact on the prerequisites for successful climate change adaptation.
4. Apart from the potential for devastating major disasters, the daily dangers of small scale are often underestimated in urban areas. Even though the combination of small hazards can have more powerful effects than large scale disasters with low frequencies (Bull-Kamanga et al., 2003).

* Corresponding Author: teti.putri@gmail.com