

# SUSTAINABLE URBAN DEVELOPMENT

20-21 August 2008

at Campus A of Trisakti University, Building D, 8th Floor, Jl. Kyai Tapa No. 1, Grogol, Jakarta, Indonesia

No. ISBN 978 - 979 - 99119 - 3 - 3









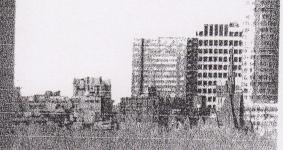
# PROCEEDING

# INTERNATIONAL SEMINAR OR

20-21 August 2008 at Campus A of Trisakti University.

Building D, 8th Floor. Jl. Kyai Tapa No. 1, Grogol, Jakarta, Indonesia

No. ISBN 978 - 979 - 99119 - 3 - 3





#### ORGANIZING COMMITTEE REPORT

Dear all participants,

The International Seminar on Sustainable Urban Development, ISOSUD 2008, is conducted by Faculty of Landscape Architecture and Environmental Technology, Trisakti University and in cooperation with Mercycorps. The aims of this seminar is to share and to discuss all ideas, experiences, concepts and regulations on sustainable urban development amongst researchers, practitioners, and decision makers.

Within two days, we will listen and discuss with some keynote speakers, they are Prof. Surna Jayadiningrat from Indonesia, Prof. Winter from Karslruhe Universitat Germany, Prof. Takao Yamashita from Hiroshima University Japan, Prof. Mustafa Kamal from Universiti Putra Malaysia, Dr. Rolf Baur from Technische Universitat Dresden Germany as Director of CIPSEM UNEP/UNESCO, Dr. Jusna J.A. Amin from Trisakti University Indonesia, Dr. Haryo Winarso from ITB, and Dr. Sujana Royat as Deputi Menko Kesra. Beside that, there will be 6 class room of presentation in each day. The presenters are come from many institutions and many countries. The local institutions including universities, like Trisakti University, ITB, UI, UGM, UNDIP, ITS, UNPAS, ITENAS, Univ. Malahayati, Univ. Islam Sultan Agung Semarang, Univ. Islam Indonesia Yogyakarta, Univ. Muhamadiyah Surakarta, UNPAD, IPB, UPN Surabaya, UNTAR, Univ. Negeri Semarang; research boards, like BPPT, LIPI, LAPAN; governments like Public Work Dept.; Donors like World Bank; and NGO's, like UN Habitat, Bali Fokus, LPPSE, and Mercycorps. International presenters are come from Malaysia, Thailand, Taiwan, Japan, and Germany.

We are very grateful to Rector of Trisakti University; Dean of Faculty of Landscape Architecture and Environmental Technology; Head of Environmental Engineering Department; Head of Landscape Architecture Department; Head of Urban and Regional Planning Department; the member of Steering Committee, Peer Reviewer, and Organizing Committee that very supported and helpful within the preparations and conduction of the seminar. The seminar is supported by Mercycorps, IDRC, and PT Jaya Konstruksi; also MS Tri Radio and DAAI TV as media sponsorships.

Thank you for your participation and hope you enjoy the seminar.

Jakarta, August 20th, 2008

Chairman of Organizing Committee

Rositayanti Hadisoebroto, ST, MT

#### Distinguished participants,

The theme of this seminar is "SUSTAINABLE URBAN DEVELOPMENT" has a great importance in the strengthening of the capacity in the environmental field. The sustainable development terminology had been known very intense, but still we face some environmental problems that related with development aspects especially in urban. Development should be sustained to ensure the increasing of people's welfare. For instance the Greater Jakarta, as a metropolitan city, faces many environmental problems, i.e. flooding, solid wastes, urbanization, traffic jam, air and water pollution, poor settlements, and many more. The sustainable development is the answer to solve all those problems.

The boundary between urban and rural is not so clearly, so we should not limit the discussion in these two terms. The environmental problems also show up in rural, but since Trisakti University is located in Jakarta as a head quarter of Indonesia, we focus our vision on solving of urban problems. Trisakti University is very concern about urban and all its problems. This challenge is in line with our vision to be the leading private university and center of excellence in Asia Pacific in developing science, technology and arts for community welfare and sustainable environment.

Therefore the initiative of Faculty of Landscape Architecture and Environmental Technology's to conduct this seminar is in the proper time frame. It is following the UNFCCC (United Nation Framework Convention on Climate Change) at Bali, Indonesia, in December 2007, and the MDG's (Millennium Development Goals) achievement, where sustainable development is the key to reach the sustainable environment.

I am very confidence that these two days International Seminar will result in the positive conclusions of a numbers of practical and concrete recommendations. Only sustainability can give the environment the power to make our right to life on this planet possible.

Thank you for your participation, have a nice seminar and welcome to Trisakti University.

Jakarta, August 20th, 2008

Shoby

Rector of Trisakti University

Prof. Dr. Thoby Mutis

#### SUMMARY of

### International Seminar on Sustainable Urban Development

Faculty of Landscape Architecture and Environmental Technology Trisakti University, Jakarta, Indonesia August 21<sup>st</sup>.2008

To ensure the long-term human well being, we must take an alternative approach to development which is acknowledges the importance of environment. Choices made today will determine how the threats will unfold in the future.

In the solid waste management, the collection, treatment and disposal are only concern the economical means. Introduce the Reduce-Reuse-Recycle waste management, which is environmentally accepted, also proved as a powerful tool for a sustainable recycle economy. Even solid wastes can be utilized as energy source.

In the modeling aspect, based on the global meteorological forecasting, the earth system simulation models have been developed and applied to many kind of environmental assessment. Asian Environment Simulator is a model that combined atmosphere, coastal and ocean, land surface, hydrology and estuary modules, and form a complicated climate comprehensive prediction in regional based that very useful in strategic policy for effective response.

Several researches in technology that support sustainable development have been done in wide areas such as:

- · utilization of organic wastes to produce energy (biogas),
- recycle treated water can reduce groundwater abstraction.
- · degradation of pollutants,
- · Generation of electricity using microbial fuel cell.
- Using ceramic filter as household water treatment to obtain safe water that affordable by the urban poor, while at the same time could also safe energy that used to boil the water.

Environmental design behavior has great impact to the sustainability of urban development as it belongs to the six major components: physical, technological, social, cultural, psychological and behavior that determine the urban identifications and social-cultural characteristics.

Considering the original nature and culture which is already present in a community/area in developing urban area will support the landscape quality which in turn will give positive impact to the tourism and increase the community economics

The potential in Indonesia for the cultural landscape idea is enormous. Now it is the challenge for all professionals concerned (landscape architects, environmental engineers, urban planners, architects, etc) and the professional organizations and educational institutions to take a lead role.

#### Last but not least, it is required a political will:

- To improve the environmental quality for urban poor by understanding the new paradigm of urbanization and urban poor. Urbanization not a disaster but a bless.
- · Land tenure should be done in respect and listen to the poor.
- Society has a social capital which can turn to a power to support the participatory development so called Community based development

europe d'accident au la company de la company

#### **CONTENTS**

Organizing Committee Report	i
Rector Speech	i
Summary of International Seminar on Sustainable Urban Development	ii
Content	v
Committees	xi
Scientific Programme	χV
Keynote Speaker	
A BRIEF CRITICAL QUESTIONS OF SUSTAINABLE DEVELOPMENT Prof. Surna Djajadiningrat	1
URBAN MANAGEMENT FOR SUSTAINABLE DEVELOPMENT : LAND USE AND WATER Dr.lng Rolf Baur	4
WASTE TREATMENT TECHNOLOGY TO SUPPORT SUSTAINABLE URBAN DEVELOPMENT Prof. Winter	11
THE ROLE OF MODELLING TO CONTROL ENVIRONMENTAL PROBLEM Prof. Takao Yamashita	22
ENVIRONMENTAL DESIGN BEHAVIOR AND ITS IMPACT ON SUSTANABILITY OF URBAN DEVELOPMENT Mustafa Kamal Bin Mohd. Shariff, Allam	50
MANAGING INDONESIA'S CULTURAL LANDSCAPE IN URBAN AREAS IN A SUSTAINABLE WAY Dr. Jusna M. Amin	<b>57</b>
PROJECT EXPERIENCE: LAND TENURE AND INVESTMENT IN HOUSING Marcelino Pandin	69
PRO-POOR GOVERNANCE AND PARTICIPATORY PLANNING: THE CASE OF STREN KALI SURABAYA Wardah Hafidz	75
PILOT PROJECT HP3/LESTARI COMMUNAL WATER SUPPLY SYSTEM Mercy Corps	82
COMMUNITY BASED SANITATION & SOLID WASTE MANAGEMENT IN URBAN AREAS -LESSONS LEARNT- Noka Destalina (BaliFokus)	87
COMMUNITY ASSISTANCE ON KAMPUNG MAKEOVER (BEST PRACTISE SHARING EXPERIENCE) BEST PRACTISE	104

RBANIZATION ANI Dr. Haryo Winarso	D POVERTY REDUCTION IN SOME INDONESIAN CITIES	118
PRO POOR URBAI Dr.Sujana Royat	N DEVELOPMENT	125
Details Programme	for Oral Presentation	
_ SUB THEME	ENVIRONMENTAL TECHNOLOGY (ET)	
OP.ET-01	Biological Treatment of Domestic Biowaste Fractions (Dr.Claudia Gilbert)	
OP.ET-03	Anaerobic Fermentation of Fresh Vegetable and Fruit Waste's (A.Susilorukmi, L.Sriwuryandari, A.Ekoputranto, Dewi N, T.Sembiring)	135
OP.ET-04	Effluent Of Laboratory Wastewater Treatment By Heliconia Rostrata To Degradation Of Organic Matter (COD) And Tota! Suspended Solid (TSS) (Rahmat Boedisantoso dan Nuraini Wijayanti)	141
OP.ET-05	Design Of A Water Recycle System In A Food Industry (Edi I. Wiloso , Vera Barlianti and Ajeng A. Sari)	146
OP.ET-06	Color Removal Of C.I. Reactive Orange 16 By Mixed Culture Of Fungi Immobilized On Mussel Shells (Fadjari L. Nugroho, Evi Afiatun, Juju Chayadi)	150
OP.ET-09	Biodegradation Of Monoclhorotriazinyl Reactive Red By <i>Pseudomonas</i> rudinensis and <i>Pseudomonas</i> diminuta (Rudy Laksmono. W , D.G Okayadnya Wijaya)	156
OP.ET-10	Preliminary Study Of Crude Oil Hydrocarbon Degradation By Dominant Fungal Isolates (Astri Nugroho)	164
OP.ET-11	Potential Application Of Biosurfactant Produced From Azotobacter Sp In Oil Industry (Qomarudin Helmy, Edwan Kardena, Pujawati Suryatmana and Wisjnuprapto)	176
OP.ET-16	Wastewater Regeneration To Minimize Industrial Cooling Water Flowrate (Ellina S. Pandebesie, Renanto H, JC Liu, Tri Widjaya)	184
OP.ET-17	Minimization Of Total Cost For Medical Waste Treatment System In Bandung City (Mochammad Chaerul, Lucky Lie Junpi, Ninda Ekaristi)	190

SUB THEME	URBAN MANAGEMENT (UM)	
OP.UM-01	Creating Sustainable Open Space Developments In Urban Housing Areas Through Community Participation, A Study Case Of West Jakarta (Ady Rizalsyah Thahir)	193
OP.UM-02	Sustainability Of Water Supply Systems For Poor Communities (Ali Masduqi, Eddy S. Soedjono, Noor Endah, Wahyono Hadi)	202
OP.UM-03	Environmentally Community-Based Urban Drainage Management: Recharge Well Development (El Khobar M. Nazech)	208
OP.UM-06	Land Use, Transport and Environment (Dr.Rofl Baur)	215
OP.UM-07	Indonesia's Most Suitable Municipal Solid Waste (MSW) Management (Adi Mulyanto and Titiresmi)	223
OP.UM-09	Characteristic Of Water Supply And Willingness To Pay To Determine Water Tariff (Djoko M. Hartono)	235
SUB THEME	ENVIRONMENTAL MANAGEMENT (EM)	
OP.EM-01	Water Quality Determination Used Phytoplakton Community In Saguling Reservoir (Diah Prambadani, and Barti Setiani Muntalif)	244
OP.EM-02	System Interrelationship Model To Approach Minimization On CO <sub>2</sub> Emission From House And Life In Cities (Priana Sudjono and Indira Kusuma Dewi)	251
OP.EM-03	Evaluation Of Water Quality Sampling Point With HP2S Model (Dr.Ir.Nieke Karnaningroem MSc.,Hermien Indraswari, ST)	258
OP.EM-04	The Environmental Impacts Of Pesticides Use On Soil, Water, And Commodities In Yogyakarta Province (Ch.Lilies Sutarminingsih, Edhi Martono, Eko Sugiharto)	268
OP.EM-05	Strategic Framework For Optimizing Water Resources Carrying Capacity As A Basis For Sustaining Urban Development (A Case Study Of Bekasi Urban Area In Indonesia) (Setyo S. Moersidik, Endrawati Fatimah, Masni Dyta Angriani, Maika Nurhayati)	277
OP.EM-06	Developing A Model Of City's Land Resources Carrying Capacity (Endrawati Fatimah, Setvo S. Moersidik, M. Putri Rosalina)	284

	OP.EM-07	Using Geographic Information Systems In Flood Prone Area Management For Sustainable Development (Yanti Budiyantini)	291
	OP.EM-08	Global Warming Control Through The Application Of Participation Conservation Model In The Catchment Area Of Wonogiri Dam, Bengawan Solo River Basin (Hermawan Kusumartono, FX)	297
-	SUB THEME	LANDSCAPE ARCHITECTURE (LA)	
	OP.LA-03	Visual Landscape Preferences And Meaning Of Tourism Areas In Indonesia (Ina Krisantia, Noorizan Mohamed, Mustafa Kamal, M.S.)	308
	OP.LA-04	The Potency Of Glodok China Town Historical Landscape For Tourism Development (Nurhayati H.S. Arifin, Qodarian Pramukanto, Hendry)	314
ā	OP.LA-05	The Need To Establish A Nursery Standard Towards A Sustainable Urban Landscape In Malaysia (Roziya Ibrahim, Osman Mohd Tahir,Nordin Abdul Rahman and Mohd Nazri Saidon)	320
	OP.LA-06	Towards Sustainable Kuala Lumpur City: Government Efforts And Social Cohesion For Safety And Security (Dr Kamariah Dola, Dr Norsidah Ujang)	329
8	OP.LA-08	Revitalising Backlanes Using Cpted Concept To Prevent Crime Case Study: Pudu District, Kuala Lumpur (Haidaliza Masram, Ahmad Ridhwan, Ahmad Radzi, Sumarni Ismail, Mohd Fakri Zaky Jaafar)	336
,	OP.LA-11	Linking Comfort And Place Attachment Dimensions : A Sustainable Agenda (Dr. Norsidah Ujang)	347
	OP.LA-12	Trend Analysis Of Green Open Public Space (Gops) At Kebayoran Baru, Jakarta (Agus Budi Purnomo)	353
Deta	ils Programme	for Poster Presentation	
-	SUB THEME	ENVIRONMENTAL TECHNOLOGY (ET)	
	PP.ET-01	Tailing Rehabilitation Using Bio-Organic Technology (Genta Hariangbanga, Melati Ferianita Fachrul)	360
	PP.ET-02	Plywood Glue Mix Sludge Recycle As A Filler (Study Case In Pt. Lakosta Indah-Samarinda) (Asih Wijayanti, Dwi Indrawati)	367
	PP.ET-04	Analysis Of Sansevieria Sp. And Hibiscus Rosa- Sinensis Capability In Reducing Co Gas Concentration	374

	PP.ET-05	Biofilter As An Alternative Water Treatment to Remove Organic Matter (Rositayanti Hadisoebroto, Raditya Arif Permana, Nusa Idaman Said)	380
	PP.ET-06	Used Of Fly And Bottom Ash (Coal Combustion By- Products) For Paving Block With Solidification/Stabilization Method (Asih Wijayanti)	387
	PP.ET-07	The Carbon, Nitrogen And Phosphorous Contents In The Biowaste Solid Fraction After Pre-Treating In A Mechanical Biological Treatment Process (Etih Hartati, Novri Susanto, Marisa Handajani and Prayatni Soewondo)	393
•	SUB THEME	URBAN MANAGEMENT (UM)	
	PP.UM-01	Formulation Of Zoning Regulation Principles For Urban Agriculture Activity in Surabaya (Myma Augusta A. Dewi)	399
	PP.UM-02	Natural Resources Analysis For Development Of Zonation Planning Of Western Coastal Area Of Kabupaten Pandeglang – Banten Province Based On GIS (DR. Ir. Hj. Arwindrasti B.K., MSi)	424
	PP.UM-06	Technical Plan Of 3r Program For Collection And Transportation Of Domestic Waste In Subdistrict Crogol Petamburan, West Jakarta (Dwi indrawati, Pramiati P.P. Riatno, Hesy Martha)	432
	PP.UM-08	Bali Cities As Models For Sustainable Urban Development 'Harmonious Urban Community Pattern Form Based On Local Wisdom' (Ir. Ida Bagus Rabindra, MSP)	439
	PP.UM-09	Study Of Correlations Spatial Indeks Housing And Physical Environmental Quality Of Residential (Dwi Nowo Martono & Ninin Gusdini)	446
	PP.UM-10	Recycle Industry Of Plastic Scrap In The Context Of City Waste Management (Case Study: Pt Weiling) (Anita Sitawati Wartawan & Benny Benyamin Soeharto)	453
	PP.UM-11	New Area Development With Water Management System (Sih Andayani & Bambang E. Yuwono)	457
	SUB THEME	ENVIRONMENTAL MANAGEMENT (EM)	
	PP.EM-01	Environmental Factors And An Eco-Epidemiological Model Of Malaria In Indonesia (M.M. Sintorini)	466

PP.EM-02	Modelling Of The Reaeration Due To Dissolved Oxygen Fluctuation In The Ciliwung River (Widyo Astono)	470
PP.EM-03	Optimization Model Of Applying Integrated Solid Waste Treatment Technology (Dwi Indrawati)	476
PP.EM-04	Study Of Small Lakes As Supporting City Ecosystem In Jakarta (Diana Hendrawan, Melati Ferianita Fachrul)	483
SUB THEME	LANDSCAPE ARCHITECTURE (LA)	
PP.LA-01	Policy Analysis Of Urban Green Openspace Management In Jakarta City, indonesia (Rustam Hakim, Moch Sarofil Abu Bakar, Foziah bt. Johar)	490
PP.LA-02	River Banks Prevention As Virtual Effort To Conservate Water (Nur Intan Mangunsong)	507
PP.LA-03	The Effect Of Temporal Aspect Aesthetic Quality Of Ricefield Landscape (Agus Ruliyansyah and Andi Gunawan)	501
PP.LA-04	Sadulur Papat Kalima Pancer In Landscape Symbolism Of Surakarta Hadiningrat Palace Within The Context Of Sustainable Urban Development (Eko Adhy Setiawan)	515
PP.LA-05	The Green Infrastructure Urban Landscape Design Base On Local Knowledge (Ida A.S. Danur)	519
PP.LA-06	Implementation Of Eco-Park Concept In Green Open Space To Support The Sustainable Development (Silia Yuslim & Lavinia)	522
PP.LA-07	Landscape Codes: What Are They And Why Have Them? (Sumiantono Rahardjo M)	527
PP.LA-08	Ecotourism, Conservation In Urban Area (Qurrotu 'Aini Besila)	533
PP.LA-09	The Influence Of Using Perforated Concrete Block Paving, Grass And Gravel As Ground Cover To Infiltration (Isamoe Prasodyo)	539
PP.LA-10	The Function Of Open Space For China Descent Community In Tangerang City (Hinijati Widjaja)	542
PP.LA-11	Green Open Space As A Reins Of Urban Environmental Quality (Ir. Hariadi Widiaianto MT)	548

PP.LA-13	Preserving The Unique Javan Gibbon Ecosystem Of The Mount Halimun National Park, West Java, Indonesia (Titien Suryanti)	553
PP.LA-15	THE ROLE OF THE PLANT AT THE BOTTOM TO THE CONTINUITY OF FOREST ECOSYSTEM (Case Study of Forest Conservation Park Ir. H. Djuanda, Bandung) (Etty Indrawati)	559
PP.LA-16	Environmental Economics As A New Paradigm In Land Use Planning And Green Open Space Management To Support Sustainable Urban Development In Indonesia (Irina Mildawani)	564
List of Presenter	8	574

#### OP.LA-04

#### THE POTENCY OF GLODOK CHINA TOWN HISTORICAL LANDSCAPE FOR TOURISM DEVELOPMENT

Nurhayati H.S. Arifin, Qodarian Pramukanto and Hendry

Dept. of Landscape Architecture, Faculty of Agriculture, Bogor Agricultural University Jl. Meranti, Kampus IPB - Darmaga, Bogor - 16680 TeVFax: 62-251-422415

E-mail: nurarif@ipb.ac.id

#### Abstract

China town in Glodok district is one of the living landscapes evident that contributed to the form of the present Jakarta Metropolitan City. Until now, this district is still famous as commercial or trading area and having unique Chinese characteristic. There are still many important historical structures that have been designated as National Heritage, though in the present time some of those building structures are not in good conditions. As this district is an integral part of the Old Jakarta, this district had been included in the Old Jakarta Revitalization Plan. One of the objectives of this revitalization plan is to promote tourism activity in Jakarta. The aim of this study was to identify and analyze the potency of the district landscape as historical site for tourism. The survey method was used to identify the characteristic of the landscape and the potency of tourism supporting factors. The landscape characteristics consist of tangible and intangible components. These components were analyzed and evaluated to define spatial potential zone that showed strongest Chinese characteristic. The tourism supporting factors was also analyzed to provide information that useful for developing the zone. As a result, this study proposed the potential zone or landscape unit as a tourist main destination. To increase the attractiveness, simultaneously to protect the unique and original characteristics, this study also proposed the conservation actions both for the objects and the whole China Town historical landscape. All of these efforts hopefully would be integrated in the Old Jakarta Revitalization Program.

Keywords: China town, Glodok-Jakarta, historical landscape, conservation, tourism

#### Introduction

China town in Glodok district is one of the living landscapes evident that contributes to the form of the present Jakarta Metropolitan City. Until now, this district is still famous as commercial or trading area and having unique Chinese characteristic. There are still many important historical structures that have been designated as National Heritage, though in the present time some of those building structures seem neglected. As this district is an integral part of the Old Jakarta, this district actually had been included in the Old Jakarta Revitalization Plan (Decision Letter of Jakarta Governor Number 34 of the year 2005). One of the objectives of this revitalization plan is to promote tourism activity in Jakarta.

Revitalization Action Plan or Program is still focused in Fatahillah Zone, colonial typical city of the core zone in the Revitalization Plan (Jakarta Office of Culture and Museum, 2007). Such action, moreover tourism development program have not touch the Goldok China Town yet. On the other hand, however, the fast increase of economic development in this area has been gradually changing unique characteristic of historical elements/settings. To save this characteristic and develop them for tourism, it is important to do identification and evaluation. The area that has unique or strong characteristics of historical elements/settings could be considered highly potential to be developed for tourism, and in the same time it should be carefully preserved (Sedyawati, 1997).

The aim of this study is to analyze the potency of the Glodok China Town landscape as historical site for tourism. Hopefully the result of this study would be useful for the committee of revitalization, and the local government of Jakarta.

#### Method

726

The study site was Glodok China Town, around 76 Ha, that included in the Old Jakarta Revitalization Plan (Fig 1). However, the surrounding area that contains important elements or characteristics related to the China Town was also observed. The potency of the landscape was derived from the landscape characteristic as the objects of tourism, and the supporting aspects of tourism. The landscape characteristic that reflects a unit of China Town contains tangible and intangible components. These components were identified and analyzed descriptively and spatially, and some quantitatively.

A modified Mac Kinnon scoring technique (Wulandari, 2002) was used to evaluate the potency of the object/area, which was composed from the object attractiveness, the potency of sustainability (the physical condition of the object as a reflection of preservation/conservation action, and its surrounding condition), and the accessibility. The value of attractiveness itself is a total of value of historical value and uniqueness, aesthetic and architecture, completeness/unity, authenticity and physical condition. The most potential objects were mapped and delineated to define the most potential zone to be developed for tourism. A development on this potential zone or landscape, as well as its tourism supporting aspects, was descriptively proposed.

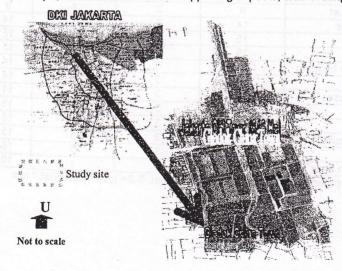


Fig 1. Study site

## Result and discussion

#### Landscape potencies

In general, the Glodok landscape still has a strong characteristic as a China town, especially reflected by the people who live there and their culture or their economic activity, and some old building's architecture and arrangement. Most of people live there are Chinese, who still use Chinese culture and custom in their daily life. As a Chinese settlement usually can be seen in Indonesia, the Glodok China town also showed a combination of settlement and commercial area. Physically the characteristics can be seen at the shrines, old houses, shops, market and food stalls.

There are 12 objects consist of historical buildings and market/shopping areas which was identified having potency or attractiveness. All of these potential buildings/areas have significant characteristics, including intangible characteristics. Among of them, four buildings are national heritage buildings. There is also a church, St. Maria de Fatima church, of which the building architecture was Chinese. The total potency was composed from the object attractiveness, the potency of sustainability (the preservation/conservation action), and the accessibility (Table 1). The most potential objects were mapped and delineated as a core zone or the most potential zone for tourism destination (Fig 2). The development of this core zone should not change the typical characteristics, but on the other hand it should maintain the characteristics in order to sustain the tourism activity itself. The surrounding areas of the core zone that still have Chinese characteristic should have function as transition or buffer for the core zone.

Table 1. The potency of the objects

Object	Attractivene ss	Potency of sustainabilit	Accessibility	score
		3	1	9
Pasar Pagi Lama market	9	3	3	14
ay An Tong drug store	14		3	. 15
Budhi Dharma shrine	15	3	3	15
Ariya Marga shrine	15	3	3	14
Tiong Hoa Hwee Koan building	13	3	1 2	14
Souw family house*	14	3	<u> </u>	11
Blandongan street/houses*	11	3	1	15
Tanda Bhakti shrine	15	3	3	15
Tanga briakii siiriic	15	3	3	15
Toa Sai Bio shrine	15	3	3	15
St. Maria de Fatima church*	10	3	3	10
Jin De Yuan shrine* Pancoran/ Glodokplein area		2	lower potential;	1

Remark: 19-25= highly potential; 9-10= moderately potential; 5-8= lower potential; \* is a national heritage

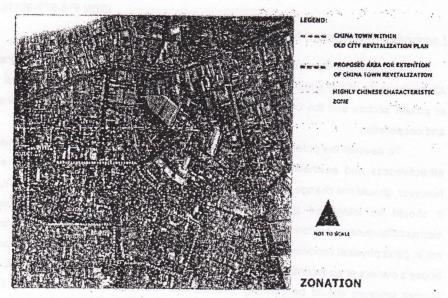


Fig 2. The proposed core zone for tourism development

#### Tourism supporting aspect

The attractiveness of the objects is not the only key factor in tourism development. It needs other supporting factors such as accessibility, transportation, touring program, facilities and services. The potential tourist and the community hospitality and awareness are also should be considered.

The accessibility was observed on its physical condition, easiness, capacity and legibility. Evaluation on those components resulted that the accessibility to the Glodok China Town and its interesting objects is relatively good, except the access to Ariya Marga shrine inside the town. The town can be reached from many directions with some transportation modes such as bus, train or other small public transportation modes. But to look around the town, tourists prefer to walk or ride a bike taxi (ojek sepeda) because the road relatively narrows and crowded. The taxi bike is a unique and interesting transportation mode. The access to Ariya Marga shrine is only one and very narrow, and the condition was not good; however, this condition may give an interesting experience.

An established tourism or touring program was not available yet, and the information about this town and the interesting objects inside were limited. People come to this town generally to do shopping. Many visitors or tourists usually come to this town on Chinese celebration days to see many attractions. There are some communities of heritage or historic conservation which sometimes hold touring event in this historic site. The supporting tourism facilities and services such accommodation and restaurants were available both inside and at surrounding the town. However, tourist information and interpretation services were still insufficient.

# Landscape development for tourism

Tourism development should be implemented comprehensively and integrative. All components of the stakeholders such as government, management board, business or private sectors and the community should get involve and work in good coordination and cooperation.

To develop the potential objects and the landscape for tourism, the convenience, attractiveness and aesthetic aspects should be taken into consideration. This effort, however, should not change the typical landscape characteristics of the China Town, and it should be integrated to the effort of preservation or conservation of historic elements/landscape. Historical buildings, particularly private houses, which are currently not in good physical condition, should be repaired. This effort needs support to the private house's owners or an incentive system should be developed. Development of the tourism program should be carefully planned and widely socialized, especially to the community, in order to avoid any conflict. The community should play important roles in the tourism activity. Furthermore, to support the program, the improvement of supporting facilities and services are needed. For historical touring, interpretation facility is very important to provide interesting and sufficient knowledge of the object to the visitors.

#### Conclusion

The Glodok China Town showed high potential for tourism development. This town has unique and interesting objects, settings/landscape and cultural activities/events. This study defined the most Chinese characteristic of historical zone that potentially valuable for tourism development, but simultaneously should be carefully preserved.

The supporting tourism aspect was relatively good, except that the established touring program had not been available yet, and the information and interpretation facilities were insufficient. To develop tourism activity in this town, the 'aesthetic' quality of the landscape should be refined simultaneously with preservation of historical objects/settings, and well-planned tourism program should be developed and promoted.

#### References

- Dinas Kebudayaan dan Permuseuman (Jakarta Office of Culture and Museum). 2007. Guidelines Kotatua. Pemerintah Provinsi DKI Jakarta. Dinas Kebudayaan dan Permuseuman. Jakarta.
- Wulandari, R.K. 2002. Perencanaan Lanskap Kawasan Wisata Budaya Kampung Sade di Lombok Tengah Nusa Tenggara Barat (*Landscape Planning for CulturalTourism in Kampung Sade, Lombok Island*). Thesis. Graduate School of Bogor Agricultural University (IPB). Bogor.
- Sedyawati, E. 1997. Potential and Challenges of Tourism: Managing the National Cultural Heritage of Indonesia. In: W. Nuryanti (ed). Tourism and Heritage Management.

25-35. Proceeding of the International Conference on Tourism and Heritage Management. Yogyakarta.

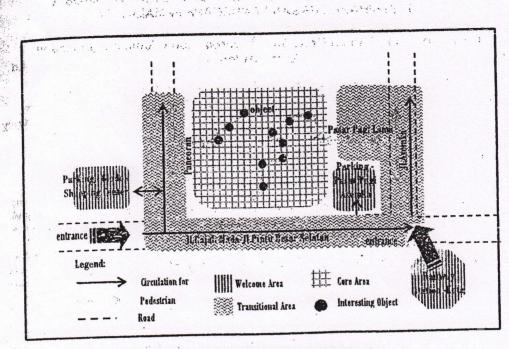


Fig 2. Circulation and interpretation line concept