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COUNTRY REPORT

THE INDONESIAN CONSTRUCTION SECTOR

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1. EXECUTIVE SUMMARY

Economy of Indonesia is growing better since the economic turmoil 10 Years ago. In 2009, GDP Per Capita At Current Market Prices is IDR 24.3 juta (USD 2,590.1) and GNP Per Capita At Current Market Prices IDR 23.4 or USD 2,499.5. The economic growth is 4.5%. The inflation rate from January to July 2010 is 4.02%. The construction sector contribution to GDP decrease from 7.31% in 2008 to 7.1%. The contribution of construction sector to GDP is 555 Trillion IDR (2009) based on current price and 140.2 Trillion IDR (2009) under constant price (2000). The next coming years, it is expected to account more than 9%. This expectation is applicable since Indonesia is known as the second largest construction market up to 2010 in Asia after China (ENR Singapore, 1997). The market covers infrastructure and property investments both under government spending and or private investment as well public private partnership. For the fiscal year 2010, the government spending for infrastructure provision accounts for almost 108 Trillion IDR and the next coming year account for 126 Trillion IDR (2011) in which public work projects covering road networks, water resources and human settlement will get the public funding almost 56 Trillion IDR (2011). It was estimated that Indonesia needs almost 1,500 Trillion IDR for infrastructure procurements (Bappenas, 2005).

2. MACRO ECONOMY REVIEW & OUTLOOK

2.1 Overview of National Economy

The Indonesian economy is growing significantly since it was hit by Asia economic crisis in 1997. Now it is considered to be in stable state and to growth at 6.06% (2008) but it slightly decreases at 4.5% (2009) due to affected by the global financial crisis. During 2006-2009, economics of Indonesia were increased by 5.5 percent (2006), 6.3 percent (2007), 6.0 percent (2008) and 4.5 percent (2009). Meanwhile, in the first semester in 2010 compare with second semester in 2009, grew by 2.1 percent and if it is compared with first semester in 2009 grew by 5.9 percent (CBS, 2010). Furthermore, the value of GDP at 2000 constant prices in 2006 was IDR 1,847.1 trillion and increased in the year 2009 to become IDR 2,177.0 trillion. In the first semester in 2010 GDP at constant prices was IDR 1,131.8 trillion.. The value of GDP at current prices in the year 2006 was IDR 3,339.2 trillion and always increased in the next year to become IDR 5,613.4 trillion in the year 2009, meanwhile, in the first semester in 2009 GDP at current prices was IDR 3,068.6 trillion (CBS, 2010). Other component of GDP which have significant contribution to GDP is Gross Fixed Capital Formation (GFCF) and export of goods and services. The growth of GFCF was 24.1 percent in 2006 and increased higher became 31.1 percent in 2009 and 31.4 percent in first semester 2010. (CBS, 2010)

The business trend index in fourth quarter of 2006 was 107.3 showing that business condition in general is better than third quarter of 2006. This business condition is growing better since increased revenue due to increasing production capacity and number of working time. Higher business revenue occurs in the finance sector, property and services. The higher increased workforce occurs in the construction sector. The highest business index is 115.35 occurring in the construction sector. It shows that this sector is the most increased sector compared to other sectors. However, the agriculture sector has decreased its index (95.12%). The business trend index during first quarter of 2007 was

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expected about 108.79. During 2007, business condition is expecting higher than 2006 and in this year, construction sector will have higher index.

Consumer trend index across greater Jakarta during last quarter of 2006 was 106.96 showing economic condition of consumers are in better condition. Increased value of consumer trend index is due to increasing household income and consumption of main commodities. Higher consumption occurs in the housing expenses (energy and water), transportation, and education, while recreation expenditure decreased. It was expected that economic condition of consumers during 2007 is much better than 2006.

2.2 Main Economic Indicators

The Indonesian economy is in a stable shape towards increased growth. The Indonesian gross domestic product for 2004 in constant 2000 real prices was RP. 1511 Trillion which represents a 1.03% increase on the previous year. To January 2005 the gross domestic product grew at an annual rate of 5.13% in Central Bureau of Statistics data (CBS, Economic Indicators, January 2005). During the same period the consumer price index standing at 118.53 in January 2005 grew by only 1.43 points against 0.57 the previous year (2002=100). The interest on 90-day bank deposit bills was 6.65% in October and the 10-year Treasury Bonds returned 8.31%. Rising cost of materials including that for crude oil leading to an increase in inflation from 5.06% in 2003 to 6.4% in 2004 and the cyclical Rupiah devaluation of 20% against the US\$ has forced the government to instigate minimization of energy consumption, spending and subsidy provisions nationwide. The unemployment rate however, increased from 15% in 2003 to 16% in 2004. Despite current uncertainties about the international economy and the downturn in balance of payments from US\$28.6 Billion in 2003 to 23.5 Billion in 2004, the rate of economic growth is forecast to continue to the end of 2006 at 6.5%, with the domestic economy proving to be relatively resistant to adverse global economic conditions.

The Indonesian economy continued to grow slowly between 1999-2004 after the Asia Economic crisis had affected all sectors in the regions since 1997, but will obviously be affected by what occurs in the global market. Although difficult to predict, the indications for the Indonesian economy are positive for the years after 2004 judging from the information shown in Table 1 This table shows that the Indonesian economy is getting better.

Table 1. Main Economic Indicators

Indicators	2005	2006	2007	2008	2009	2010 (forecast)
Economic Growth (%)	5,7	5.50	6.28	6.06	4.5	6
Construction Growth (%)	9.90	9.00	10.40	10.50	7.1	7-8
Inflation (%)	17.11	6.60	6.59	11.06	6.5-7,5	5,67
Foreign Exchange (Rp/US\$)	9,830	9,167	9,300	10,895	10,150	8,950
CBC-3 Months (%)	12.83	9.75	8.50	8.67	7.36	7.25
Oil Price (US\$/barrel)	41.00	64.00	94.00	99.40	71,17	85

Source: Bank Indonesia, Finance Department of RI, www.oilprice.net (2009) Updated

According to the latest CBS the real gross domestic product (GDP) expanded by 6,06% (2008), indicating that the economy is picking up, as the corresponding value for the previous year was 6,28% (2007). In the past the Indonesian economy was relatively resilient against minor adverse international economic conditions. The control exercised over the relatively long recovery period since the economic crisis of 1997-2000, through fundamental economic remedies, has provided a good basis for managing the present uncertainties thereby indicating opportunity for gradual expansion and continuing

sustained growth in the key sectors of the economy. These include in particular the construction, agriculture, manufacturing and services sectors. In terms of consumption and investment (not in the table), for the first half of 2005 compared to the first half of 2004, retail sales at current prices increased by 16%, new capital expenditures by 27% and new government expenditures were up 10%.

Table 2. Macro Economic Development Indicators

	(1,000,000 IDR)					
	2005	2006	2007	2008	2009	2010 (forecast)
GDP at constan prices 2000 Rp. Billion	1,750,815	1,847,127	1,963,092	2,082,104	2,165,388	2,286,650
GDP at current market price	2,774,281	3,339,217	3,949,321	4,954,029	5,152,190	5,440,713
GDP growth (%)	5,7	5.50	6.28	6.06	4.00	5,6
GDP growth (%) for agriculture, forestry and fishery sector	2.72	3.36	3.43	4.77	3.57	2,9
GDP growth (%) for manufacturing sector	4.60	4.59	4.67	3.66	4.38	3,6
GDP growth (%) for services sector	5.16	6.16	6.60	6.45	6.09	4,6
GDP growth (%) for mining sector	3.20	1.70	2.02	0.51	1.86	3,5
GDP growth (%) for construction sector	7.54	8.34	8.61	7.31	7.95	7,3
GDP growth (%) Financial, Ownership and Business Services	6.70	5.47	7.99	8.24	7.10	5,5
GDP growth (%)Transportation and Communication	12.76	14.23	14.04	16.69	14.43	11,9
GDP growth (%)Trade, Hotel and Restaurant	8.30	6.42	8.41	7.23	7.59	9,3
GDP growth (%)Electricity, Gas and Water Supply	6.30	5.76	10.33	10.92	8.33	7,2
Population (number)	219,852	222,747	225,642	227,779	230,633	237,556
Population growth rate (%)	1.79	1.32	1.30	0.95	1.25	2.9
Labour force (number)	106,280	106,390	109,940	111,879	113,852	116,000
Labour force growth rate (%)	1.59	0.10	3.34	1.76	1.76	1,9
Unemployment rate	10,854,254	11,104,693	10,547,917	9,427,590	9,258,964	8,595,600
Unemployment growth rate (%)	5.88	2.31	(5.01)	(10.62)	(1.79)	(7.16)
Inflation rate	10.40	13.33	6.40	10.31	6.02	5.67
Short term interest rate (%)	16.83	17.58	16.13	16.62	17.12	17.56
Long term interest rate (%)	16.23	15.07	13.00	13.90	14.87	15.18
Changes in Consumer Price Index (2007=100)	141.50	148.34	155.58	170.18	186.16	118.37
Average change against USD\$	9,830	9,020	9,300	10,895	10,150	8,950

Source: CBS (2009) & Central Bank of Indonesia (2009)

3. OVERVIEW OF THE CONSTRUCTION INDUSTRY

4.1 Construction Investment

The construction value completed can be seen in Tabel 3. The Government of Indonesia has expressed her desire to speed up infrastructure development in order to accelerate economic growth to levels of 7.8% through increasing the ratio of Investment to GDP to 28.4% from 19.6%, opening new job opportunities to reduce unemployment and poverty alleviation to 5.1% and 8.2%. The above investment driven development plan can be seen in Table 4 which depicts infrastructure demand between 2005-2009 to be Rp.145 Trillion or US\$15.825 Billion. A more accurate picture can be obtained in Table 5 which illustrates for construction investment and maintenance demand in the Department of Public Works to total Rp.73.59 Trillion; broken into Bina Marga (Roads and Bridges) Rp.21.27 Trillion, Sumber Day Air (Water Resources) Rp.34.53 Trillion, Cipta Karya (Human Settlements) Rp.14.60 Trillion, and Other Public Works Rp.3.18 Trillion.

Table 3. Value of Construction Completed by Type of Construction
2004 – 2009 Based on Contract Price

(1,000,000 IDR)

TYPE OF CONSTRUCTION		2004	2005	2006	2007	2008	2009*
1	Residential	4,795,995	7,495,904	9,305,172	9,305,172	11,263,484	13,633,931
2	Non residential	18,581,659	20,701,163	22,069,558	23,528,407	29,613,637	37,272,710
3	Electrical installation	3,825,819	3,174,567	3,363,393	3,563,451	3,775,409	3,999,974
4	Gas and Water supply installation	114,635	431,511	371,544	319,911	275,453	237,174
5	Sanitary installation	69,988	206,000	194,926	184,447	296,659	477,137
6	Foundation	353,875	1,155,892	850,095	625,198	1,127,658	2,033,936
7	Sound system, AC, lift, etc	2,038,887	1,090,505	1,268,817	1,476,285	1,261,856	1,078,573
8	Water supply network	447,877	487,919	512,374	538,055	681,455	863,073
9	Oil and Gas pipe network	759,422	650,974	648,546	646,127	1,031,995	1,648,304
10	Electricity network	1,559,105	439,088	1,027,867	2,406,148	3,653,882	5,548,641
11	Road and bridge works	15,083,795	18,844,750	19,897,065	21,008,143	25,345,791	30,579,053
12	Irrigation/drainage	4,975,447	3,845,006	4,553,470	5,392,472	6,999,582	9,085,657
13	Electric power supply and Telecommunication Network	20,973	2,823,137	1,137,230	458,105	218,031	103,770
14	Construction or improvement of airport, harbor, bus station, etc	1,440,669	1,688,968	1,598,572	1,513,014	1,112,716	818,325
15	Other construction works	1,936,391	4,282,534	5,144,678	6,180,386	7,827,060	9,912,468
	TOTAL	56,004,537	67,317,918	71,943,309	79,391,287	94,484,668	117,292,725

Source: CBS (2009)

Table 4. Construction investment plan (2008 – 2009)

MODEL PROJECTS	USD \$Million
Central Java Coal Fired Power Plant 2 x 600 MW	1,200
Pasuruan Combined Cycle Power Plant 1 x 500 MW	275
Medan Kuala Namu Tol Road 60 kms	142
Solo Kartosono Tol Road 165 kms	928
Margagiri Ferry Terminal 0.9Million Vehicles, 1.2 Million Passengers	97
Teluk Lamong Seaport (Tanjung Perak Port Expansion)	275
Bandung Water Supply Project	26
Dumai Water Supply Project	44
Tangerang Water Supply Project	37
Palapa Ring Telecommunications Projects 7 ring FO 30000 kms	1,500
Total	4,524

Table 5. Public works investment plan (2008 – 2009) (USD Million)

Public Works	Strategic Plan 2008	Indicative Investment 2008	Strategic Plan 2009	Proposed Investment 2009
Road Networks	8.80	10.02	10.30	11.25
Water Resources	13.20	15.80	15.10	18.73
Human Settlement	5.60	7.13	6.49	7.47
Others	0.88	1.42	0.95	1.77
TOTAL	28.48	34.37	32.84	39.22

4.2 Construction Companies

According to Law No. 18/1999, construction company consists of consulting and contracting company. Consulting company can be designer and also supervision engineer. Under a new guideline for construction services certification and registration, the number of certified consulting companies was 4,389 firms consisting of 3,280 firms (G1-G2), 824 firms (G3) and 285 firms (G4) and registered by National Board of Construction Services Development (NBCSD) in 2008. In the same year, the number of certified contracting companies was 112,071 firms registered by NBCSD 2008. These contracting companies consist of G1 up to G7 qualification firms. The number of small contracting companies (G1-G3) was 101,293 firms (90%). The number of medium contracting companies (G4-G5) was 10,083 firms (9%) and the big contracting company (G6-G7) is only 695 firms (1%). Of the figure, 263 Contractors already hold ISO-9000.

The Number of foreign construction companies has been increasing since a couple of years ago. In this year, the number of foreign contracting companies in Indonesia is 79 firms mostly coming from Japan and it is about 67 consulting companies mostly also coming from Japan. In the period of January to July 2007, 19 foreign contractors and 9 consulting firms were endorsed by the government.

4.3 Construction Employees and Workforce

Total number of registered engineers is about 106,283 professional engineers (2008). The following table 6 shows the distribution of certificate held by professional engineers according to their expertise.

Table 6 The Number of Professional Engineer

ENGINEER	QUALIFICATION				TOTAL
	BEGINNER	LOWER MIDDLE	MIDDLE	HIGHER	
Electrical Engineer	165	5,225	3,869	433	9,692
Landscaping Designer	327	4,423	1,099	213	6,062
Civil Engineer	4,841	58,368	18,182	1,917	83,308
Mechanical Engineer	62	2,282	710	74	3,128
Other	37	253	438	71	799
Architecture	265	1,268	1,497	264	3,294
Total	5,697	71,819	25,795	2,972	106,283

Source: NCSDB (2008). Note: a professional engineer may hold more than one certificate of competence.

The number of workforce working in the construction sector is more than 5 million people in average. The following table 7 shows annual number of construction workers.

Table 7 The number of construction workforce

Year	2004	2005	2006	2007	2008	2009
Construction Labour	4,540,102	4,417,087	4,697,354	5,252,581	5,547,324	5,858,606

Source: CBS (2009)

4.4 Construction Productivity

Productivity in construction varies according to many factors. Current research findings (Wuryanti, 2005) on productivity measurement show different level of productivity in construction works under observation. The following table 8 figures out some findings from productivity analysis of 4 composite columns of reinforce concrete.

Table 8 Some findings of productivity analysis

No	Construction Works	Unit	Man-Minute
01	Steel cutting for reinforce concrete	M ³	21.90
02	Steel fixing for reinforce concrete	M ³	28.50
03	Concreting for sloof foundation	M ³	16.56
04	Formwork dismantling	M ³	4.10
05	Soil stabilisation under floor	M ²	36.10
06	Concrete work	M ³	17.11

Source: Wuryanti (2005)

4.5 Construction Cost

Indonesia is a large country with high diversity. It is very difficult to get a standard figure of construction cost across archipelago. In Jakarta, skill worker may have 100,000 rupiahs daily wage while in other regions such as Yogyakarta only 40,000 rupiahs. It is similar to natural material price such as sand and stone. In Central Java where sand and cobble stone are easier to get, the cost of sand is roughly 70,000 up to 90,000 rupiahs for 1 m³. It is quite common to buy a truck of sand which is about 2.5 – 3.5 m³ will cost about 300,000 up to 350,000 rupiahs.

Table 9. Indices of Permanent Workers, Mandays, Wages & Salaries and Value of Construction Sector 2004-2008(Quart.II)

Year and Quarter	Permanent Workers	Mandays	Wages & Salaries	Value of Construction
(1)	(2)	(3)	(4)	(5)
2004				
Qrt I	97.77	94.38	94.27	95.36
Qrt II	96.06	92.78	94.5	87.24
Qrt III	100.57	106.77	107.03	106.47
Qrt IV	99.29	104.66	102	104.08
2005				
Qrt I	104.75	107.72	108.52	110.85
Qrt II	110.21	109.19	111.53	115.23
Qrt III	102.77	108.71	109.54	114.01
Qrt IV	100.38	110.48	110.46	111.27
2006				
Qrt I	108.27	107.83	110.82	110.01
Qrt II	108.44	105.31	110.8	110.63
Qrt III	100.58	103.74	103.84	105.97
Qrt IV	100.46	112.14	115.97	113.09
2007				
Qrt I	101.59	98.28	97.54	99.92
Qrt II	100.77	100.07	101.10	101.37
Qrt III	102.13	108.57	111.75	112.51
Qrt IV	102.67	107.62	108.80	109.02
2008				
Qrt I	101.99	110.78	115.02	111.96
Qrt II	103.92	109.71	113.35	113.51

Source: CBS (2009)

Table 10. Construction Material Prices (Feb 2009)

PASIR + Batu		
Sandclayey for Embankment (per m3)	Rp	175.000
Soil for Embankment (per m3)	Rp	130.000
Sand for Bricklayer(per m3)	Rp	145.000
Sand for Masonry (per m3)	Rp	150.000
Sand for Concrete (per m3)	Rp	195.000
White Sand Bangka (per m3)	Rp	175.000
White Sand Rangkas (per m3)	Rp	170.000
Sandy Gravel (per m3)	Rp	110.000
Gravel 1/2 (per m3)	Rp	150.000
Gravel 3/4 (per m3)	Rp	165.000
Fly Ash (per m3)	Rp	145.000
Boulder (per m3)	Rp	135.000
Sand with gravel (per m3)	Rp	135.000
Biscos (per m3)	Rp	135.000
Gravel (per m3)	Rp	210.000
Stone (per m3)	Rp	130.000
Pressed Brick (Unit)	Rp	413
Normal Brick (Unit)	Rp	303
CEMENT		
Cement by Cibinong (kujang) (50 kg)	Rp	46.000
Cement by Tiga Roda (50 kg)	Rp	46.000
White Cement by Tiga Roda (40 kg)	Rp	62.500
Cement Gresik (50 kg)	Rp	43.550
Cement by Holcim	Rp	44.850
CONCRETE STEEL		
Diameter 6mm (12m)	Rp	21.000
Diameter 8mm (12m)	Rp	32.000
Diameter 10mm (12m)	Rp	49.000
Diameter 12mm (12m)	Rp	64.000
Diameter 16mm (12m)	Rp	110.000

Source: www.duniarumah.com, accessed Sept 2009

4.6 Export & Import of Construction Services

The Indonesian construction has been working overseas since 1980s, particularly led by State Owned Contracting Companies such as Waskita Karya, Adhi Karya, Hutama Karya in Asean and Middle East countries. Although, the construction export is not so progressive, it built confident level among construction companies working overseas. The number of construction companies doing export is still less than foreign companies coming in Indonesia.

Current figure shows that most foreign construction companies in Indonesia come from Japan, followed by US, China and then Europe. The companies come over through loan agreement policy and international competitive bidding particularly in the oil and gas sector, power plant projects and large infrastructure projects under loan or grant agreement.

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THEME PAPER

Sustainable Urbanization in Real Estate Sector Indonesia

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Executive summary

Urbanization is a consequence of the developing countries, for instance Asia. In developing countries, the tension on growth and urbanization has huge correlation in sustainable housing, infrastructure and services. The trends to be eco-polis and urbanized have been appeared before Habitat II in Istanbul (1996), in which the people in the world aware that people live in the city and the world change into urbanization. The construction is important role in realization of sustainable urbanization and the industry is expected to contribute by executing its works in a sustainable way and the Role of city's stakeholders in dealing with the implementation of sustainable urbanization is very important. According to Gary Pivo, the Chair of the Department of Urban Design and Planning at the University of Washington, cities have moved to the forefront of global socio-economic change, with half of the world's population now living in urban areas and the other half increasingly dependent upon cities for their economic, social and political progress. Factors such as globalization and democratization have increased the importance of cities for sustainable development. Congress Real Estate Indonesia 2009 is expected to produce a plan of work programs, agreements and make recommendations to policy makers. The issue of the global financial crisis, the environment and the outbreak of new viruses, disruption of ecosystems due to global warming and the reduction of environmental resources into actual issue which is currently the world is facing economic problems, ecological and social.

Keywords – Indonesia, sustainable urbanization, real estate

1) Introduction

Urbanization is a consequence of the developing countries, for instance Asia. In developing countries, the tension on growth and urbanization has huge correlation in sustainable housing, infrastructure and services. The trends to be eco-polis and urbanized have been appeared before Habitat II in Istanbul (1996), in which the people in the world aware that people live in the city and the world change into urbanization. The world needs recently to achieve the goal of sustainable development and sustainable Urbanization is a major practical component of this. The construction is important role in realization of sustainable urbanization in practice and the industry is expected to contribute by executing its works in a sustainable way, and by engaging with the wider community in the planning, design and creation of buildings and infrastructure which promote the city's performance in sustainability terms. The Role of city's stakeholders in dealing with the implementation of sustainable urbanization is very important. City authorities are particularly key to sustainable urbanization progress because of the coordinating the city policies and have the power to directly implement those policies. The stakeholders consist of individuals, households and community neighborhoods contribute towards sustainability goals in ways within their limited powers, but effective progress lies squarely with city authorities working in harmony with their construction industries. To benchmark the current progress in city towards SU implementation, as evidenced by the effects on both the processes/practices of the construction industry and its outputs as well as a further aim is the identification of good practices in light of comparisons with other Asian Cities. A framework of recommendations towards further development of an sustainable urbanization culture in city will be made, structured to suit the different types of stakeholder involved in the construction process.

2) Sustainable Development and Urbanization

Turner, Tom (2009) wrote that the sustainable urban landscape reaches the balance between “environmental, economic and social needs”. The landscape planning becomes important in analyzing the sustainability of recent and future land use in according to environmental capacity and landscape character. The changing of landscape form will be affected by social, economy as well as environment, the landscape planning is holistic because in their planning must integrate the whole aspect such as social, culture, economy and aesthetic. Landscape architect has their tasks: to help the community, to enhance urban landscape structure, to provide activities live in harmony with nature. That is in accordance with which stated by the United Nation Organization:

Sustainable development is a program to change the process of economic development so that it ensures a basic quality of life for all people and protects the ecosystems and community systems that make life possible and worthwhile; Sustainable development is development that delivers basic environmental, economic and social services to all without threatening the viability of the systems upon which these services depend.

The United Nations Conference on Environment and Development having met at Rio de Janeiro from 3 to 14 June 1992, Reaffirming the Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm on 16 June 1972, and seeking to build upon it, With the goal of establishing a new and equitable global partnership through the creation of new levels of cooperation among States, key sectors of societies and people, Working towards international agreements which respect the interests of all and protect the integrity of the global environmental and developmental system, Recognizing the integral and interdependent nature of the Earth as our home with the first Principle 1 that human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature. Specifically based on the Research of Triangle Institute in 1996 sustainable urbanization set the city with decision of Ecology, Economy, Equity, Engagement and Energy. Because of the mass concentration, human settlement is a consumer for natural resources (land and water). The modern cities use the “non-renewable resources” and destroy the environment.

According to Gary Pivo, who is the Chair of the Department of Urban Design and Planning at the University of Washington, cities have moved to the forefront of global socio-economic change, with half of the world’s population now living in urban areas and the other half increasingly dependent upon cities for their economic, social and political progress. Factors such as globalization and democratization have increased the importance of cities for sustainable development. This statement is generally accepted that cities not only show the potential factor to sustainable development but also hold promising chances for social, economic as well as environmental improvements at local, national, and global levels. This is supported also by the World Commission on Environment and Development (1987) that sustainable development has been defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Recently the concept of sustainable development has begun to be implemented in urban planning. The principles below show us the six C developed by Gary Pivo:

1. Compactness: The first principle is that more compact, densely developed cities are less auto dependent, less expensive to serve with infrastructure, and put less pressure on nearby farm, forest, and environmentally sensitive area
2. Completeness. A second principle of sustainable urbanization is that communities should be made more complete. A complete community is one in which the segregation of urban activities has been reduced. The residents of a complete community have the opportunity to work and shop

in close proximity to their homes. The elimination of long commutes reduces traffic congestion, air pollution, energy use, and water pollution

3. Conservation. Regarding the use of a number of tools (in addition to development regulations) to protect environmentally sensitive areas. Such tools may include tax incentives, fee-simple and less-than-fee-simple land acquisition, cluster development, and the use of transferable development rights. In the category of development regulations, the elimination of free or abundant parking promotes alternatives to single-occupancy driving, thereby saving energy, reducing air pollution, and helping to control the build up of greenhouse gases

4-6. Comfort, coordination and collaboration. Comfort takes note of the fact that it is important to create public spaces and routes that are pleasant for pedestrians and for non-auto users, such as bicyclists. A study in Portland found that more people walk when there are continuous sidewalks, streets are easy to cross and not confusing, and the topography is conducive to walking.

According to the Asian Development Bank (ADB) in 2009, Sustainable development is not possible without sustainable urbanization. In his speech to the Regional Workshop on sustainable Urbanization, Klaus Gerhaeusser, Director General of ADB's East Asia Department, said rapid urbanization presents significant challenges for ADB's developing member countries. He said that urbanization strategies should be "green" with a strong emphasis on energy efficiency, public transport, and sound urban planning and construction. "Only through a green approach to urbanization is it possible to ensure the quality of air and water, and effective waste treatment, which are essential to a healthy living environment, and to mitigate the impacts of climate change. He also stressed that urbanization must be inclusive in its integration with rural development, take place in partnership between the public and private sectors, and be linked to regional development initiatives, with successful experiences and lessons to be shared among cities and countries. Meanwhile from the discussion according to the Department of Economic and Social Affairs Division for Public Administration and Development Management Sustainable Urbanization in the Information Age (P. Celik, Aliye, Zyman Roxana and mahdi, Rafat) one of the principal pursuits of the United Nations is to promote economic and social advancement of all peoples, and the organ which leads this effort is the Economic and Social Council (ECOSOC). Working not just for present generations but also for the future, the Council advocates a truly sustainable kind of development – a development that reflects a careful balance of economic growth, social development and environmental protection. The key mechanism through which it does so is the Council's Commission for Sustainable Development (CSD), a high-level forum on sustainable development. This functional commission was created to ensure effective follow-up of the Earth Summit, held in 1992 in Rio de Janeiro. Its functions have since expanded so that it may respond to new needs. The Economic and Social Council itself has discussed progress made towards sustainable development during the 2008 Annual Ministerial Review (AMR), held in New York in July during the Council's Substantive Session. Selected as 2008's Review theme, sustainable development was a broad subject, but today's topic – sustainable urbanization – is a significant component. They called for better sustainable planning for urban growth based on the experiences of the twelve cities. The Forum was successful in achieving its initially defined objectives. It presented a valuable opportunity to the participants to exchange their experiences of identifying best practices in sustainable urbanization with ICT as a strategic instrument

The international Decree and National Action as seen at Chapter 7 Agenda 21 Earth Conference in Rio 1992 and Habitat Conference II 1996 held in Istanbul regarding the sustainable human settlement, paid attention on the planning of green open space and building. *Urban ecology* has supported *vulnerable urban communities*, as well as *non-human harmless species*. It means that the settlement placed not far from centre of transportation. If it is added with compact land use and nature resource as well as the appropriate technologies such as solar passive, gardens, composting, drainage or open spaces, that is what ecological city about. The green city model is not just energy agglomeration, but also efficient energy. There are 5 (five) elements namely land use dan urban form, housing and environment, transportation, urban ecology and green building (Kamil, 2007).

In 1996 the German Government has successful by greening 28.8 ha green roof (*dachgarten*) and recently 1 of 10 apartments has already greened. Since 2000 Hongkong and Japan obliged the management of building to green the roof minimal 20% from the total roof or about 250-1000 sqm. From different resources reported that roof green is able to minimize the city temperature about 4,2 degree Celcius, absorb pollutant and heat island, sun radiation until 80%, as well as noise until 50 dB, natural insulation and decreasing the indoor temperature until 3-4 degree lower than outside. In other hand Madrid has already increased the ecological urban development associate with the University of Agribusiness Project called *Environmental Protection in Berlin* through Initiative directed in the greenery of building surface under logic thinking that urban and periphery environment as one system, decreasing of noise immission, dust and other stress factors, increasing the city bioclimatic condition, planning of green open space (*urban vegetation areas*) and experience of international networking of agribusiness.

3) Real Estate Companies Association of Indonesia (REI) and Overview of Real Estate Market

REI was founded 1972 in Jakarta, is an associate organization of business firms on an equal basis, activities and professions in the field of real estate and aims to enhance the dignity, quality of life of the people of Indonesia through strengthening and development of housing and settlements. At this time 1300 REI member companies throughout Indonesia. might not imagine after a quarter century later REI will be huge. REI forward together government and community boards determined to make provision for the whole society, especially *one million housing program*. The interest rate home loans (KPR), which now ranges from 14-18% led to sales of lower-middle-class homes fell 32%. The decline was predicted to continue until the first quarter - 2009. Similarly, exposure of Indonesia presented the Executive Director Property Watch (IPW) Ali Traghanda after it was researching the impact of rising mortgage rates on housing demand. It was stated by him in connection with the national banking policy that adjusts the previous mortgage rates ranging from 9-13% to 14-18% per year. The results for the lower middle class housing, each increase of 1% mortgage rates will lower demand for homes ranging from 4-5%. By calculating that mortgage rates rose 5% in the past month, according to him has lowered demand for lower-middle-class home to 20%. In addition, the IPW noted a pending request from the public house as much as 12%. Thus, the demand for housing slumped 32% in just one month. The Prediction of sales decrease meanwhile, based on data from Bank Indonesia (BI) realization of KPR / KPA banking until third-quarter 2008 totaled USD 120.89 billion or 62% of total property loans which reached Rp 196 trillion. Prior to the increase in mortgage interest rates, residential price survey of BI in the same period mention the increase in house prices, both quarterly and annually. Quarterly (qtq), the price index rose 0.97%, lower than the increase in the previous quarter (1.86%). The price increase is principally due to higher fuel prices. Price increases expected to continue in the fourth quarter of 2008. Based on the type of house, on a quarterly basis (qtq) the highest price increases experienced by house small type. For instance financing residential property in the third quarter of 2008 remained largely sourced from internal funds (56.0%), followed by funds coming from banks (28.5%) and customer funds (12.6%). Meanwhile, in the purchase of residential property transactions, mortgages remains the facilities used by most consumers (73.6%) with an interest rate of 12%, followed by a gradual cash payments (19.8%) ,and a small portion is in the form of hard cash (6.2%). Ali said the decline in housing demand lower middle class potentially continue until the first quarter of 2009. Therefore, he urged developers to be cautious because of potential home sales slump. In the first quarter of 2009. Ali predicted, sales of middle class homes by the developer will go down 29%. This trend can only be detained with a reduced interest rate (Indonesian Bank /BI Rate). Among the developers hope, if the BI rate is lowered, banks immediately responded by lowering mortgage rates. Since BI while maintaining the BI rate at 9.5% level and then fell in early December 2008 to 9.25% of the national bank was not cut interest rates credit. They fixed mortgage rates raises the rate (KPA) be 14-18%. Some developers expect the BI rate back down. According Alkudri, Chairman of the Department of Real Estate DPP HIPMI, national banks should not only raise interest rates quickly when the BI rate loans go up, but the same treatment is also done when the BI rate to fall. Because of that advice, the government should do the rescue of the high and the difficulty developers and consumers to get bank credit. When the BI rate began to fall now ,

mortgage rates should be lowered. If there was mortgage interest cost, which bought the house so much, labor continue to be needed and the industry-will continue to run. The cycle was to be maintained and should not be stopped.

4) The mapping/ master planning of the decision-making system in planning and land using of the city, the policies designed to promote SU, the instruments in place to encourage/enforce the policies, and the methods in use for assessing city SU progress.

The spatial planning in Indonesian cities are still following the trend of development with less out considering in ecological boundaries and environmental capacity. The sustainability of ecological function in allocation of land use and the Role and function of the city as an ecosystem and supporting of the updating of spatial data is are not yet considered. The analysis as well as prediction of ecological aspects, conservation of natural spaces (ecologically sensitive areas)- such as forest, mangrove, ricefeld, river and artificial spaces such as drainage, polder, breakwater, seawall, the spaces for conserving ecological function and optimalization of buid up area such as compact city, mix land use, vertical development, infill development, mass transportation as well as pedestrian way should be fit in the development.

It was predicted in 2030 that mOre than 60% of world population will be live in cities. The growth will have huge impact to the water supply and garbage. Recently one of three citizen lives marginally. Unoted Nation suggest to “*Greener planning for cities*”. The first idea to ‘greening’ the structural architecture building just recognized recently. A lot of new property development claim that their development is “green”. Green is becoming a new trend nowadays. Some Indonesian architects and engineers have been designing and applying the green principles in the design and achieve what supposed to be a green building standard. It is not merely a trend, it has to be a lifestyle change, the demand of the consumer of a “green” living environment meets the planet current conditions, climate change and degrading environmental conditions. The theoretical frame work is that it is timely and important to establish a Green Building Council. “Green” has become the shorthand term for the concept of sustainable development as applied to the building industry. Green buildings, including the appropriate site development as a sound landscape planning and design also known as high-performance “buildings” in terms of i.e. materials efficient used, wise settings in the case of socio-economy-physical environment development as a whole, are intended to be environmentally responsible, economically profitable, and healthy places to live and work. If not, then all of us will be suffer caused by the negative environmental impacts as human beings as part of the planet biological creature, we should be part and follow the natural law of the globe natural process (Purnomohadi, Ning 2010)

5) Finance sources for in sustainable urbanization in real estate sector

The difficulty to obtain construction loans from banks, which met several real estate developers claim began to look for alternative sources of financing. The need in looking for alternative funding for the project remains a way to fulfill a commitment to the market. Alternatively start from the optimization of internal funds through partnerships with strategic investors. But it was not easy considering the reputation of the developer to be one determinant in the success of making a financing in the market. For developers who have a good reputation in project development and track record of managing credit is not too difficult to get financing. Although developers are still trusted by the bank lenders, but money is not the only bank financing for developers as sated by President Director of PT Bakrieland Development Tbk. According to him, to accelerate sales by *pre-sales project* is the best strategy in getting cheap financing. Funds obtained from pre-sales results combined with loans to finance construction projects and other operational costs. He admits project financing the property when it was heavy. However, for developers who have a business focus in the property will fight tooth and nail to keep the road project. They will struggle to maintain a reputation for not disabled in

the market. For some developers, bridging bank funds when cash flow was just so sluggish. If it no longer funds the bank paid more. So keep the road projects with minimal risk.

Meanwhile In targeting the One Million Houses Governments's Program in developing the simple healthy housing target for the lower middle class in some areas are not achieved. Local governments are considered to be one factor inhibiting. Efforts to provide affordable housing for lower middle society is not an easy matter. Realization of simple healthy home (RSH) in some areas many do not reach the target. Apart from the low purchasing power, local government policies were sometimes made the program is blocked. This then makes the Minister for Public Housing asked local governments to maintain the investment climate of public housing development to lower middle class by removing fees and levies that may incriminate the developer in the current global economic crisis. Government should help continue the public housing program in support of a more conducive climate for development. The Minister of Public Housing acknowledge that the amount of illegal fees and levies in the licensing process of housing construction is still a constraint in many areas. For that, the government asked to distinguish the granting of licensing for luxury housing developers with middle to lower housing. Licensing for middle to lower housing should be faster, and levy a disadvantage should be eliminated. He also called for granting permission on public housing sites are selectively provided in accordance with spatial planning and regional regulations. Permit the location of housing should not be spent for productive land prone to floods. With efforts to simplify the licensing process, RSH is expected to target one million this year could be achieved. This year, there are additional targets the Ministry 170 thousand new RSH throughout Indonesia. Licensing issues it is still a wedge for developers to build RSH. Hope for local governments to facilitate the licensing process and remove the levy so that the investment climate of permanent housing construction continues to increase leveled Real Estate Indonesia (REI) of West Sumatra. "Of the 19 districts / cities in West Sumatra is not uniform in maintaining the investment climate because there is residential development charges and permit services rather convoluted. The Padang Government has wiped Building Permit (IMB) and simplify the licensing service. Furthermore investors should be entertained by local governments to facilitate the licensing process and the release fee. That way, public housing construction investment continued. With the ease of the licensing process, both the developer and the community will be helped. Developers can more freely develop the project, and the people will more easily obtain the desired occupancy. Moreover, the provision of houses by developers are assisting the government. Not only in the form of houses, but also infrastructure. The infrastructure built by the developer later handed over to local governments. Because after a community-owned, assets such as roads automatically become government property. To support all that, he hopes local governments and related institutions such as land agencies to support the sustainability and housing development conducive investment climate. With the convenience of the developer, would build houses for the people will still continue

Meanwhile vice Governor of Riau said the provincial government Riau promised to support housing development through the improvement of road infrastructure and the availability of electricity. Riau Province, with the assistance of central government, plans to add 30 megawatts of power generation in order to overcome the electricity crisis in the region Unfortunately, the problem that is considered the licensing process is often a stumbling block for developers to build RSH. The optimistic arget due to The global financial crisis to overshadow the actual construction of RSH and a modest home in some areas. As in Jambi, the target of 6500 units of houses, who realized years ago only 3500 units. These targets are not achieved because of the impact of global crisis, in which developers and consumers of capital difficulties did not have the funds to buy housing. In 2009, REI with 115 members and only 85 active members of the target to build 5,000 units and RSH is expected to be realized 100 percent. This optimism over the improving economy or the recovery of the global crisis. In the city of Jambi, today, more dominant RSH housing development that received subsidies from the government. Set a maximum sales value of 55 billion dollars per unit. RSH was built for middle to lower economic citizens or low class civil servants. While for the house type and house red RS is intended for middle to upper economic class.

In connection with the global financial crisis that began also felt by Indonesia, then, a national working meeting in 2008 recommended to the Government as follow.

1. National: appeal that this crisis is a national problem, which needs to be addressed collectively by all actors in the Indonesian economy, society and government. Ensuring the interests of the nation rather than personal or group interest.
2. Liquidity Banks and mortgage: To maintain the availability of subsidized housing for RSH and Rusunami with interest rate based on current decree of Minister of Public Housing. Mortgage and commercial NAC should not be stopped, interest sought a maximum of 4% above the BI rate. Urge the government / government agencies to increase the placement of funds in banks executor for the benefit of mortgage and construction loans as well to ease of rescheduling banking facility and acceleration of institutional savings for housing (regional / national housing fund)
3. Taxation : Final Income Tax Regulations concerning the Government to immediately published / released and responding to the current crisis situation for the government to liberate luxury sales tax for property for at least 2 years (2009 till 2010). RSH to be released following the price set by Menpera and applied at nationally VAT Rusunami Construction Services for construction should be released and Determination SVTO increase based on inflation in the region should be concerned, and specifically for the current crisis situation there is no increase
4. Ownership of Property for Foreigners. In order to place capital inflow property sector, is expected to have a significant breakthrough in a relatively short time in the ease of property ownership for foreigners, with the proposal as follows: The term of at least 70 years of Land Rights, Price lowest standard that can be purchased USD. 1 Billion and the dwelling units to be purchased is a new dwelling units and the ownership of foreigners in an area no more than 49%.
5. Energy. Propose to the government to review trade regulations in the field of electrical energy. and the application of Transition Connection Fee (BPMT) prevailing electricity in Java and Bali are also applied throughout Indonesia.

Innovation Programm such as annual exhibition in Housing Market is expected to restimulate the market in the area. For example housing transactions in Central Java in 2009 has plummeted by 40 percent due to lower purchasing power. This exhibition is although expected to increase sales, both for the developer and the lower middle upper middle, but the housing market slowdown in such many other areas in Indonesia. Slump in housing transactions due to people's purchasing power fell and interest rate mortgage loans (mortgage) is still high. The high interest rate has increased and heavy burden on the community, even though fuel prices have not increased. The developer expects mortgage rates could fall due to lower BI rate to as low as 7.5 percent. Because without a decline in mortgage interest rates, bank credit disbursement difficult absorbed.

6) Operation of the market -Products and services that related to sustainable urbanization in real estate sector

An Example the goal and plan 2008/2009 work program is to establish a constructive communication with all levels of management and all its members, stake holders, associations, partners and all elements of civil society organizations, Enhancing the role and capacity of DPD REI across Indonesia by improving the quality and professionalism of its members based on commitment and competence in the field of real estate as well as to develop synergistic cooperation among member-based regionalization and strategic partnerships with reality and the ideal approach, To coordinate with the vice-chairman of DPP REI in terms of program implementation for each area to the DPD in accordance to their needs and conditions of each region and Monitor developments in national and local organizations in order to improve to benefit the organization to the needs of its members. Provide socialization and discussion within the framework of the implementation of pilot certificate issuance Legality Real Estate Feasibility Standards within 6 (six) months including testing for areas that are ready to implement it and there will be an evaluation of 6 (six) months. To socialize

about REI's presence in those events and / or publications that are pro-actively encouraging companies to real estate REI Member. To coordinate with the vice chairman of the organization and membership in each DPD REI.9. Coordination in improving the function and role of the Secretariat and the Secretariat membership in terms of data systems to service, administration of membership data base as well as Continuing and optimize REI Membership Management Information System.

Continuing availability of credit financing and construction of subsidized housing for RSH despite the global financial crisis is done by continuing to coordinate and lobby the Government / agencies and cooperation that has been formed between REI and Ministry of Public Housing. Socialization of REI members regarding the mechanisms Konsuil with speakers from REI and agencies of foreign policy, Department of Public Works etc Renewal of MOU between REI with National Land Agency.

7) Real Estate market Outlook for sustainable urbanization

The Congress REI in 2009 has significance in the journey of REI organization in conjunction with the 9th FIABCI Asia Pacific Summit Secretariat and implemented after the establishment of the Indonesian government from 2009 to 2014. There are different the agenda of the annual fixed issues relating to the activities of the National Working Meeting of Real Estate Indonesia (REI Congress) 2009 . Congress REI 2009 is expected to produce a plan of work programs, agreements and make recommendations to policy makers. The issue of the global financial crisis, the environment and the outbreak of new viruses, disruption of ecosystems due to global warming and the reduction of environmental resources into actual issue which is currently the world is facing economic problems, ecological and social. Implications of the global financial crisis caused the value of economic growth in various countries to minus , except India, China and Indonesia are showing positive growth, as well as Indonesia's property sector in 2009 is predicted to still be able to exist. The potential market in the Asia Pacific property large enough, even Indonesia has become the country with the largest property market after the United States and China so that the property market in Indonesia has become a main attraction for investors and foreign buyers. Congress REI and 9th FIABCI Asia Pacific Regional Secretariat Summit brings two (2) themes for FIABCI theme: "Real Estate Strategy Into Global Market". While the theme of a national working meeting is: "Policy Strategies in Achieving Development Targets and the Provision of Infrastructure Facilities-Housing Settlement." Both themes were sorted aims to participate anticipate the development and growth of international property, in order to open new horizons as well as insights to provide an understanding and an opportunity for members of REI in Indonesia in the Global Era. REI also will continue to support policy measures to accelerate the realization of a balanced sustainable housing development and housing in particular the availability of basic infrastructure of electricity, clean water, while GNA strategic steps to improve purchasing power and financial support in the achievement of national Housing target. To trace the red thread flashback and reflect the policy directions and programs and residential housing,

One of the recent council named Green Building Council Indonesia (GBCI) should be in the context of sustainable urbanization. It is a not-for-profit organization that are committed to promote and implement green building concept and principles in Indonesia. This organization has to be supported by industries, professionals, media, government institutions, non-government and other organizations in collaboration to develop Indonesia's sustainable future. The vision is to encourage and develop the implementation of sustainable development with green building principles and market value considerations; improving the environmental awareness by changing our way of living, using the green building principles in designing, building and operating a property. This is aligned with the World Green Building Council (WGBC) 's vision; through leadership, collaboration, the global construction industry will transform traditional building practices and fully adopt sustainability as the means by which our environments thrive, economies prosper and societies grow to ensure the future health of our planet (Punomohadi, Ning, 2010).

Green Building Indonesia promoting Sustainable Building Concept In The Archipelago. The environmental impact of the building design, construction and operation industry is significant.

Buildings annually consume significant amount of energy, electricity, water and produce wastes. Development shifts of land usage away from the natural, biologically-diverse habitats to hard-space that is impervious and devoid of biodiversity. The far reaching influence of the built environment necessitates the action to reduce its negative impact, green building practices could significantly reduce or eliminate environmental negative impacts, improves existing unsustainable design, construction and operation practices. As an added benefit, green design measures reduce operating cost, enhance building marketability, increase worker productivity, and reduce potential liability from indoor air quality problems, i.e. 'the sickness syndrome'. In other words, green design has the environmental, economic and social elements that benefit all building stakeholders, including owners, occupant and the general public.

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