

SUBJECT

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Welcome and Introduction

It is my honor and pleasure to join the 17th World Planning Congress of EAROPH here in Onyang, Asan City, Korea. Let me, first of all, send my warmest welcome to all participants – speakers and session chairs. I want to thank the leaders in this locality who have offered first-rate services to this international meeting – Mayor Gill Young Lee and Governor Dae-Pyong Shim. Thanks are due to Minister Erna Witoelar, President of EAROPH and Minister Yoon Ki Kim. I also want to compliment the organizers of this Congress – Professor Soo Young Park, the President of the Organizing Committee, Professor Hee Soo Chung, Vice-President of EAROPH-Korea and the entire Korean staff who worked indefatigably during the last several months.

I have been to past EAROPH meetings and other international gatherings on planning and housing regularly during the last few decades. The 17th EAROPH World Planning Congress is historic in its scale, coverage of subjects, academic rigor and practical implications. What is being achieved in this Congress reflects the enhanced awareness about planning and housing issues and the increasing richness of academic and professional research in the post cold war period. In my view, we are at a critical juncture in history that demands a new vision and action in planning and housing.

The most basic needs to maintain decent human life are food, clothing, and shelter. To satisfy these needs, we must produce, distribute and consume goods and services. In this process--production, distribution and consumption--people use natural resources, capital, technology and humanpower.

People in general want to produce, distribute and consume more material goods. Therefore, many nations, in their pursuit of enhancing social well-being of people, prepare plans and strategies to promote economic growth. However, economic growth created unwanted destruction of nature in global scale--eventually making people aware that material progress could reduce social well-being of people. And without decent housing, people cannot be productive. Environmental planners and housers began to exercise more voice in policy making since the 1970s. The trends gained more support with some programs supported by the international agencies such as the World Bank's sites and services projects. The growth of NGOs in planning and housing during the 1980s and 90s added a momentum to increase attention and investment in planning and housing.

In this paper, I explore issues in environmental planning and housing to develop an argument that we need to redirect investment priorities to move toward a sustainable global civil society. The organization of this paper is as follows.

Section II: The Vision of a Sustainable Global Civil Society

Section III: Problems and Resource Allocation in Environmental Planning

Section IV: Problems and Resource Allocation in Housing

Section V: Shifting Investment Priority for Civil Security.

Section VI: Summary

The Vision of a Sustainable Global Civil Society

Vision is an ability to see something invisible. Without vision, we see only what exist in our immediate sight.

Proposal of a Vision

I propose *a sustainable global civil society* as a vision for planners and policy makers around the world.

What is *a sustainable global civil society*? It is defined as “a global society in which the basic human values such as peace, justice, freedom, equality, love, and a decent livelihood are practiced in every facet of people’s life.” In such a society, people’s basic mental and physical needs must be satisfied.

A life in a sustainable global civil society should be free from war, injustice, oppression and a lack of basic needs for survival. Normatively, planners’ and public policy makers’ role is to pursue the vision of a sustainable global civil society and to take actions for realization of such a life.

Definition of Sustainability

The World Commission on Environment and Development (WCED), established in 1987, proposed a concept of sustainable development. The so-called Brundtland Commission declared:

“...to meet the needs of the present without compromising the ability of the future generations to meet their own needs.”

In the meantime, the World Bank made the following statement relevant to sustainability (World Bank, 1988).

“...economic growth, the alleviation of poverty, and sound environmental management are in many cases mutually consistent objectives.”

The two definitions of sustainability are narrow in terms that they only

focus on economic development and environmental protection. In order to build a sustainable global civil society, a broader concept of sustainability is required.

In the following are presented the five elements of the broader concept of sustainability.

- (1) Economic Sustainability
- (2) Institutional Sustainability
- (3) Ecological Sustainability
- (4) Technological Sustainability
- (5) Cultural Sustainability

Details of the Five Concepts of Sustainability

To achieve sustainable development, many planning units have been preparing an Agenda 21. Nevertheless, they are using the relatively narrow definition of sustainability suggested by the Western researchers.

We must understand the history, nature, and culture of a planning unit, and then devise the plans suitable for its context. The following are the details of the five concepts of sustainability that we must consider in planning process.

Economic Sustainability

- A. Growth and Equity
 - i. Consistent Economic Growth
 - ii. Fair Distribution of Wealth and Income
 - iii. Sheltering of the Needy and Dependent Population

- B. Logic of Urban & Local Development
 - i. Scale Economy
 - ii. Agglomeration Economy
 - iii. Comparative Advantages

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- C. Finance
 - i. Efficient Reinvestment
 - ii. Debt Management
 - iii. Overhead Capital Investment Planning
 - iv. Financial Self-sufficiency
 - D. Sectoral Planning
 - i. Land
 - ii. Housing
 - iii. Transportation/ Communications
 - iv. Education
 - v. Health
 - vi. Recreation
 - vii. Environment
 - viii. Energy/ Resources
 - ix. Safety/ Enforcement of Law
 - x. Coordination
 - xi. Coordination with the National Planning
 - xii. Coordination with the Neighboring Areas

Institutional Sustainability

- A. Relation to Hierarchical Entities
 - i. Relation to International Agencies
 - ii. Relation to Domestic Agencies
 - iii. Relation to Urban & Regional, and Other Internal Agencies
- B. Coordination with Vertical Entities
 - i. Coordination with Neighboring Areas
 - ii. Coordination with Other Cities and Regions(Domestic)
 - iii. Coordination with Other Cities and Regions(International)
 - iv. Civic Organizations - Government Cooperation
 - v. Business Sector - Government Cooperation
 - vi. Academic Circle - Government Cooperation
- C. Establishment and Transformation of Institutions
 - i. Establishment and Dynamic Transformation of Government

Agencies

- ii. Establishment and Dynamic Transformation of Legislature
- iii. Establishment and Dynamic Transformation of Judicial

System

D. Democratic Decision Making and Consensus Building

- i. Establishment of Public Participation
- ii. Official/ Unofficial Operation of Negotiations
- iii. Mediation
- iv. Other Conflict-Resolution Systems

Ecological Sustainability

A. Key Topics on Environmental Protection

- i. Understanding Environmental Values/ Philosophy
- ii. International Trends (ISO 14000 etc.)
- iii. Domestic Trends (Laws about Environmental Protection)
- iv. Environmental Movements
- v. Environmental Impact Assessment

B. Countermeasures to Pollution

- i. Air Pollution
- ii. Water Pollution
- iii. Solid Waste
- iv. Nuclear Waste
- v. Noise Pollution

C. Carrying Capacity

- i. Ecological
- ii. Economic and Others

D. Energy

- i. Demand for Energy
- ii. Supply of Energy
- iii. Sectoral Planning (Industrial, Residential, Commercial)
- iv. Nuclear Power Plants
- v. Ecological Technology Development

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- E. Recreation Facilities
 - i. Demand for Recreation Facilities
 - ii. Supply of Recreation Facilities
 - iii. International Recreation
 - iv. Domestic Recreation
 - v. Urban/ Regional Recreation
 - vi. Recreation in the Neighborhood

Technological Sustainability

- A. Transfer of Environmental Science & Technology
 - i. Transfer of Software Technology
 - ii. Transfer of Hardware Technology
 - iii. Transfer of Environmentally Friendly Technology
- B. Development of Environmental Science & Technology
 - i. Development of Software Technology
 - ii. Development of Hardware Technology
 - iii. Development of Environmentally Friendly Technology
- C. Application of Environmental Science & Technology
 - i. Application of Software Technology
 - ii. Application of Hardware Technology
 - iii. Application of Environmentally Friendly Technology
- D. Education of Environmental Science & Technology
 - i. Education of Software Technology
 - ii. Education of Hardware Technology
 - iii. Education of Environmentally Friendly Technology

Cultural Sustainability

- A. Environmental Values and General Environmental Education
 - i. Government
 - ii. Civil Organizations
 - iii. Businesses
 - iv. Educational Institutions
 - v. General Public

- B. Environmental Information
 - i. Surveys on Environmental Values and Awareness
 - ii. Environmental Database
 - iii. Environmental Communications System
 - iv. Use of Internet
- C. Environmental Cultural Facilities and Events
 - i. Environment Center
 - ii. International Events
 - iii. Domestic Events
 - iv. Regional Events
 - v. Urban/ Regional Events
 - vi. Neighborhood Events
 - vii. Mass Media Advertisements for Public Interest
 - viii. Academic Activities on Environment
 - ix. Environmental Campaigns

Especially, I would like to emphasize the significance of cultural sustainability. This particular element is not usually introduced in previous papers and articles on sustainability. In the long run, cultural behavior of a society is eventually responsible for creating the economic and institutional frameworks and environmental values in a society. Therefore, cultural sustainability is an essential element for building a sustainable global civil society.

Problems and Resource Allocation in Environmental Planning

Theories of Economic Development and Environment

Since the end of the World War II, many nations have put national efforts to achieve economic development and increase the level of national aggregate production. Although there are various economic development theories competing against each other for validity, no clear explanation as to

determine what spurs economic growth has yet been presented. Below is a review of key theories of economic development and environment.

Neoclassical economic theory: This theory can be explained within the framework of supply and demand of commodities in a free market system, and has emphasized such policies as export-oriented industrialization and investment in productive capacity. More recently, neoclassical economists came back to emphasize the importance of capital accumulation for economic development (Mankiw, 1995). On the other hand, Asian currency crisis has led some scholars to believe that the era of export-oriented economic growth has passed and to suggest a transformation toward policies based on domestic consumption (Thurow, 1998). Capitalism explains the environmental problems arising in the process of production and distribution of commodities as a concept of externalities. In order to resolve the problem of divergence between social and private costs from external diseconomy, voluntary agreement between concerned parties or government intervention is required. As a result, various environmental charters and pacts are formulated and government restriction and taxes are imposed.

Bureaucratic command economy in communist countries: In contrast, USSR and its satellite nations have operated a bureaucratic command economy based on Marxism. However, the collapse of the USSR has proved command economy ineffective, and now Russia, Eastern European nations and China are turning toward market economy for solution to their economic problems. In the past, Communist countries have declared that in the process of controlling all economic activities, pollution-free industrialization could be achieved, that is, by internalizing the externalities caused by all industrial activities. But USSR has in fact brought about severe environmental damages while competing against the Western countries to upkeep its growth rate. What happened in Chernobyl, sometimes called ecological genocide, only proved poor environmental management system in USSR or in command economies.

Dependency theories and world systems view: The Marxist analysis of political economy gave birth to dependency theories (Cardoso, 1972, Evans, 1979, Lim, 1985) and the world systems view (Wallerstein, 1979). These theories suggest within the international framework that the economic dependency between center and peripheral nations determines economic growth and backwardness. While these theories explained backwardness of Asian or South American countries in earlier years, their universal validity was not upheld, when we observed the rapid economic growth of the four Asian tigers. Dependency theory and world systems view attribute the environmental problems in less advanced nations to the center nations' extracting of their natural resources and generating international income inequalities. An implication is that a country's environmental issues need to be considered in a broader global framework of production, distribution, and consumption.

Institutional theory: The role of government in economic development has been a controversial issue to many. In general, capitalistic economic development theory favors a market-based economy with a minimal government intervention. To the contrary, some scholars claim that a strong government is responsible for speedy economic growth observed in such cases as Singapore, Taiwan, and Korea (Evans 1996, Evans, Rueschemeyer and Skocpol, 1985, Im, 1987). So far, institutional theory has not offered any suggestions or policies on environmental issues. There are evidences of negligence on environmental protection in early Taiwanese and Korean economic policies. It is only after they have achieved economic development to some extent that they have begun to implement environmental policies.

Technology: Technology in industrialized and information society increases efficiency and is the main driving force in economic growth. Recently, some scholars including Krugman (1994) have argued that Asian economic growth was based not on technological development and its application, but on quantitative mobilization of productive means, and therefore, is a myth that is miraculous. If this view proves correct, then the newly industrializing Asian

nations will significantly slow down in their economic growth and such externalities as pollution become undesirable byproducts of inefficient economic growth.

Cultural Theory: In contrast to the above theories, a number of scholars and policy-makers in both Eastern and Western countries have shown substantial interest in cultural influence on economic development and more broadly on social change. This view, especially, is being applied to compare and contrast the rapid growth and changes of Asian countries to the development of Western advanced countries. In a bigger context, the debate over the role of culture now covers a wide range of issues on social change to clash of civilizations (Huntington, 1993, Ingleson, 1996, Mahbubani, 1995). Cultural theory, therefore, implies the need for a close look at how a society's values and philosophy affect the decision making process in planning.

Record of Economic Development and its Environmental Consequences

For about forty years since the war, world economy has experienced consistent development and growth. The annual growth rate was 4.9% in 1950s, 5.2% in 1960s, 3.4% in 1970s, and 2.9% in 1980s. In 1990s, the world economy growth rate has slowed down. (Brown et. al. 1995, p.13) But, despite the financial crisis in Asia and Latin America in recent years, the world economy grew at 4.1% from 1996 to 1997. (Brown et. al. 1998, p.74~75) In contrast to the slowing down of growth rate in the advanced nations since the 1960s, the growth rate of developing nations has accelerated. In particular, ANIEs (Advanced Newly Industrialized Economies), namely Korea, Taiwan, Hong Kong, and Singapore, have achieved an annual growth rate of 5 to 10 % (IMF, 1993).

While economic growth has continued both in advanced nations and less advanced nations, environmental disruption has accelerated and damages from pollution expanded. Table 1 shows the statistics of E8's (Eight environmental heavyweights) influence on environment. The United States, Russia, Japan, Germany, China, India, Indonesia, and Brazil alone take up

56% of world population, 59% of aggregate production, 58% of total carbon dioxide emission, and 53% of the forests. These statistics clearly reveal that the economic development, public policies and environmental policies of the eight countries inevitably play a pivotal role in the creation of and solution to the global environmental problems.

On the contrary, less advanced nations record lower production and consumption rates, and also create less pollution in total quantity. In this regard, it could be argued that advanced nations carry a bigger responsibility for resolving global externalities, meaning, global environmental problems.

Table 1. Eight Environmental Heavyweights (E8)

(Unit: %)

Country	Share of World Population 1996	Share of Gross World Product, 1994	Share of World Carbon Emissions, 1995	Share of World Forest Area, 1990	Share of World Flowering Plant Species, 1990
United States	5	26	23	6	8
Russia	3	2	7	21	9
Japan	2	17	5	0.7	2
Germany	1	8	4	0.3	1
China	21	2	13	4	12
India	17	1	4	2	6
Indonesia	4	0.7	1	3	8
Brazil	3	2	1	16	22
E8 total	56	59	58	53	--

Sources: Flavin, Christopher (1997). "The Legacy of Rio." Brown (1997). p. 8.

Dreadful environmental disasters that take away human lives and harm the nature have been observed first in the process of industrialization of advanced nations. Air pollutant emission from power generator system at a steel factory in Belgium in 1930, which has produced numerous casualties, is

a classic case of an environmental disaster. Since then, in 1950s, 60s, and 70s, the cases of Smog in London and LA, Minamata disease in Japan, Love Canal in the US, Bophal in India and nuclear disaster in Chernobyl have shocked people around the world.

Today environmental issues are not simple technical matters bounded by the territorial divisions. Our planet earth is certainly experiencing rapid, yet unexpected, ecological changes. We are obliged to pay attention to several key global environmental trends.

First, green house effect and deforestation have shaken up the ecological system of the earth. A group of researchers warn the world of rapid temperature rise of the globe and thus of possible environmental disasters.

Second, ozone depletion is also a problem. It is widely known that the chemical (CFC) for sprays, which we use in our everyday life, destroys the ozone layer, which surrounds the earth and protects us from the Sun's UV rays. Therefore, ozone depletion lets through the excessive amount of UV rays to the earth, and causes skin cancer and other diseases.

Third, acid rain created by the mixing of primary pollutants from factories and rain can travel over a great distance with wind. Acid rain has already become a serious international issue between the US and Canada, and European countries. In Asia, as China's industrialization is accelerated, acid rain is carried over to other Asian nations and significantly damages the environment.

Fourth, solid waste disposal is another problem. Until now, solid wastes have been disposed of by landfill or incineration. However, as the land availability for landfill decreases, the problem of ocean dumping and export of solid wastes is likely to cause international disputes. Especially, health hazardous nuclear wastes disposal is causing a headache for policy makers because we suffice part of our electricity needs by nuclear power generators. The case of Taiwanese attempt to export wastes to North Korea revealed the complexity and seriousness of waste disposal.

Fifth, the seriousness of environmental issues certainly has raised the awareness of the public. The voice for the need for environmental protection has risen in many countries and the numbers of civic environmental

movements and governmental organizations have increased.

Last, continuing disparity between population and resources is another problem. A large portion of the world population still suffers from starvation and severe poverty. Such population-resources disparity will continuously act as a variable that influences negatively the earth's environmental quality.

Investment in Environment

Some economists believe that environmental investment discourages other productive investments, hindering economic growth. However, there are evidences that refute this view. According to the research conducted by some Japanese scholars at an international conference on environmental protection in 1976, environmental investment does not have negative effects on GNP or employment. Gains from investment in pollution abatement industries more than compensate the decrease in GNP from the expenses (Lim, 1988).

In relation to the effects of environmental investments, we must closely analyze the national priority of resource allocation from a macro perspective. Table 2 shows the ratio of GDP versus expenses of Pollution Abatement and Control (PAC) of OECD member countries. As presented here, individual nation's ratio does not exceed 1%: 0.6% in US, 0.7~0.9% in Canada, 0.9~1.0% in Japan, 0.5~0.6% in France, 0.7~0.9% in Germany, and 0.4~0.9% in UK. For Korea, Table 3 shows the GDP versus expenses of PAC ratio of 0.79~1.27%, which does not differ much from other OECD countries. Expenses of PAC, defined by OECD, include both governmental and private expenses, and therefore, differ from regular environmental budget.

There has been no research on the optimum size of environmental investment for national development and social welfare improvement. What currently available data show is that as proportion of national output, investment in environmental protection is quite small.

Some environmental researchers claim that environmental disasters have bred the awareness of the governments and the public, stimulating them to come up with new policies and civic movements. *Normatively, policy-makers and environmentalists who share the vision of a sustainable global civil society must*

approach the environmental issues with a broad understanding, resolving the issues through preventive methods and future inventive transformation, and therefore, upgrading the quality of life of all people. Environmental disasters with casualties must not be the causes for environmental awareness and policies. A normative environmental planning should be practiced for human betterment.

Table 2. Ratio of Expenses on Pollution Abatement and Control

(Unit: %)

Country	Year			
	1985	1990	1991	1992
United States	0.6	0.6	0.6	0.6
Canada	0.7	0.9	0.7	-
Japan	0.9	1.0	-	-
France	0.6	0.5	-	0.9
Germany	0.7	0.8	-	0.8
Great Britain	0.7	0.4	-	-

Sources: OECD (1993, 1996). Kim, Hong-Kyun (1997).

Table 3. Ratio of Expenses on Pollution Abatement and Control against GDP

(Unit: %)

	1992	1993	1994	1995
Estimates by Kim, Hong-Kyun & Lim, Jong-Soo	0.99	1.00	1.02	1.27
Estimates by Bank of Korea	0.79	0.81	0.81	0.83

Sources: Kwak, Tae-Won (1997).

Problems and Resource Allocation in Housing

In a *sustainable global civil society*, all of its members should have all basic human needs. A *decent human life* requires food, clothing and housing. Among these basic human needs, housing is most durable and expensive. Housing also affects the emotional well-being of people in a significant way. It is a container of life. For this reason, individuals struggle to have an access to adequate housing, and the public sector feels obliged to deal with the problems associated with the housing situation. Housing is a private good needing public attention. Housing is on the agenda of politicians, planners and policy makers of almost every government, regardless of their motivation or ideology.

For the entire world population, progress in the housing sector has been relatively slower in comparison to other areas of human life. Humans in the contemporary world are able to send people to the outer space. Improvements in transportation and communications have made our world much smaller. Costs of computing have been decreasing rapidly. And yet, a substantial proportion of people on earth continue to suffer from persistent housing problems. In poor countries, a vast number of people live in squatter settlements and in some instances literally on streets. In some middle-income countries including those which have made steady economic growth, the shortage of housing is still prevalent. Even the rich nations are not free from housing problems. In USA, the homeless people have not disappeared from streets of large and small cities.

Theories of Housing

Several strands of housing theories have been developed over the last several decades. Some of them are intended to describe the nature of the housing market, while some others are intended to prescribe policies to solve housing problems. Some of them are based on microeconomics while others look at the relationship between housing and macro economic development. Existing theories of housing include the following.

Competitive theory: The competitive theory of the housing market was developed primarily by microeconomists (Muth, 1960, Olsen, 1969). New urban economics is an extension of this theory. Income and price are key factors in analyzing housing problems. Estimation of income elasticity is based on this theory.

Theories about housing investment and economic development: According to these theories and empirical findings obtained by this approach, there is a strong relationship between the levels of housing investment and economic growth (Burns and Grebler, 1977, Donnison, 1976). As income grows, countries increase housing investment as percent of national income. The peak is reached by middle-income countries. Then, high-income countries tend to decrease their share of housing investment over time.

Market segmentation theory: This theory proposes that housing markets are highly fragmented. There is not a single market (Kain, 1968). Certainly, the fact that housing has a fixed location leads to market segmentation. Based on the concept of fragmented markets, hedonic regression analyses are used to analyze components of housing prices.

Institutional theories: Institutionalists believe politics and institutions play a more important role in dealing with the issue of housing. Functioning of markets is dependent upon institutional factors such as power relationship among interest groups, access to power, bureaucracy, and government regulations. For example, some have observed that housing investment increases as the election approaches and decreases afterwards. A more radical form of this approach is Marxist theories of housing (Harvey, 1973).

Housing cycle theories: Because the housing sector occupies a big proportion of the national economy, investment in housing is closely related to the overall performance of the national economy. Studies have been conducted to observe the cyclical behavior of the housing sector (Chung, 1976). Sometimes, housing investment is used to stabilize the national economy rather than to

ameliorate housing situation.

Theories about squatters: For a long time, most nations considered squatter and other illegal settlements as undesirable social ills. This view prompted government officials to eradicate squatter settlements. However, beginning 1960s some scholars argued that squatters make positive contribution to the overall housing sector. This view helped develop self-help housing and sites and services projects endorsed and practiced by the World Bank, other international agencies and governments (Turner, 1977).

Traditional Housing Policies

In the past, most governments around the world have dealt with housing problems primarily by regulatory measures. The regulatory approach is deeply rooted in the history of housing policies since the industrialization and urbanization began in Europe and the United States. I highlight some of these measures.

Price control of land and housing: The rationale for price control is that land and housing are too expensive for the poor, and therefore freezing the prices will make land and housing more accessible to them.

Minimum physical standards: Governments set minimum physical standards for individual land and structure in the hope that these rules will prevent people from building low quality housing which government believes to be unsafe and unhealthy.

Eradication of informal settlements: Governments have attempted to remove informal housing—particularly those occupied by squatters—sometimes providing only a site for relocation. The logic behind the eradication policy is that these types of settlements are harmful to the society and they should not be seen. Governments also think that the physical removal of squatters of other informal settlements would discourage their residing in urban areas.

Development restriction in urban areas: The best known development restriction measure is the greenbelt. Supporters of the greenbelt argue that the delineation of the boundary of a city by a greenbelt will limit urban growth, containing the number of residents and reducing housing shortage in urban areas. This policy is closely linked to population decentralization policies.

Population decentralization: The government's attempt to decentralize population is still going on. This policy measure is based on the notion that balanced distribution of population among regions would reduce the demand for housing in large metropolitan areas and thus alleviate housing problems. Special taxes on urban residents and subsidized land development in non-urban areas are examples of the tools to disperse population.

Given the critical shortage of housing, the housing policies should focus on increasing effective demand and facilitating the supply of housing at stable prices. Traditional housing policies, however, run counter to these objectives. All five measures practiced widely among both developing and developed nations exert harmful influence on the land and housing markets. For these and other reasons, housing markets are seriously distorted (Renaud, 1992).

Recent Shifts

Critical assessments of the traditional housing policies over the last few decades have led to a gradual shift in certain areas of housing policies. For example, sites and services and self-help housing concept has been strongly endorsed by such international agencies as the World Bank (1974, 1975, 1980) and US-AID. In addition, the World Bank (1981) and some of its member nations now emphasize the role of the private sector and housing finance system. But, except USA and some Western democracies, the argument for strong and effective housing finance system is lingering at a rhetorical stage. Some of the old measures such as squatter eradication are no longer practiced widely in middle-income nations. But, other traditional practices are still effective in many nations--government price setting, minimum standards,

greenbelts, population decentralization, and a host of unnecessary bureaucratic rules and procedures. Overall, the effort to deregulate the housing sector and related areas of the economy has a long way to go.

Other recent attempts to reduce housing shortages within a short span of time included a large-scale housing construction plan. We have seen the housing project of immense scale in former Soviet Union and some of its satellite countries. Another example is Korea's two million housing construction plan (Kim and Lim, 1988). These government driven large-scale projects are usually doomed to fail because they are not based on what people want and can afford.

Housing Consumption and Investment

Consumption of Housing

No matter how much one may desire to move upward in the housing market and attain decent housing in the regular housing market, if the person does not have financial capacities, the person can never make an *upward transition*. A dream to have my own house requires substantial financial resources. It might take years of hard work and savings before one can afford to buy a house. How much can one spend to obtain a house or rent a space to have a decent living? Are there certain observable regularities about consumption of housing? To design viable housing policies which will encourage people to spend more on housing without undue burden, it is essential to understand the relationship between an individual's income and housing expenditures.

During the last decades or so, housing scholars have accumulated substantial evidence on how people might increase their housing expenditures as their income rises. Scholars of housing have estimated income elasticity of demand for housing for different cities, regions and countries. A summary is given in Table 4 International Comparison of Income Elasticity of Demand for Housing. Some of the data used for these studies are grouped, while some others are ungrouped (individual). It is easier and less

expensive to collect grouped data, but they tend to result in biases in the estimation (Polinsky, 1977). For the purpose of finding out individuals' behavior in the market, ungrouped (individual) data yield more reliable outcomes. In Table 4, the maximum value obtained is 2.48 by Lluch et.al. for Korea in 1972, and the minimum value 0.027 by Mills and Song also for Korea during 1962~75 period. These are rather extreme cases. Results of most studies range between 0.50 and 1.0. It is also noteworthy that the income elasticity estimated for mainland China and the former Soviet Union shows remarkably similar magnitudes. In case of Korea, Follain, Lim and Renaud (1980), which employed individual household survey data, reported an elasticity of 0.57. Despite the complexity of the housing market, people's ability to pay for housing seems predictable.

There is now a general consensus that income elasticity of demand for housing is most likely to be under one. This means that an increase in income does not lead to a proportional increase in housing expenditures; doubling the income of a household will not double its housing expenditures. This result implies that in order to increase households' expenditure for housing, there should be a well-established financing system for the low income. Without a mortgage market system, the majority of population both in the developed and developing countries cannot afford to purchase decent housing.

From a long-term perspective, it could be argued that the problem of housing will not disappear without a steady and substantial growth of the economy. In addition, to solve housing problems, the benefit of economic growth must reach the bottom of the economic ladder. The rich do not have housing problems. The poor who lack both economic and political power suffer most from the pains of housing problems. Income distribution policies are critical part of implicit housing policy. Although housing subsidies can be used as a measure of income redistribution, there should be a separate set of public policies dealing with redistribution and social justice.

Table 4. International Comparison of Income Elasticity of Demand for Housing

Study	Country/ Area	Year	Elasticity
Howe & Musgrave	Guyaquil, Ecuador	1968	1.10
Howe & Musgrave	Lima, Peru	1969	1.31
Howe & Musgrave	Bogota, Columbia	1968	0.98
Howe & Musgrave	Caracas, Venezuela	1966	1.09
Lluch et. al.	Mexico	1968	0.93
Betancourt	Central Chile	1964	0.79
Lluch et. al.	Korea	1972	2.48
Lluch et. al.	Urban areas, Korea	1971	0.86
Lluch et. al.	Seoul, Korea	1971	0.54
Lluch et. al.	Korea	1976	0.57
Song & Struyk	Korea	1960~65	0.91
Mills & Song	Korea	1962~75	0.027
Follain, Lim & Renaud	Korea	1980	0.57
Kim, Jeong Ho	Korea	1982	0.09~0.24
Houthakker	Beijing, China	1929~30	0.940
Houthakker	Shanghai	1929~30	0.714
Chow	Rural areas, China	1981	1.783
Lim & Lee	China	1952~1987	0.5~1.5
Lim & Lee	Soviet Union	1970~1989	0.76~0.85

Source: Malpezzi and Mayo (1987); Chow (1985); Kim, Joong Soo (1984); Lim and Lee (1991, 1993)

Investment in Housing

On the other side of housing consumption is housing investment. The housing consumption and investment are two sides of the same coin. While analyses of housing consumption are intended to find out how individual consumers behave in the market, studies on housing investment deal with macro behavior of the market system. Studies on investment in housing delve into the question of how the level of national income determines the overall investment in the housing sector. These studies also look at how other macro variables such as population growth and urbanization affect aggregate investment in housing.

At a descriptive level, it is useful to examine the one to one relationship between the level of the national output and housing investment. Data on these variables are scattered and there is no uniform system of national accounting. Different definitions of products and income are used by different countries. Countries also differ in collecting and estimating other relevant data such as population and urbanization. Therefore, information collected from various sources should be used with as much understanding about each nation's statistical and accounting systems as possible. <Table 5> International Comparison of National Economy and Housing Investment shows the two key indicators: (i) housing investment as % of GNP or GDP and (ii) per capita GNP or GDP. It is clear that the higher the income, the higher the share of housing investment. In 1978, USA at the per capita GDP of \$9,757 invested 5.1% of its GDP, while Japan at the per capita GDP of \$8,351 invested 7.8%. In contrast, Indonesia, Turkey, and Korea at a lower level of economic growth invested less than 4.0% of their GNP or GDP in housing.

Table 5. International Comparison of National Economy and Housing Investment

Country	Year	GNP(\$) or GDP(\$) per Capita	Housing Investment as % of GNP or GDP	GNP or GDP
USA	1970	4,795	3.6	GNP
	1978	9,757	5.1	GDP
Japan	1970	1,882	7.0	GNP
	1978	8,351	7.8	GDP
Indonesia	1971	75	2.3	GNP
	1976	262	2.1	GNP
Turkey	1970		3.6	GNP
	1977		3.6	GDP
Korea	1965	105	1.5	GNP
	1970	243	3.4	GNP
	1975	574	4.6	GNP
	1980	1,481	5.3	GNP

Source: Korea Research Institute for Human Settlements (1981); Economic Planning Board (Various Years).

Table 6 International Comparison of Housing Investment presents some additional information on the share of housing investment. Nations in this table are mostly advanced industrialized nations. All of them have maintained an investment level higher than 4% except the United Kingdom. Balchin (1995) criticized that the relatively lower level of British investment in housing is because its government did not have as high priority on housing as other European nations.

Table 6. International Comparison of Housing Investment

Country	Year	Housing Investment as % of GNP or GDP
Greece	1970~89	6.34
France	1970~89	6.20
West Germany	1970~89	5.98
Spain	1970~89	5.82
Ireland	1970~89	5.67
Netherlands	1970~89	5.52
Italy	1970~89	5.51
Denmark	1970~89	5.22
Belgium	1970~89	4.54
Portugal	1970~89	4.22
United Kingdom	1970~89	3.59
Sweden	1982	4.2
Finland	1982	5.9
Norway	1982	4.5
USA	1982	3.1
Japan	1981	6.3
China	1982	7.1
Korea	1983	5.2

Source: Balchin (1995); Lim (1991).

Historical data on Korea's housing investment is given in Table 7 Housing Investment in Korea during Fast Economic Growth. Per capita GDP (given in 1970 constant price) has risen steadily since 1953. The pace of growth began to

accelerate since the 1960's. It is reported that Korea in 1995 marked U.S. \$ 10,000 which symbolizes the nation's stepping into an upper middle income status. The share of housing investment as % of GDP was indeed small during the post-Korean war years. In 1965 the share was only 1.70%. The long-term trend shows that the share has increased gradually reaching 8.18% in 1990 and 6.40% in 1992. The data in Table 7 confirm what theories on housing investment and national economy predict.

Table 7. Housing Investment in Korea during Fast Economic Growth

Year	GDP per capita(1000 Won) in 1970 Constant Price	Housing Investment as % of GDP
1953	295	1.55
1955	305	1.81
1960	342	2.18
1965	476	1.70
1970	850	3.36
1975	1387	4.47
1980	2208	5.75
1985	3149	4.24
1990	5068	8.17
1992	5738	6.40

Source: Economic Planning Board (various years); Bank of Korea (various years).

Table 8 provides other variables, which might affect housing investment. Previous empirical studies indicated that the national share of housing investment is affected by such variables as total population and urban population which creates demand for housing. More recent studies have examined the effect of institutional and financial variables on housing investment. Lee and Lim (1995) probed the effects of policy variables on housing investment in Korea. One of the noticeable observations made by this study is that the magnitude of defense spending appears to have strong influence on housing. As Tables 7 and Table 8 show that the steady increase in the share of housing investment has been accompanied by the decrease in

the share of defense spending. This is an extremely important observation which should lead to a careful and thorough analysis of national priorities, national security, and social well-being of the people.

Table 8. Variables Which Might Affect Housing Investment

Year	Population (in 1,000)	Urban Population (in 1,000)	Housing Supply Ratio(%)	Per Capita Housing Loan from KHB(Won)	Defense Spending as % of GNP
1953	21,546	8,395			
1955	21,700	8,370			9.22
1960	24,989	10,558	79		5.99
1965	28,703	12,827	81	180(1966)	3.70
1970	31,435	17,134	74	1,225	3.59
1975	35,282	20,480	71	5,059	4.33
1980	38,124	25,738	67	18,658	6.09
1985	40,448	30,086	65	65,674	4.69
1990	42,869	35,558	63	203,333	3.75
1992	43,663	37,319	70	301,360	4.31

Source: Economic Planning Board various years); National Statistics Office (various years).

Shifting Investment Priority for Civil Security.

One of the most important government expenditures is military spending. In this section, I review national investment priorities concerning military spending and suggest major shift in national investment decisions.

Reconsidering National Investment Priorities

The relationship between defense spending and economic growth is a

controversial and sensitive issue. For this reason, political leaders, while repeating the theme of peace and

well-being of the people, have not dared to take actions to restructure national priorities in resource allocation—for instance shifting military spending to peaceful purpose. International agencies in the past also avoided addressing this issue directly. However, since the collapse of the Eastern bloc, there have been more progresses made in nuclear disarmament, and public officials began to discuss the issue more openly.

Military Expenditures

Defense spending takes up a large share of expenditure as percentage of GNP. Table 9 shows international comparison of defense spending. The world spent 6.7% of GNP in 1985, 4.3% in 1997, and 4.2% in 1998. Per capita spending in 1985 was \$388, \$240 in 1997, and \$229 in 1998 (in 1997 constant value). Total defense spending mounted to \$1,213,197 million in 1985, \$812,539 million in 1997, and \$785,269 million in 1998.

The U.S. spent the largest amount of military expenditures in the world — \$265,890 million in 1998. It has one of the largest per capita defense expenditures—\$982. Per capita basis, Israel (\$1,844), Kuwait (\$1,532), Saudi Arabia (\$1,173), Qatar (\$1,967), UAE (\$1,138), Brunei (\$1,169) and Singapore (\$1,543) spent more than USA. In terms of the share of GNP, USA spent 6.7% in 1985, 4.3% in 1997 and 4.2% of its GNP for military purposes in 1998. USSR spent 16.1% in 1985. Russia spent 5.8% in 1997, and 5.2% in 1998. North Korea's military spending changed from 23.0% in 1985, to 16.8% in 1997, and 14.3% in 1998. South Korea spent 5.1% in 1985, 3.5% in 1995, and 3.1% in 1998.

As a result of military competition between USA and USSR, at one point of time, there were about 45,100 nuclear warheads on earth which are equivalent to 9.7 billion tons of TNT. This means that each person on earth has 1.7 tons of TNT. This is a chilling fact. (Fischer, Nolte and Oeberg, 1989)

It is encouraging that the percentage of military expenditure in almost all countries has decreased somewhat in the past decade and a half. One might hypothesize that the end of Cold War brought about this phenomenon.

Table 9. International Comparison of Defense Spending
(1997 Constant Values)

Country	Per Capita Military Spending (US \$)			% of GDP		
	1985	1997	1998	1985	1997	1998
World	388	240	229	6.7	4.3	4.2
U.S.	1,537	1,031	982	6.5	3.4	3.2
Canada	439	272	229	2.2	1.2	1.1
USSR	1,232	-	-	16.1	-	-
Russia	-	435	368	-	5.8	5.2
Japan	254	325	293	1.0	1.0	1.0
N. Korea	290	106	93	23.0	16.8	14.3
S. Korea	218	333	278	5.1	3.5	3.1
China	27	30	30	7.9	5.7	5.3
France	843	708	676	4.0	3.0	2.8
Germany	662	405	395	3.2	1.6	1.5
Spain	278	196	186	2.4	1.4	1.3
Swiss	426	544	503	2.1	1.5	1.4
UK	803	611	624	5.2	2.8	2.8
Hungary	317	66	64	7.2	1.4	1.4
Brazil	41	112	108	1.8	3.3	3.2
Kenya	18	9	10	3.1	2.7	3.1
Nigeria	11	18	19	3.4	4.1	4.3
Egypt	76	45	45	7.2	4.3	4.1
Iran	454	68	80	36.0	5.5	6.5
Iraq	1,153	56	59	25.9	7.4	7.3
Israel	1,700	1,947	1,844	21.2	11.9	11.6

Sources: International Institute for Strategic Studies (1999) p. 300~305.

Promoting Civil Security

As indicated, policy-makers have been hesitant to address the issue of military spending and national development. Personally, I started suggesting a shift of military resources for civilian purposes in 1985. But my suggestion has been rarely heard. The President of the World Bank, Barber Conable, pointed out at the 1989 annual Board of Directors meeting that the defense

spending of developing nations in the mid 1980s exceeded health and education budget. He also pointed out that many countries borrowed money to increase armaments. In conclusion, he suggested that defense spending be systematically analyzed with national development in mind, and also possibly be re-allocated to improve national social welfare (Conable, 1989).

In the past, especially in the Cold War era, communist countries like USSR, China and North Korea spent the largest share of their GNP for military purposes. It has been often pointed out that such excessive defense spending acted as an obstacle to economic growth. As their economy has deteriorated, the actual amount of their defense spending has not increased despite the high ratio of defense spending. Rather, those countries with high economic growth rate with lower defense spending ratio have more budgets for military expenditure. This is the irony of national resource allocation determined by military domination.

National security comes from people with high morale, and high morale comes from guaranteeing not only military but also *civil security*. In order to achieve *civil security*, housing, health care, and environmental welfare must be promoted and consistently maintained. Without preservation of environment and providing adequate housing, there is no decent life and little room for overall security.

South Korea recorded a high rate of growth and increased housing investment significantly (Lim and Lee, 1991). We are also aware that North Korea spends an extremely large share of its GNP and national budget for military purpose. In 1991, North Korea's military expenditure amounted to 22% of its GNP and 30% of its national budget. It was 25.6% in 1995 and to 27.2% in 1996. In the meantime, its economy has been deteriorating for the most part of 1990s. Because of its weak economy, despite its large share of military expenditures, its military expenditure (\$2,005 million in 1998) was much smaller than Korea's (\$12.940 million in 1998) proving the irony of the military dominated resource allocation.

One of the most important studies relevant to defense spending and national development was released by International Monetary Fund. The study by Knight, Norman, and Villanueva (1995) finds that a reduced level of

military spending will lead to substantial amount of “Peace Dividend” in the form of higher rate of economic growth. In the long-run, cuts in military spending will enable Eastern European countries to increase their total production by 50% and the Middle East by 46%. In the developing nations of Asia and North Africa, reducing defense spending would lead to 30 to 40 % of gain. Sub-Saharan Africa can add 10 % to their total output. Industrial countries can increase their production by 20%.

Summary and Recommendation

I began this paper by proposing a vision of *a sustainable global civil society* for planners and policy makers around the world. I defined *a sustainable global civil society* as “a global society in which the basic human values such as peace, justice, freedom, equality, love, and a decent livelihood are practiced in every facet of people’s life.” *A life in a sustainable global civil society should be free from war, injustice, oppression and a lack of basic needs for survival.*

Then, I looked at the problems and resource allocation in two sectors; environment and housing. It was noted that environmental expenditures account for a very small portion of national output—usually less than one percent. The share of housing in GNP increases as economy grows to a middle level and gradually declines—ranging between 1.5 and 9 percent.

I showed that our world as a whole has been spending a large proportion—about 4 to 6 percent—of GNP for military purposes. For many nations, particularly the poor nations, this burden of military spending seriously interferes with desirable progress in economy, destabilizes their societies and eventually weakens national security. Polluted environment, poverty, inadequate shelter and dissatisfaction are the worst threat to national security. A cut in military expenditures can profoundly increase economic output. And a more investment in environment and housing will raise people’s sense of well-being thus reinforcing civil security and eventually national security.

It is time that planners, policy makers, housing scholars, and civic movement leaders begin to seek new directions for resource allocation with *the vision of a sustainable global civil society*. I propose that planners and policy makers around the world ask the government of their own and others to change national investment priority for civil security and that governments and international agencies start preparing a national and global plan to shift resource allocation for peace, justice and well-being of people.

Reference

- Bailey, Ronald. Ed. *The True State of the Planet*, New York, NY: The Free Press. 1995.
- Balassa, Bela. Ed. *The Newly Industrializing Countries in the World Economy*. New York, NY: Pergamon Press. 1981.
- Balchin, Paul. *Housing Policy*, London: Routledge. 1995.
- Bank of Korea, *Economic Statistics Yearbook*, Seoul, Korea: Bank of Korea. 1965, 1970, 1974, 1980, 1981, 1986, 1989, 1990, 1991, 1993, 1994.
- Brown, Lester R. et al. *State of the World, 1993, 1994, 1995, 1996, 1997*. New York, NY: W. W. Norton & Company. 1993, 1994, 1995, 1996, 1997.
- Brown, Lester R., Renner, M., and Flavin, C. *Vital signs 1998*. New York, NY: W. W. Norton & Company. 1998.
- Burns, L.S. and Grebler, Leo, *The Housing of Nations: Analysis and Policy in a Comparative Framework*, New York, NY: John Wiley & Sons. 1977.
- Cardoso, F. H. Dependency and Development in Latin America. *New Left Review* 74: 83~95. 1972.
- Chomsky, Noam. *World Orders Old and New*. New York, NY: Columbia University Press. 1994.
- Chow, Gregory, *The Chinese Economy*, New York, NY: Harper & Row Publishers, Inc. 1985.
- Chung, Hee-Soo, *Cyclical Instability of Residential Construction in Canada*, Ottawa, Canada: Economic Council of Canada. 1976.
- Conable, Barber B. Annual Address by Barber B. Conable, the President of the World

- Bank Group, *Summary Proceedings. 1989 Annual Meetings of the Board of the Governors*, Washington, DC: World Bank. 1989.
- Copp, David and David Zimmerman. Eds. *Morality, Reason and Truth*, Totowa, NJ: Rowman & Allanheld. 1984.
- Costanza, Robert. Ed. *Ecological Economics: The Science and Management of Sustainability*, New York: Columbia University Press. 1991
- Donnison, David, *The Government of Housing*, Baltimore, MD: Penguin Publishers. 1967.
- Economic Planning Board, *Economic Statistical Yearbook*, Seoul, Korea: Economic Planning Board. 1965, 1970, 1974, 1980, 1981, 1986, 1989, 1990, 1991, 1993, 1994.
- Epstein, Samuel S. M. D., Lester O. Brown, and Carl Pope. *Hazardous Waste in America*. San Francisco: Sierra Club Books. 1982.
- Evans, P. *Imbedded Authority*, Berkeley, CA: University of California, Berkeley Press. 1995.
- Evans, P., and D. Rueschemeyer and T. Skocpol. Eds. *Bringing the State Back In*, Cambridge, UK: Cambridge University Press. 1985.
- Fischer, Dietrich, Nolte, Wilhelm and Oeberg, Jan, *Winning Peace: Strategies and Ethics for a Nuclear-Free World*, New York, NY: Crane Russak, 1989.
- Follain, James, Lim, Gill-Chin and Renaud, Bertrand, "The Demand for Housing in Developing Countries: The Case of Korea," *Journal of Urban Economics* 7: 315~336, 1980.
- Harvey, David, *Social Justice and the City*, Baltimore, MD: Johns Hopkins University Press. 1973.
- Huntington, Samuel. "The Clash of Civilizations?" *Foreign Affairs*. Vol. 72. No. 3: 22~49. 1993.
- Im, Hyug-Baek. "The Rise of Bureaucratic Authoritarianism in South Korea." *World Politics* XXXIX(2): 231~57. 1987.
- Ingleton, John. "The Asian Ethic" in Bell, Roger, Tim McDonald and Alan Tidwell Eds. *Negotiating the Pacific Century*. St. Leonard, Australia: Allen and Unwin. 1996.
- International Institute for Strategic Studies.. *The Military Balance 1999/2000*, Oxford, England: Oxford University Press. 1999.
- International Monetary Fund. *International Financial Statistics*, Various years.
- Kain, John, "Housing Segregation, Negro Employment, and Metropolitan Decentralization," *Quarterly Journal of Economics* LXXXII :175~197, 1968.

-
- Kim, Hong-Kyun. "VI-1. Trends in Environmental Expenditure." In Rho, Sang-Whan 1997.
- Kim, J. I. L. J. Lau and J. S. Park. *The Role of Intangible Capital in the Economic Growth of East Asian Newly Industrialized Economies*. Seoul, Korea: Institute of Economic Research, Seoul National University. 1996.
- Kim, Jeong-Ho and Lim, Gill-Chin, "Two Million Housing Unit Construction Plan: Feasibility and Policy Issues," *Journal of the Architectural Institute of Korea*, 32,5: 11~15, 1988.
- Kim, Joong-Soo, *Housing Supply: Current Status and Issues*, Policy Report 84-30, Korea Development Institute. 1985
- Knight, Malcolm Loayza, Norman and Villanueva, Delano, *The Peace Dividend: Military Spending Cuts and Economic Growth*, International Monetary Fund Working Paper WP/95/53. 1995.
- Knight, Malcolm Loayza, Norman and Villanueva, Delano. *The Peace Dividend: Military Spending Cuts and Economic Growth*, International Monetary Fund Working Paper WP/95/53. 1995.
- Krugman, P. "The Myth of Asian Miracle." *Foreign Affairs* Vol. 73. No. 6: 62~78. 1994.
- Kwak, Tae-Won. "II-2. Study on Korean Environmental Budgetary Policies." Rho, Sang-Whan. 1997.
- Lim, Gill-Chin and Choi, Yeol. *Environmental Movements, Social Responsibility, & National Transformation*. Environmental Movements Association Press. 1995.
- Lim, Gill-Chin and Lee, Man-Hyung, *Housing Policy in Socialist China: Ideology and Reality*, Seoul, Korea: Na-Nahm Publishing Co. 1991.
- Lim, Gill-Chin and Lee, Man-Hyung, "Political Ideology and Housing Policy in Modern China," *Environment and Planning: Government and Policy* 8, 447~487. 1990.
- Lim, Gill-Chin and Lee, Man-Hyung. "Housing Consumption in Urban China," *Journal of Real Estate Finance and Economics* 6: 89~102. 1993.
- Lim, Gill-Chin and Williams, Jack Eds. *Korea: Its Political and Economic Future*, East Lansing, MI: Asian Studies Center, Michigan State University. 1993.
- Lim, Gill-Chin, *Political Economy of Housing in Soviet Union*, Seoul, Korea: Hanssem Housing Institute. 1991.
- Lim, Gill-Chin, "Housing Policies for the Poor in Developing Countries," *Journal of the American Planning Association* 53,2: 175~185. 1987.

- Lim, Gill-Chin. "Theory and Practice of EIA Implementation in Developing Countries: A Comparative Study," *Environmental Impact Assessment Review*, pp. 133~153. 1985
- Lim, Gill-Chin. "From Negligence to Prevention: Environmental Impact Assessments in Developing Countries," *Urban Law and Policy*, Vol. 9, pp. 1~19. 1988.
- Lim, Gill-Chin. "State and Society: Some Reflections on Theory and Theory Building." *Environment and Planning C: Government and Policy*, Vol. 7, p. 475. 1989.
- Lim, Gill-Chin. *Humanistic Planning Theory for the Future*. Korea: Nanam Publications. 1997.
- Lim, Hyun-Chin. *Dependent Development in Korea*. Seoul, Korea: Seoul National University Press. 1985.
- Mahbubani, Kishore. The Pacific Way. *Foreign Affairs*, 74, 1, 100~111. 1995.
- Malpezzi, Stephen and Mayo, Stephen, "The Demand for Housing in Developing Countries: Empirical Estimates from Household Data," *Economic Development and Cultural Change* 35.4: 687~721. 1987.
- Mankiw, Gregory. "The Growth of Nations." Brookings Papers on Economic Activity. September 1995. Washington, DC: Brookings Institution. 1995.
- Ministry of Home Affairs, *Municipal Yearbook*, Seoul, Korea: Ministry of Home Affairs. 1970, 1980, 1990.
- Muth, Richard, "Demand for Non-Farm Housing," in Harberger, A. Eds. *The Demand for Durable Goods*, Chicago: University of Chicago Press. 1960.
- Naess, Arne. "The Shallow and the Deep, Long-Range Ecology Movement. A Summary." *Inquiry* 16: 95~100. 1973.
- National Statistics Office, *Korea Economic Indicators*, Seoul, Korea: 1965, 1970, 1975, 1980, 1985, 1990.
- Olsen, Edgar O., "A Competitive Theory of the Housing Market," *American Economic Review*. 59:612~621. 1969.
- Organization for Economic Cooperation and Development(OECD). *Pollution Abatement and Control Expenditures in OECD Countries*, OECD Environmental Monograph. 1993, 1996.
- Pezzey, John. *Sustainable Development Concepts: A Economic Analysis*, Washington, D. C.: The World Bank. 1992.
- Polinsky, A. M., "Demand for Housing: A Study in Specification and Grouping," *Econometrica*. 45: 447~461. 1977.

-
- President's Council on Sustainable Development. *Sustainable America: A New Consensus for Prosperity, Opportunity and a Healthy Environment for the Future*. 1996.
- Renaud, Bertrand, "Confronting a Distorted Housing Market: Can Korean Policies Break with the Past?" Paper presented at the Korea-US Symposium on Korean Social Issues, Graduate School of International Relations and Pacific Studies, University of California at San Diego. June 26~27. 1992
- Rho, Sang-Whan. "I. Introduction and Summary." Rho, Sang-Whan. 1997.
- Rho, Sang-Whan. ed. *Environmental Budget and Policy Objectives*, Korea Environmental Technology Development Institute. 1997.
- Serageldin, Ismail *Water Supply, Sanitation, and Environmental Sustainability: The Financing Challenge*, Washington, D.C.: World Bank. 1994.
- Singer, Max and Wildavsky, *The Real World Order*, Chatham, NJ: Chatham House Publishers Inc. 1993.
- Thurow, Lester. *Asian Collapse: Cause and Cure*, New York Review of Books. Vol. XLV. No. 2. February 5. 1998.
- Turner, J. F. C., *Housing by People: Towards Autonomy in Building Environments*, New York, NY: Pantheon Books. 1977.
- U.S. Arms Control and Disarmament Agency, *World Military Expenditure and Arms Transfer*, Washington, D.C.:USACADA. 1989.
- United Nations Centre for Human Settlements (UNCHS: Habitat). *An Urbanizing World: Global Report on Human Settlements 1996*, Oxford: Oxford University Press. 1996.
- Wallerstein, I. *The Capitalist World-Economy*, Cambridge, UK: Cambridge University Press. 1979.
- White, Jr. Lynn. "The Historical Roots of Our Ecological Crisis." *Science*. 1967.
- Williams, Maurice J. and Patti L. Petesch. *Sustaining the Earth: Role of Multilateral Development Institutions*, Washington, DC: Overseas Development Council. 1993
- World Bank, *Economic Development and the Private Sector*, Washington, DC: World Bank. 1981.
- World Bank, *Housing Sector Policy Paper*, Washington, DC: World Bank. 1975.
- World Bank, *Shelter*, Washington, DC: World Bank. 1980.
- World Bank, *Sites and Services Projects*, Washington, DC: World Bank. 1974.
- World Bank. *Economic Development and the Private Sector*, Washington, DC: World Bank.

1981.

World Bank. *Environment and Development: Implementing the World Bank's New Policies*, Development Committee Pamphlet 17. Washington, D.C.: World Bank. 1988.

World Bank. *World Development Report*, Washington, DC: World Bank. 1995, 1996, 1997, 1998, 1999.

World Bank. *Sustainable Transport: Priorities for Policy Reform*, Washington, DC.: World Bank. 1996.

World Commission on Environment and Development (WCED) *Our Common Future*, Oxford, England. 1987.