

2006

Blue Planet Prize

Dr. Akira Miyawaki (Japan)

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Former Minister of Population and Environment, Republic of Indonesia.



Eternity:

Some time in our past, we humans stopped listening to what the forest tells us and no longer paid heed to the wisdom of nature. We forgot that life is limited, and that the might of each individual is also limited. The 2006 opening film told the stories of the wisdom of nature and the forests which were the cradle of living creatures in their pursuit of eternity.



His Imperial Highness Prince Akishino congratulates the laureates



Their Imperial Highnesses Prince and Princess Akishino at the Awards Ceremony

The prizewinners receive their trophies from Chairman Seya



Dr. Akira Miyawaki



Dr. Emil Salim



Hiromichi Seya, chairman of the Foundation delivers the opening address



The prizewinners Dr. Akira Miyawaki (right) and Dr. Emil Salim (left) at the Congratulatory Party



Dr. Saburo Nagakura, President of the Japan Academy and Jusuf Anwar, Ambassador of the Republic of Indonesia, to Japan, congratulate the laureates



The prizewinners meet the press

Profile

Dr. Emil Salim

Professor, Faculty of Economics and Post Graduate Course, University of Indonesia
Former Minister of Population and Environment, Republic of Indonesia

Education and Academic and Professional Activities

- 1930 Born on June 8 in South Sumatra, Indonesia
- 1958 Graduated from University of Indonesia, Faculty of Economics
- 1959-1964 University of California at Berkeley, USA, Ph.D. in Economics
- 1970-1972 Vice Chairperson of the National Development Planning Agency, and concurrently State Minister for State Apparatus Reform
- 1972-present Professor, Faculty of Economics, University of Indonesia
- 1973 Bintang Mahaputera Adiprandana from the Government of Indonesia
- 1973-1978 Minister of Transportation, Communication and Tourism
- 1978-1983 Minister of Development Monitoring and Environment
- 1982 Golden ARK (Commandeur) of the Netherlands 1983-1993 Minister of Population and Environment
- 1983-1987 Member of the World Commission on Environment and Development
- 1990 Paul Getty Award, USA
- 1992-present Founder and Chairperson of the Board of Trustees of the Sustainable Development Foundation
- 1993-2003 Founder and Chairperson of the Board of Trustees of the Indonesian Ecolabelling Institute
- 1994-2003 Founder and Chairperson of the Board of Trustees of the Indonesian Biodiversity Foundation
- 1994-1999 Co-chair the World Commission on Forests and Sustainable Development
- 1995-1999 Deputy Chairperson of UN High Level Advisory Council for Sustainable Development
- 2000-2002 Chairperson of the UN Commission for Sustainable Development
- 2001-2002 Chairperson of the National Economic Council
- 2001-2002 Chairperson of the Preparatory Committee of the World Summit on Sustainable Development
- 2001-2002 Member of Advisory Group for the President of the Republic of Indonesia
- 2005 Zayed Prize Winner for Environmental Action Leading to Positive Change in Society

Dr. Salim was born in South Sumatra in 1930 and was educated in a Dutch elementary school

during the Dutch colonial period and in a Japanese school under Japanese occupation. He learned the importance of a capacity for logic from his father who was an engineer and acquired an interest in religion from his mother who was a devoted Muslim. He grew to become interested in economics and studied economics at the University of Indonesia.

After graduating from the university, Dr. Salim went to University of California Berkeley in 1959 and studied mainstream economics at that time in the United States, and earned a Ph.D. degree. Later, returning to Indonesia and while teaching at the University of Indonesia, he participated in a team of economics experts for President Soeharto and dealt with the issues in building the nation with a sound management based on macro economics with an emphasis on market principles and began to have influence on the management of the economy.

In 1971 at the age of 41, he became Minister of State for Administrative Reform, and till 1993 for 22 years served four terms the ministerial positions as Minister of Transportation, Communication and Tourism, Minister of Development Monitoring and Environment, and Minister of Population and Environment. He became the first minister of the Environment in Indonesia in 1978 with the strong request of President Soeharto who became concerned of the environmental destruction caused while the country goes through economic development and executed environmental policies which enable economic development consistent with environment conservation.

As minister of Environment, he enacted the Basic Guidance for Environmental Management in 1982 which is Indonesia's first general and comprehensive fundamental law on the environment, and further built the foundation of environmental administration in Indonesia by establishing the Environmental Impact Management Agency.

The foresight Dr. Salim had shown through trying to build a sustainable society gained high international reputation, and from 1984 to 1987, he participated in the United Nations World Commission on Environment and Development (The Brundtland Commission) representing Asia and made a significant contribution in establishing the concept of "Sustainable Development." After the Earth Summit was held in Rio de Janeiro in 1992, as Deputy Chairperson of UN High Level Advisory Council for Sustainable Development, he contributed in coordinating the discussions on sustainable development carried out in the United Nations. In 1994, he became the co-chair of the World Commission on Forests and Sustainable Development which was established modeled after the Brundtland Commission, and in 1999 published the report "Our Forests Our Future" by listening to the voices from worldwide, stressing the need of sustainable development in forest conservation which was facing crisis.

At the Johannesburg Summit which was held ten years after the Earth Summit, Dr. Salim as the chairman of the 10th Commission on Sustainable Development which served as Preparatory Committee for the World Summit made a significant contribution in getting the consensus and in preparing the draft implementation plan.

Dr. Salim addressed from early on the environmental problems in the developing nations region in Asia, and as the chairman of the ASEAN Environment Ministerial Congress, set the target, the scope, the program and the action plan for the ASEAN nations to cooperate in the environment area. He also participated in the meetings of the Asia-Pacific Forum for

Environment and Development (APFED) and made a large contribution in arranging the recommendation to the Johannesburg summit and the final report. It is of great significance that the opinions from the developing nations of Asia were voiced to the world by Dr. Salim being the pioneer, when there were hardly anything raised about environmental problems in the developing nations of Asia in the international arena.

After serving as Minister of the Environment of the Indonesian government, while teaching at the University of Indonesia, Dr. Salim has put his efforts in promoting various environmental NGO activities such as the "Indonesian Biodiversity Foundation," placing himself at the core of various promotion propagation activities. He has also helped and assisted the African nations in its development problems and environmental issues.

Dr. Salim has taken the initiative ahead of the world in consolidating the development plan with environmental consideration. And to realize Sustainable Development, he showed great leadership consistently in Indonesia, in the developing nations of Asia, in the Asia-Pacific region and the whole world, played an active role internationally, and contributed to better the global environment.

Essay

Out of the Poverty Hole

Dr. Emil Salim

October 2006

A woman fell into a deep empty hole. There was no water, only clay and stone and the walls were steep, difficult to climb. There was nothing she could use to pull herself out of the hole, no tools, no ladder, nothing. She shouted loudly to call for help, but nobody listened. The woman got tired and weak. She waited for a miracle, if only somebody knew that there is someone in the hole and by only throwing a rope, she could pull herself out of the hole. But then she is still not safe, because she may fall in another hole that is spread all over the place. Her life is uncertain in a place full of holes.

Profile of the Poor

There are many “poverty holes” in the globe today and many poor people are still trapped in it. At the end of the 20th century their number has reached 2.2 billion out of 6 billion people of the globe. These people are usually the vulnerable poor living in developing countries. The poor live in rural areas but have only small plots of land, not enough to support their basic needs. Muscles are their only “tools” of work. They work in agriculture on land not their own. If they live in cities, they find their living in informal sectors as street traders, to sell whatever they can sell with their limited funds. Most of them earn their living with low cost activities like collecting and recycling garbage, selling newspapers, bottled drinks, cigarettes, and some time even their own body. They live in squatters or slum areas without access to clean drinking water, decent sanitation facilities, and they are forced to use rivers or ponds as toilets. They do not have electricity and telecommunication facilities. Many of them are still illiterate. Few of them have obtained primary education. Some continue to lower level secondary schools, but most of them cannot afford education to higher level secondary schools. The household size of the poor is large, but many of them will not survive long. The girls from poor families, when reaching the marriage age level, drop out of schools to prepare themselves to become housewife. If the wife delivers her baby, she is usually assisted by unskilled midwife, with high risk of losing her life. The poor suffers high maternal mortality rate and high infant mortality rate. Malnutrition is high among the children of the poor. Many of these children go to school without breakfast and with only few dollar cents to buy cheap food for lunch. Health facilities are poor and inadequate to cope with people’s diseases, like malaria, tuberculosis, flu, and infection of respiratory and digestive channels.

Poverty is not inherent in the genetics of the people, but it is strongly affected by the socio-economic conditions of the poor. Most poor family’s breeds further poor offspring that

are trapped in the “poverty hole”. As poor individuals caught isolated in poverty, they have no one to rely upon and no access to any means to help them out of poverty. But in society as a group the poor can rely on social solidarity for help. In rural areas, the customs of “mutual help” still exist at times of sickness and death. The poor can enjoy community support for weddings and building family houses. The poor can also rely on the available food supply in community’s rice storehouse to meet bad seasons. Informal leaders can play effective role to help the poor through social institutions, like collective praying, mosques, churches, religious praying centers, community based organizations and non-governmental organizations.

The strength and effectiveness to uplift the poor depend very much on the quality of social cohesiveness of the society, which is much stronger in rural than in urban communities. Rural society is much closer to their natural surroundings and is more holistic and eco-centric in their environmental worldviews as opposed to the atomistic and individual centered environmental worldviews. According to this eco-centric worldview, human beings are part of and not apart from the community and the ecological processes that sustain all life. Under these circumstances the social cohesiveness fabric becomes strong, which makes possible to uplift the poor from the “poverty hole.” With the introduction of industries and the growth of urban cities, the society’s link with nature and its surroundings becomes more “human-made” and detached from the natural surroundings, pushing away the holistic eco-centric worldview and replaced by human-centered environmental worldviews. In this view, human beings are the planet’s most important and dominant species that manage the planet for their own benefit. This leads towards the atomistic individual centered orientation of behaviors and actions. (Miller, 2002, 375-377).

Society is classified into the upper rich class, the middle income group and at the bottom of the poor. To allocate resources most efficiently among alternative wants, the effective vehicle is price mechanism that registers demand and supply signals through the market. This is especially true for non-public resources, non-public goods and services. Markets reveal relative scarcity of resources, goods and services only under very strict assumptions, such as the validity of property rights, the availability of full information, equitable income distribution, free competition and economic efficiency. When market allocates resources in the development process, the rich are more equipped to lay claims on resources that suit their benefits better than the poor. The market cannot cater to the needs of the poor because they have limited accessibility to resources and development capability that determines the outcome of the market. But it also reveals the ingredients for policies to alleviate poverty.

Poverty Alleviation through Sustainable Development

The twentieth century model of development has demonstrated that development along the single path of economy is necessary but not sufficient. Gross World Product has increased with a factor of seven in 2000 compared to 1950. The world of today is better off materially. But the existence of 2.2 billion poor people in the globe is morally not acceptable. The same applies to massive hunger that still persists in Africa. The digital divide between the rich and poor countries is increasing because education and human capacity building are seriously lacking in developing countries. Social development is not moving as fast as economic development.

This is also true with environment. Million hectares of forests have shrunk. Transportation, industries and energy have released green-house gasses with serious impacts on global warming, climate change, increased water scarcity, negative impacts on agriculture and animal husbandry, and the emergence of new diseases, sea level rise, increased typhoons and stormy weather.

Conventional development as conducted in the past is clearly not sustainable and cannot proceed on the “business as usual” basis, when population is climbing from 6 to 9 billion at the end of this 21st century and the proportions of the poor are increasing. Hence, sustainable development must change fundamentally the content of conventional development by embracing simultaneously economic, social and environmental sustainability with as its focus to reach for the goal of poverty alleviation, to get the poor out of the “poverty hole.”

Within this context, sustainable development requires that economic development must take deliberate efforts to build human capacity through education. The focus of education must change from education *about* to education *for* sustainable development (Osman, 2005, p.28). Education for sustainable development is focused on building human capacity, individually as well as societal, that raises the quality of life to a balanced level between the physical needs for human survival and the psychological as well as the social needs of human being in a society to live a humane life in harmony with natural environment.

Economic development affects environment as sources for development. The basic notion here is that perpetuity of economic development emphasizes enrichment rather than the exploitation aspects of natural resource development. Science and technology can enrich trees to derive higher value than those of wood by transforming the bark of trees, leaves, fruits and its roots to medicinal ingredients.

Economic development affects horizontal and vertical social mobility that changes the social structure of the society. The movements of the rural poor to the cities are triggered by the image of having a better life in the more developed urban areas. Economic development affects the poor through its wide repercussion on environment and social development.

Social development on the other hand affects the economy through education, human capacity building, skill formation, knowledge, science and technology development that raises productivity of the society, and it also opens the opportunity to add values to natural and environmental resources. Social development enables us to attack the roots of poverty by opening the accessibility of the poor to acquire economic developmental tools. Social development acts like a “rope” that is thrown into the “poverty hole” to enable the poor to pull themselves out of the hole.

Environmental development assures the sustainability of economic development by maintaining natural eco-systems to function continuously. It assures the conservation of water, clean air, comfortable climate, soil fertility and the diversity of genes, species and microbes in an interconnected and interdependent web of life. Environmental development ensures stability of the “web of natural life” by maintaining diverse eco-systems that on the other hand enables natural environment to sustain also the “web of societal life.” Such a healthy “web of natural and social life” will be beneficial for the poor who always suffer first when the reverse happens.

In focusing on poverty alleviation it is important to structure sustainable development policies by taking into account the vice-versa interdependent relationship between economic, social and environmental forces of development affecting the needs of the poor. Because of market failures, such an interdependent approach of sustainable development cannot fully rely on the free market as an appropriate tool for poverty alleviation. Market responds more accurately to demand for private goods and services rather than for public ones. To cater medicines for the rich are more profitable than those for the poor. Private transportations are more lucrative for business than public transportation. Government intervention in the market is therefore required to overcome market failures and to correct price distortions.

But governments in most developing countries are weak, especially in soft states, which cause underdevelopment. This leads to many instances where government's functions in public services, like infrastructure development, human and societal security, are taken over by corporate business groups. Also in general election to elect public officials, the funding of campaigns depends too much on business contributions. It may create collusion and a strong "mutual help" relationship between governments and corporate business groups. Development may then cater too much for the interests of business first and the general public later. This is especially true when the interests of the poor do not coincide with those of business, like the clash of interests in using land, forests, water, and space for the benefit of the poor as against business.

In this context civil society groups can play a balancing role between governments and corporate business groups. Civil society groups, with their close link to the poor, know the needs of the society at the bottom level in the villages much better than the corporate or governments. Through social networks with the poor, civil society groups are able to articulate felt needs of the poor more realistically. With this capacity, civil society can counter-balance the interests of business and politicians in governments to enable a more equitable approach of sustainable development to serve the poor.

The prerequisite for successful sustainable development is the effectiveness of "good governance" that is able to reach an equitable balance between government's political interests with business' commercial interests and civil society societal interests, with special emphasis on the interests of the poor. "Good governance" requires high quality of intimate *trust* between government, corporate and civil society groups. Trust will not come automatically, but must be nurtured to grow towards a common focus of elevating the poor out of the poverty trap through sustainable development.

Pro-poor Sustainable Development Policy

Development is usually indicated by the annual growth rate of Gross Domestic Product (GDP) as it applies to the whole economy on national as well as on per capita basis. High growth rate of GDP per capita is necessary for developing countries to meet the many challenges of underdevelopment. But obtaining high growth rate of income per capita in macro-economic terms does not automatically imply a similar high growth rate of income for the poor. The results can be entirely different when high growth rate of income is achieved through increased output by intensive capital projects and rising exports by modern highly capitalized extractive industries

with no linkages to the people, especially the poor. The popular arguments of “trickle down effect” are here not valid and are not effective to pull the poor out of the “poverty hole.” The fact that conventional development of the last fifty years has raised economic growth with increased number of the poor is a clear demonstration that fruits of development have not trickled down effectively to the poor. This trend of unequal growth pattern between the rich and the poor must change into a more equitable growth through pro-poor sustainable development policies.

To what extent aggregate growth process is pro-poor can be derived from the key measurement tool, like the “growth incidence curve,” that indicates how growth rates for given quintile vary across quintiles ranked by income. Pro-poor growth is indicated by the growth rate in the mean of the poorest quintile (Ravallion and Chen, 2001, 2).

Such a pro-poor growth requires focusing on several priority sectors: First, is the need of the poorest of the poor to meet their basic needs of food. The greatest portion of spending of the poor is on food. It means that for the poor, the availability, accessibility and the purchasing ability to secure food is of the highest importance. The policy of poverty alleviation must integrate the various factors affecting food, such as price, trade, production, distribution, imports, and storing food policy.

Food is not only an agricultural commodity produced by farmers; it is also a vital commodity that affects heavily the conditions of the poor, who spend most of their income, energy and time to obtain food. It requires a level of price that affects the number of the poor below the poverty line, but it needs also to sustain farmers to earn a decent living. Price formation of food concealed conflict of interests between alleviating poverty and raising farmer’s income.

Farmers with mini plots of land that is not enough to sustain their basic needs or farm-laborers without land of their own are the majority of the poor living in rural area. These poor are in general net buyers of food and are hence vulnerable to global, national and local price increase of food. Under these circumstances it is not acceptable to give more weight on high price policy of food under the pretext “to protect” the farmers who are not net buyers of food, at the expense of increased number of the poor below the poverty line. Food price policy must favor the interest of the poor. Efforts must be made to make the terms of trade of products the poor sell much higher than what the poor buy.

The urban poor require skill, capital and technology for non-farm development program, since they have only their body and muscle as their “capital” to work. Therefore pro-poor policy must prioritize capacity building of the poor for non-farm, industrial and services development. Most urban poor earn their living as street traders in informal sectors. Urban planning must take these interests of the poor into account and provide urban space to be combined with financial and food health facilities accordingly.

The vulnerable poor and the near poor are living precariously under and close to the poverty line. Among the poor, it is the poorest quintile at the bottom of the poor that suffer the most and carries the highest risk of collapse in times of crisis. They are also the weakest link in the chain of social life. If this link is not strengthening, any small crisis can break the chain and turn the society into disorder. It is therefore important that the pro-poor policy is focused on empowering the poorest of the poor that have a spill over effect in strengthening the fabric

of the whole society. A stable society and an increased purchasing power that starts from below will create a condition that is conducive for sustained development.

The *second* priority area of pro-poor development policy is trade. Developing countries' factor of endowment forms the basis for natural resource development like agriculture and mining. These products are subject to seasonal and price fluctuation. Because of lack of capital, the poor producer loses competition against the wealthier traders. The difference in economic capabilities raises the dependence of the poor to the wealthier traders, who also acts as its "personal financier," off-harvest food supplier, provider of inputs and seller of their output. Under these conditions the traders bargaining position is always stronger than those of the poor and will always reap the benefit of any price increase, while any price drops is passed on to the poor producer.

Pro-poor development policy must raise value added of agricultural and mining development by enabling domestic producer to process raw material into final products. In most cases the poor is trapped to produce raw material only, because they don't master the technology and skill of processing. Hence, government must actively interfere to raise production capability of the poor and to link them in the network of science and technology to joint the trend of change to shift conventional raw material products into higher value added products in the global economy.

Pro-poor policy must also enhance linkages with other producers of similar conditions to raise their economic and social bargaining power. The poor lacks financing and marketing ability. Pro-poor policy must induce cooperation in marketing and develop better financial services for and by the poor.

The *third* area of pro-poor sustainable development policy is energy, especially renewable energy. Micro-hydro power, solar energy, biomass energy, wind energy, natural and steam gas combined with a decentralized local grid system are examples of renewable energy system that need to be coordinated with existing electricity network.

The supply of renewable energy development must be linked with a restructuring of demand side, by designing appropriate transportation, information and communication system, road network, rural, urban and housing architecture with the focus of energy savings and its optimum utilization.

The world is currently facing "green house gas" emitted by fossil fuel based energy, transportation and industrial development. Increased air pollution will raise global warming, climate and level of the sea. This will negatively affect agricultural and especially food production, increases new diseases, raises frequency of storms and floods, which will hit the poor more than any other income groups of population.

This comprehensive renewable energy program must include efforts to correct market failures. Government's taxation, subsidies, licenses, and all other policy tools must necessarily internalize into the cost structures of production all externalities that affect negatively the quality of environment. It must raise prices of items that degrade and reduce prices that improve social and natural environment. All this market corrections are aimed at the goal of "getting the prices right." Removing price distortions through the correction of market failures will improve the quality of the pro-poor sustainable development policy.

There are of course other important focus areas for pro-poor sustainable development policies. However suffice it is to demonstrate the intricate content of pro-poor sustainable development policies that cover agricultural food production, trade and energy. The content will be made more complex because of the fierce competition between developed and developing countries in the global economy.

While leaders of developed countries are preaching for the need of open markets, free competition and economic liberalization to developing countries, the grim reality is that developed countries themselves are not implementing them within their own boundaries and in global negotiations.

Agriculture has the potential to become the main engine of growth in developing countries. It fails because of limited market access into the developed countries market. High import duties, quota system, non-tariff trade barriers, anti-dumping arrangements, special safeguard mechanism, special and differential treatment for developing countries are market access provisions of the *World Trade Organization* framework agreement on agriculture that requires fundamental changes in the current trade system between developed and developing countries.

Developing country exporters in agriculture are facing protection that is four to seven times higher than in manufacturers in the *Organization for Economic Cooperation and Development (OECD)* countries. Domestic support and subsidies for agricultural products in developed countries have made these products artificially competitive against those produced in developing countries. In the *European Union*, *Japan* and the *United States* the combination of quotas, tariffs, and subsidies have made domestic producer to receive more than double the world market price. In sugar for example, OECD governments alone have supported sugar producer at the rate of \$6.4 billion annually, which is equal to sugar exports of *all* developing countries. This has made possible for the *European Union* to change from a net importer of sugar in the early 1980s to a net exporter today.

US subsidies to cotton growers of \$3.1 billion (2003) were 1.5 times higher than US foreign aid to Africa. These subsidies depress world cotton prices by 10-20% and have reduced income of poor farmers of Western Africa, Central and South Asia and other developing countries. More than 70% of subsidies in developed countries are directed to large farmers, who have reached income that are higher than average incomes in Europe and Japan and to a lesser extent the United States. (*Newfarmer R*, 2006: 17-18). The WTO is currently under severe pressure from developing as well as developed countries to reach for a wise solution. Because voting arrangement of WTO is based on dollar contribution, it will put developing countries in a most disadvantageous position.

On energy, the Final Report of the Extractive Industries Review commissioned by the World Bank has recommended to phase out World Bank Group's investments in oil production by 2008, the year of the first commitment period under the Kyoto Protocol, and devote its limited scarce resources to investments in renewable energy resource development, emissions-reducing projects, clean energy technology, energy efficiency and conservation, and other efforts to delink energy use from greenhouse gas emissions (*Extractive Industries Review*, 2003, 64). This proposal was rejected by the World Bank because the Bank considered that fossil fuel investment will raise export earnings and other economic benefits to developing

countries, and the negative impact of fossil fuel development on the environment is considered lower than the positive impacts of economic development.

Taking these circumstances into account, it is clear that substantial changes are required in international institutions, such as WTO, World Bank and International Monetary Funds, who base their decisions on dollar-vote. Globalization has blurred national boundaries. Greenhouse gas emissions in one country raise their impacts on the global environment affecting all countries. It is hence imperative that international institutions that affect the global economy, society and ecology cannot be based on dollar votes, but must be part of the UN family with decision making on the basis of country vote. This is the logical consequences of the globalization process that affects all walks of life of anyone in every country. But most poorest of the poor are concentrated in developing countries, and they will suffer the most from any decision making process that put them “outside the development voting box” to be left behind suffering in the “poverty hole.”

There are too many human beings under the poverty line that are still trapped in “poverty holes” of the globe. It is the moral and humane duty of decent people all over the world to pull the poor out of the “poverty hole” and to enable them to walk on the path of sustainable development towards a life worth living for all.

References

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Lecture

Plain Living, High Thinking

Dr. Emil Salim

Introduction of the Problems

It was in March 1978 when President *Soeharto* invited me to join him on a boat ride at the Jakarta Bay. This was the time when the just elected President invited candidates for cabinet position to have a person-to-person talk with him away from the glare of television lights and crowded journalists.

We passed the mouth of the *Ciliwung River* at the Jakarta Bay, when he showed me the polluted dirt entering the sea. The water close to the coast was full with filth. The President told me that he enjoyed fishing here in the past, but he now had to sail further away from Jakarta Bay into the ocean. He told me about his village life when he was a young boy playing with friends in the forests, washing his water buffalo and joyfully swimming in clean rivers. But now not only the Jakarta Bay is heavily polluted, but also the river in his village and all other rivers, the forests have also gone and we have not even started our development yet, he uttered a sigh with anguish.

Then he looked into my eyes and said with a firm voice, that he wanted me to prevent further environmental destruction. We must reconcile development with environmental construction. Development should not be anti environment and environment should not be against development. Development and environment must be merged into one flow of joint effort. I want you as Minister of Environment to assist me.

I was honestly surprised by this offer. I am a trained economist and I have served in the National Development Planning Board. I know somewhat about economics and development but to be frank, I don't know anything about ecology.

The President however argued that because I am a developmental economist, it is easier for me to reconcile development with environment. "Since you are an *economist* it must be somehow related to the same word of *oikos* in *ecologist*, isn't it? Why not reconcile economy with ecology?" And with a smile he extended his hand and shook my hand.

Since then I have traveled the road searching to reconcile development with environment and economy with ecology. In this journey I have gained some wisdom and knowledge from numerous leaders, experts and common people around the globe to make me beginning to understand the idea of sustainable development and ecological economy.

Environment Ministers usually have to attend regular annual meetings organized by *United Nations Environment Program (UNEP)* in Nairobi, Kenya. UNEP was created in Stockholm, Sweden, at the *UN Human Environment Conference* (1972). Since then the word "environment" entered into the world's vocabulary. Some progress has been made in environment, but the negative impacts of development on environment have moved much faster.

UNEP called in 1982 for a Special Session to review progress made ten years after

Stockholm. The general consensus of this session was that environment had to be considered within the framework of development. Based on the proposal made by Japan, the Special Session agreed to set up a *World Commission on Environment and Development* (WCED) to explore efforts to reconcile environment with development in a global agenda for change. Prime Minister of Norway, Gro Harlem Brundtland, was asked to chair and she selected 21 personalities representing different continents of the globe to become members of what became known as the *Brundtland Commission*.

Saburo Okita, who was the oldest, represented Japan but also the most experienced of the group. He was one of the prominent architects of Japan's post war development in the fifties. He shared his experiences with commission members on the good and the bad sides of development when environment was not known at that time. Developing countries can learn from the mistakes made when development neglects the environment. Discussions among commission members were held everywhere and at any occasions. The group celebrated *Saburo Okita's* birthday on the boat while traveling on the Amazon River on the way to Manos, Brazil.

On the basis of discussions within the group as well as in public debates with various stakeholders from all continents that were visited by the commission, ideas were gradually sharpened up and have found its way into the Commission report "Our Common Future" (1987). After the publication of this report, numerous conferences and meetings have taken place in and outside the UN, which contributed to the enhancement of sustainable development concept with distinct differences from the prevailing concept of conventional development.

Almost twenty years after the *Brundtland Commission* has completed its work in Tokyo, February 1987, and the world has moved into the 21st century, the time has come to ask the questions what has development in the globe achieved thus far, what has gone wrong with conventional development model of today and in what direction do we have to go?

To answer these questions we need to revisit the ideas of Sustainable Development, as it was perceived twenty years ago when "*Our Common Future*" was published and to explore efforts, to reconcile "development with environment" and "economy with ecology."

Conventional Development's Achievements

The world of today has pursued in the twentieth century the pattern of "conventional development" that has been able to raise Gross World Product of the year 2000 seven times those in 1950.

The world has witnessed nations, like Ghana, Nigeria, Sierra Leone, Venezuela and others to reach the level of 1999 Gross Domestic Product per capita already in or before 1960 (World Bank, 2003, 149), which put them in a more advanced level than Botswana, Republic of Korea or India at that time. Now however the positions of these countries have been reversed, the latter countries have surpassed the former indicating the non-sustainability of former countries' development.

Conventional development has been able to raise income, education and health condition of developed countries but it has failed to do the same in developing countries. Out of 6 billion-world populations in 2000 more than 2.2 billion people were living on less than two

dollars a day. In many countries of Africa, Asia, Latin America and the Caribbean more people are suffering undernourishment, high infant mortality rates, low education quality, inferior health facilities, lack of clean drinking water and poor housing. In the meantime developed countries on the other hand, have to cope with increased obesity, aging population, underutilized class rooms, highly sophisticated disease control, abundant clean drinking water and increased demand for second summer housing.

In San Francisco the Vermont Meeting (1995), chaired by *Mikhail Gorbachev*, has voiced the concern that the current trend of global development is leading towards a world of 20/80, implying that 20% of the global population of developed countries will control 80% of global resources, while 80% of global population of developing countries will control only 20% of global resources, because of continued economic and technology strengthening of developed countries at the expense of weakening developing countries in the world of globalization, open market and free competition.

This gap between developed and developing countries is also increasing because of lack of capital and limited transfer of financial resources from the rich to the poor countries. It is recorded by the *Organization for Economic Cooperation and Development* that during 2000-2002 in the European Union, domestic subsidies to agriculture have reached up to \$105 billion compared to \$25 billion of net official development assistance; in the United States, \$95 billion total agricultural support is accompanied by less than \$10 billion net official development assistance; in Japan \$58 billion total agricultural support is match by almost \$5 billion net official development assistance. (World Bank, 2005, 184).

It indicates that funds are actually available in developed countries to assist developing countries, but the political will is seriously lacking. While in developing countries globalization, open market and free competition are widely promoted, in developed countries however, protection and unequal competition in subsidized agricultural products still persist.

Growth of Gross Domestic Product in developed countries also requires larger inputs of natural resources. *World Wildlife Fund* has estimated in 1999 the “ecological footprints” as “the amount of productive land needed per person to support patterns of consumption”, which in US was 9.7 hectares compared to Japan (4.3 hectares), the global economy (2.2 hectares), People’s Republic of China (1.5 hectares), Asia Pacific (1.3 hectares), Indonesia (1.2 hectares), India (0.8 hectares) and Bangladesh (0.6 hectares). (Asian Development Bank, 2005, 3). This “ecological footprint” is currently much deeper and is expected to be worse in this 21st century, if development continued to proceed along the path of “business as usual”.

The main features of conventional development as promoted by the *World Bank* were to build infrastructure, import machines, protect industries from competition, invest in human capital, technology transfer, liberalize markets, free the exchange rate, privatize state-owned industries and expose them to competition. This model is widely supported by the *US Treasury* and the *International Monetary Fund*, and is popularly known as the “*Washington Consensus*.” Under these conditions the main engine of sustained economic growth is private enterprise operating through the market. (World Bank, 2005, 45-46).

There is a rational logic in this development model that makes sense. Private enterprises will flourish in a market that is geared up for growth. It assumed however, that those pri-

vate enterprises are of similar strength and operate in a global market of equal level playing field. The grim reality is that competition between developed and developing countries is conducted with unequal strength, as if we are watching a boxing match between the heavy weight US champion, Mohammad Ali, against the heavy weight Indonesian champion, Elias Pical. It is obvious that the Indonesian champion with nutrition intake, training facilities, body weight and boxing skills far below the US champion, loses the fight.

The world has no facility in agriculture, industry or trade to close the gap between developed and the developing countries. The weak has to compete against the strong in a free competitive market. The results are that the gap has grown in the past and it will grow further in the future if no drastic change is made in the currently prevailing development model.

Market, Policy and Institutional Failures

When the *Brundtland Commission's* report "Our Common Future" was published in 1987, total World Gross Domestic Product was about US\$33 trillion. In 2006 it has reached around \$60 trillion, a doubling of World GDP in a time span of less than 20 years. In spite of such a growth, most shocking are the facts that the Commission's evaluation of the world situation 20 years ago is for the most part still valid today.

The world of today is still suffering poverty, hunger, low education and health facilities with ravaging effects on the quality of life in developing countries. On the other hand developed countries are much better off, although suffering from "rich country's diseases" like obesity, heart diseases, overcrowded cities, traffic jams and lower birth rate. The gap between developed and developing countries is still widening, because of un-equal growth that still prevails today.

The basic flaw of the conventional development model is that it relies heavily on the market but fails to cope with market failures. Social and environmental goods are public goods, which the market cannot sell. Public vaccination against infectious diseases, for instances, is a social service whose values are not registered by the market. Clean air, rivers, mountains, forests, comfortable climate are environmental goods that have no market value.

Development that relies solely on the market will necessarily put economic values of goods and services on the forefront, while ignoring the values of social and environmental goods and services.

The market is also not accommodating externalities, in which one's action creates negative effects or externalities to "outsiders" and therefore raises their costs. One's action may create positive effects and positive externalities that raise benefits to "outsiders". Both negative and positive externalities are not revealed in the market and are therefore not accommodated in the cost structure of the producer and price structure for the consumer. With a distorted cost and price structure in the market, those products that pollute, like fossil fuel, will be over-valued, while those that are clean, like solar energy, will be under-valued. Under these conditions of price distortions, fossil fuel and other non-renewable energy sources are flourishing, while solar and other renewable energy sources are dwindling.

Private enterprises are oriented towards the interests of shareholders first and stakeholders later. Financial returns on investment dominate, while social and environmental inter-

ests play a subordinated role. With this outlook, it is not surprising if conventional development produces rapid economic growth, at the expense of social deterioration and environmental degradation as demonstrated by development indicators of the globe thus far.

Looking closer to resource use, conventional development model does not explicitly take into account the different nature of natural resources as renewable and non-renewable resources. Renewable resources have a threshold beyond which its regeneration will *not* take place. In utilizing renewable resources, development must therefore take this threshold into account. It also means that the choice and the use of technology must not exceed the threshold level for regeneration of renewable resources.

When renewable resources are located in public domain, like fish, we must apply principle of “sustained yield.” Adequate and enforceable restrictions must be effective to avoid the validity of the “*tragedy of the common*”; in which everybody will face the tragedy of loosing if everybody wants to use freely common property.

Resource use management is different when using non-renewable resources that are subject to resource depletion and produce as by-product pollution and waste. These factors are not taken into the conventional development model and will then necessarily raise pollution and waste. When non-renewable resources are depleted, like in mining, the company usually leaves the place after paying some “farewell money” to the people left behind. There are no plans in the company’s budget to deal properly with appropriate compensation to locally affected people who lost their livelihood. No time frame is drawn for the period before resources are used up to develop alternative substitutes to enable development to sustain beyond the time of depletion.

Factories ignore to deal comprehensively with wastes, especially hazardous and toxic waste, by not internalizing them in factories’ costs structure and by not managing well its negative impacts. Unless the government and the corporate strictly enforce the environmental and pollution laws, these external costs will *not* be internalized in the conventional development model.

To cope with pollution and waste, the company should from the beginning and all the way through the life cycle of production take into account the choice of clean technology. The corporate must cope with all costs related to social and environmental degradation at all stages of production.

Closely linked to the externality problem is “property right,” which according to the *Coase Theorem* posits that assigning property rights to any good, even if externalities are present, makes bargaining between affected parties and reaching efficient solution possible. (Callen and Thomas, 2000, 87).

The second basic flaw in conventional model of development is the use of scales, such as the time and size scale. Practically most conventional developmental issues are of short-term duration, highly influenced by the usual 5-year time frame of elected government officials. This limited and short-term period influences the way we conceive development, which has the tendency to be myopic and to deal only with developmental issues as observed through a tunnel vision. Only the short-term issues are caught on the radar screen, while the longer-term issues are outside the purview of conventional development. Social and environmental issues

are typical long-term issues. Its impacts are felt after sufficient time has elapsed. In the short-term model of economic policy, these long-term issues are insignificant because, as Keynes likes to say, on the long run we are all dead.

Another scale-issue is size. Most experiments of social and environmental development are initially conducted on a pilot project of limited scale. When it proves to be successful, the inclination is to blow these small-scale pilot projects into bigger size, with the risk of failures. Rice production, which was successfully experimented in Indonesia on peat-soil as pilot project in a scale of less than 10 hectares was blown up into 1 million hectares of peat-soil. The results have been disastrous.

Government bureaucrats are eager to reach for quick results. Small scale projects are trapped in the “fallacy of scale”, where it is believed that the multiplication of small into larger scale of these projects will also multiply the results in growing proportions. This is not realistic.

The pressure for large and quick results has induced governments to launch development with a big push approach. Countries that have the ambition to jump on the ladder of technology development from low to high-technology in a short period of time have to pay highly subsidized costs. With economic crises these high-tech projects become easily the victim of bankruptcy.

After decades of centralization and strong central authority, under the spell of democracy, Indonesia has decentralized government’s central power straight to the districts and bypassing provinces. When decentralization is executed with a big bang approach in 1999, it has created a stinginess effect that is still felt today. The adjustment from a highly centralized into a highly decentralized model of governance within a too short time period has created waves of confusions and instability that have now not been subdued.

The third basic flaw is that main actors in conventional development model are too limited to governments as regulators and policy makers with only businesses as executors of economic development. The government’s task is to provide legal structure to create a healthy climate for businesses to flourish and grow. Other non-governmental and non-business actors are not playing a significant role.

In democratic system that has been widely promoted in developing countries, top decision making leaders are elected through general elections. Since campaigning and running political parties are quite expensive, candidates for top ranking government’s positions are inclined to look for financial support from business people. The formation of illicit collusion between elected government and business leaders are the bitter consequences of such political alliances. It makes elected government leaders obliged to conduct policies that are very much pro-business and pro-free market to enable businesses to obtain a profitable rate of return on their political investments.

Currently a growing tendency emerges that successful and rich business people are actively striving for top positions in governments.

Under these circumstances it is difficult to expect government to be objective in intervening and correcting market forces for the benefit of the whole society. There are numerous examples of governments’ policies that are very much pro-business while ignoring the inter-

ests of the small, the weak, the vulnerable and the poor.

The content of “development” is steadily eroded from its initial ideal goal of sustained livelihood and social welfare for the common people, to the content that is becoming increasingly commercial to raise material wealth and money. “Development” becomes now the general commodification of economic goods to be followed later of environment and social goods. (Rist in *Development Dialogue*, 2006, 71).

The market is increasingly replacing the state as the primary means of allocating resources that reduces also its executive capacity, its mandate and scope of its activities. The more the market dominates and the less the state regulates the better. This seems to be the hidden assumption of the Washington Consensus.

Under these circumstances it is of crucial importance to induce civil society groups that are non-governmental and non-business to grow into countervailing powers to push government and businesses to strive for policies and development that are very much pro-poor and pro-environment. With the dominance of neo-liberal paradigm that has pushed development away from the road to improve conditions of the poor, civil society organizations are increasingly growing in opposition to the state and to corporate capital. (Hyden in *Development Dialogue*, 2006, 183).

Since the *World Summit on Sustainable Development* (2002), a range of partnership among various actors has sprung up vividly to execute jointly the “Johannesburg Plan of Implementation”. These partnerships follow in general the pattern of the triangle of equal actors comprising of government as regulator and policy maker, businesses as implementers with economic interests and civil society as balancing power to articulate societal interests, especially of the deprived citizens. The emerging triangle of equal partnership among government, business and civil society groups opens the opportunity to correct the various basic flaws in conventional development and opens the way towards sustainable development.

After 20 years of conventional development, it is clear that radical change is necessary to move development away from the pattern of “business as usual”, to cope with its basic flaws and to follow the correct pattern of sustainable development.

Main Features of Sustainable Development

Conventional development model is used to follow a single linear line of approach to deal with economic developmental issues only, while other non-economic variables are frozen. When environment deteriorates, it cannot supply the needed resources to sustain development. Similarly if social factors are ignored and erupt into social conflicts, the sustainability of development will also be at risk.

It is clear that sustainable development requires a bundle of triple lines, consisting of economic, social and environmental lines moving in a spiral upwards of poverty alleviation, higher quality of human development with social cohesion, within a perpetuating life supporting eco-system.

This triple approach is to be formulated into “sustainable development matrix,” that reveals dimensions of economic, social and environment in vertical and horizontal columns. Sustainable development requires an inter-disciplinary approach combining economic, social

and environment in a “three column and three row matrix” simultaneous development.

To pursue poverty alleviation through employment creation as the goal of *economic* development, will raise impacts on social and environmental development that must be managed.

Similarly, to raise human quality through education, health and human resource development with efforts to improve social cohesion as the goal of *social* development, will exert its impacts on economic and environmental development.

By the same token, to assure the sustained functioning of eco-systems to support life, such as water, land, air, climate, and genetic resources as the goal of *environmental* development will affect economic and social development.

With the application of “*inter-sector impact analysis*” the interrelationship and interactions between economic, social and environmental factors can be pursued. By managing the triple sector impacts within and between each factor, this comprehensive and holistic approach can ensure the sustainability of development.

In economic theory, *growth* was initially considered as moving along a singular linear line of economics only. Since the fifties “growth” has to make way for a wider concept of “development,” which involves economic and social dimensions along a two linear lines. With the introduction of “sustainable development,” however, development covers now a broader field of economic, social and environmental development. Development has left the single approach to shift into the triple lines along an upward spiral of sustainable development “that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Our Common Future, 1987, 430)

Requirements for Sustainable Development

This “triple lines” of sustainable development require strong management that is able to coordinated government, business and civil society through the triangle of equal partnership. Sustainable development can however be hampered by the weakest line in the bundle of triple lines. This calls for a management that strengthens and empowers the weakest link, which refers currently to the social and environmental dimensions of sustainable development.

Sustainable development model recognizes five modes of capital: namely natural, human, social, financial and human-made capital.

- The quality of *natural* capital is determined by the sustained function of networks of interlocking ecosystems;
- *Human* capital is affected by raising the quality of human resources through education, cultural, spiritual and human health development;
- *Social* capital depicts the quality of togetherness, the social relationships and networking among individuals that are strongly affected by the quality of the “*we-ness*” or “*Wirheit*” approach. Interesting is the fact that the Indonesian language has two words for “we”, namely “*kami*” implying “*we-without-you*” and “*kita*” meaning “*we-with-you*.” Investment in social capital implies strengthening togetherness of “*kita*” that enable inclusion of all members of society in a “*we-with-you*” togetherness regardless of differences in race, ethnic, religious beliefs, culture, custom law, language and political ideologies. Social cohe-

sion requires value formation and value strengthening of “unity in diversity”;

- *Financial* and *human-made* capital is both creation of human beings that requires investments in hard and software.

With the proper combination of all these capital and recognizing constraints of nature’s as well as societal carrying capacity or the “*Plimsoll line*,” depicting the limits of cargo carrying capacities of ships, we can pursue sustainable production and consumption as the twin pillars of sustainable development.

Sustainable production can be achieved if in terms of *natural resources*, renewable resources are used below the threshold level and non-renewable resources recycled and used.

In terms of *energy*, priority must be given to maximize energy efficiency, to actively stimulate and promote the use of renewable energy, to reduce pollution by non-renewable resources through the use of clean technology with full awareness that “green house gas emissions” must be controlled in accordance with the *Kyoto Protocol* allowable limits to prevent climate change. On the demand side, we must launch cleaner and more efficient transportation modes, environment friendly urban development plans that are able to cope with floods, sanitation, and waste, pollution while assuring distribution of safe drinking water, clean air and healthy public open spaces. Construction of tropical architecture and building codes must promote energy efficiency and energy savings.

In terms of *spatial use*, through effective enforcement of spatial plan we must optimize the use of land and other natural resources within the constraints of eco-systems’ carrying capacities. Spatial planning serves to prevent and solve social conflicts in resource use between resource exploiting companies and local people.

In terms of *technology*, it can optimize natural resource use and raise value added especially of biological resources, it eliminates hazardous and toxic wastes, and it recycles, reduces and reuses pollution and waste for further production. Biotechnology, genetic engineering, marine technology and nano-technology are most effective in raising value added of biological and marine resources.

Sustainable consumption requires that government’s policies, taxation, subsidies, budget spending, laws and regulations are geared toward making available goods and services that are produced along the sustainable production patterns as close as possible to the consumer’s purchasing power ability. Examples are by shifting tax burden away from immaterial human mind creativity towards material intensive human made consumption goods. Human mind creativity, such as science and technology development, creative arts and culture as well as spiritual endeavors will satisfy social-cultural demand that are using less material compared to material intensive consumption goods.

Similarly with government’s policies of financial incentives in fiscal, trade and industry, we can promote renewable resource and recyclable non-renewable based consumption goods and services, such as in automotive industries that make more use of light, recyclable non-renewable material in construction of cars.

By imposing health regulations of the World Health Organization, government can promote requirements to reduce harmful and unhealthy substances in consumption goods, like nicotine in cigarettes or pesticides in food.

To assist consumer to choose healthy and environmentally friendly consumer goods, countries must impose eco-label, ISO 14000 and ISO 28000 and other international standards for environmentally friendly products.

To ensure sustainable consumption, we must apply transparency and disclosure of information on the content and quality of consumption goods.

Since markets fail to register social and environmental preferences, environmental valuation techniques have been developed to substitute for failures in “getting the prices right” (The Wealth of Nature, 2003, 116-126) as the basis “to get the incentives right”.

To deal with pollution problems, emission charges are instruments to reduce the quantity of pollution. Under the Kyoto Protocol permits are issued equal to the permissible total emissions in the region. Polluters that are not using their allowable emission levels can sell this unused emission level as *tradable pollution permits* with scarcity values that provide incentives to create a market for these permits.

There are two methods for valuing in environmental resources, namely the *indirect* method in estimating the use value of resources by means of *travel cost method* and *hedonic pricing*, and the *direct* method through the *contingent valuation methods*.

Travel cost method uses the amount of expenditure spent on the trip and transport charges as well as the average time spent on the trip in reaching the sites of recreational forests, which reveals the total value of the forests. (Environmental Valuation, 2000, 140-141 and Natural Resources and Environmental Economics, 2003, pp.411-438).

Hedonic pricing, for instance, reveals to particular characteristic of a building to obtain high value because of its contribution to environmental benefits, such as the hotel rooms with ocean view compared to hotel rooms looking to the wall of its neighbors.

Contingent valuation methods assess the economic value of environmental services through surveys on the “willingness to pay” for demanding a given environmental service to be harmonized with the “willingness to accept” its compensation. The equilibrium between the “willingness to pay” and the “willingness to accept” determines the value of the environmental services.

Realizing that market failures persist in the economy, government policies can make the necessary corrections required by interfering in the market through fiscal, trade, industrial policies, regulations, licensing and by creating values for environmental goods and services through tradable permits, travel cost method, hedonic pricing and contingent valuation methods. More instruments are expected to become viable for valuing environment in the future.

By managing these inter-sector impact analysis, and by dealing with market failure combined with valuing environmental service, this comprehensive approach makes possible the change of conventional into sustainable development.

To manage sustainable development properly, the crucial prerequisite is the creation of *good governance* as revealed in the triangle of equal partnership between government, business and civil society.

It is not the government’s scale of preference per se, or the businesses companies desired objectives only, but it is bundling up of the combined preferences of governments, businesses and civil societies that enable balanced management of sustainable development.

This is especially true when democracy has not been matured and government's institutions as well as the corporate are not yet functioning properly. Check and balance by civil society components in conjunction with improving maturity in democracy on the path of developing *good governance* make sustainable development more realistically feasible.

It enables social and environmental services to obtain appropriate compensation by interfering and correcting market prices. This interference requires institutional arrangements that make possible to capture the appropriate societal scale of preferences through the triangle of equal partnership between government, businesses and civil society.

It requires also an aspiration of striving for a common goal in a long-term time perspective that emerges through democratic deliberations from below with people's participation.

A goal that is not emphasizing long run economic achievements only, but is balanced by social and environmental achievements that enables sustainability of life for mankind and society within a life supporting natural ecosystem most feasible and desirable.

Implication of Sustainable Development on the World

At the international forum there are no similar national government's operating institutions, which make market corrections difficult on global level.

This will be made more complicated if powerful governments and international institutions are enforcing unilaterally their own convictions and economic ideologies of liberalism, free trade and private enterprises in a world with inequality.

International conventions are normally used to substitute for global governance but to be effective it must be based on multilateralism.

Since the world is differentiated in unequal economic, technology and political strength between the rich and the poor countries, developing countries adhere to the principle of "common but differentiated responsibilities". All countries have common responsibilities to enhance sustainable development, but these responsibilities must be differentiated in accordance with the differences in economic strength and development capacities between the two groups of countries.

Because the fruits of development are not equally shared between the rich and the poor countries, the burden of development cannot be distributed even. Unless developed and developing countries have equal rights, especially in influential world institutions when the dollar votes dominate such as the World Bank, International Monetary Fund and the World Trade Organization, the validity of "common but differentiated responsibilities" is its logical outcome.

On the other hand if this goal of equally sharing the benefits between the rich and the poor are not achieved, the danger will be that social and armed conflicts will perpetuate, as revealed in the current battles in developing countries of Afghanistan, Lebanon, Iraq and Palestine against the armed forces of developed countries of US and United Kingdom, making the world unsafe and unsustainable.

This calls for the need to strive for the essentials of sustainable development to live within the carrying capacity of the global economic, social and eco-systems.

The world has enough natural, human, social, financial and human made capital to support a humane sustained livelihood. Based on the accumulation of knowledge, science, wisdom and technology, human and social life can be sustained within a healthy ecological system.

The needs of the world today are in changing the course of development from an increased materially based style of life into an increased enrichment of immaterial, cultural, spiritual, knowledge and science based humane livelihood within the purview of human needs that is able to suppress human greed.

There are increased efforts today to critically review the economically based Gross Domestic Product and to strive for Green GDP to make the necessary corrections through internalizing externalities, by incorporating resource depletion and by including social and environmental benefits.

The life style of tomorrow does not imply reducing consumption, but consuming *differently*. What is needed is changing the quantity of consumption from resource exhaustion with finite energy inefficiency to raising the quality of consumption with resource enrichment and sustained by perpetual energy efficiency.

To strive for this different life style, *plain living* is the most ideal paradigm supported by the creativity of *high thinking* on the basis of science, technology, cultural and spiritual development.

Agenda for Actions

To reach for this goal of changing life style, the following efforts are required:

First, to educate and enrich human capacity to understand the interdependent net-working processes of the economy, society and ecology on the basis of symbiotic relationship of *natural sciences* (biology, ecology, physics and chemistry) that interact with *social sciences* (economics, sociology, psychology, anthropology, political science) to give substance to sustainable development, among others by making use of ideas developed by “Blue Planet Prize Laureates” during these last 15 years;

Second, to change the orientation of development from an “*I*” or “*aku*” and “*we-without-you*” or “*kami*” into a “*we-with-you*” or “*kita*” outlook. This is important to consider within the Asian context, since this region is expected to become the main “locomotive” of global growth in the 21st century. Unlike in the West, in Asia there is a strong urge to ascertain harmonious relationship between human being and God the Creator, between human being and nature and between human being and society. These Asian values are crucial in sustainable development and needs to be nurtured through moral persuasion, education, intellectual, cultural and spiritual enhancement;

Third, incentives, disincentives, punishment and rewards must be created through government policies, law enforcement and institutional development to shift paradigms of resource exploitation to resource enrichment by applying science, technology and local wisdom that

add value to social and natural resources;

Fourth, governance in sustainable development requires the involvement of government, businesses and civil society leaders in a triangle of equal partnership to enable maximum participation of all people to reach for poverty alleviation through full employment, raising quality of human development within a cohesive society and sustaining essential life supporting ecosystem;

Fifth, global partnership among nations on equal basis in decision making are necessary requirements to reach for Millennium Development Goals and the Johannesburg Plan of Implementation of Sustainable Development.

On the basis of these five-points it is possible to draw the essence of sustainable development, which is revealed in the notion of *plain living, high thinking* as the basis of a sustained life style for global survival with God's blessing.

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