

8

Two Worlds

Essays Collection

Intercultural Experiences
from The Perspective of
Indonesian Students in
South Korea

The Indonesian Students Association
in South Korea (PERPIKA)



Center for Korean Studies
Gadjah Mada University

KOICA

Korea International
Cooperation Agency

Two Worlds

**Intercultural Experiences
from the Perspective of Indonesian Students
in South Korea**

ISBN : 979-25-8810-8

Writers :

**The Association of Indonesian Students in South Korea
(PERPIKA)**

First Published May 2006

Lay Out and Cover Design by Obiet

Publisher

**Center for Korean Studies Gadjah Mada University
Bulaksumur B-9, Yogyakarta, Indonesia 55281**

Phone : +62 274 6491979; +62 274 554323

In cooperation with

Korea International Cooperation Agency (KOICA)

Copyright PERPIKA 2006

Printed in Indonesia

Two Worlds

Essays Collection on
Intercultural Experiences from the Perspective of
Indonesian Students in South Korea

[Signature] bogor, 15.03.08.

The Association of Indonesian Students in South Korea (PERPIKA)

The Center for Korean Studies

Gadjah Mada University

Indonesia

And

Korea International Cooperation Agency (KOICA)



Center for Korean Studies
Gadjah Mada University

KOICA Korea International
Cooperation Agency

WRITER'S IMPRESSION ABOUT KOREA

Between the ascent of towards boundaries science in Seoul and the adventure for keeps survive from *Gu* to *Gu*, from *Si* to *Si* until all corners of *Do*, realized that there are many patterns, such as, lesson and experiences that become a very worthy blessing. As wise words said: ' the much that walk, the much that you seen and blessings you will get. (Qodarian Pramukanto, PhD Course Student of Seoul National University).

My experiences in South Korea make me realized that man is unique. It are reflection which I wish to inform that the man is a social creature with all off its unique and limitations. Such as wise people said that, we must be clever to find gold. We have to take the gold experiences and exploit them while its sand has to remove. (Frass Minggi Kamassa, Korean Language Course Graduate, Yonsei University).

Philosophic opinions behind the fast of progress that experienced by South Korea is a pleasant exploration but full of challenge while digging its. (Etsar Muktasar Syamsuddin, Phd Course Student, Hankukk University of Foreign Studies)

Fully impressed, how in the middle of progress and modernity, the heritage values of their ancestor still be held tautly by each generations. Being interacted directly with them, remind us about our cultural root. (Andi Fadly Yahya, Phd Course Student, Seoul National University)

Climbing up to the Sky, Reach the Upper Level University

Qodarian Pramukanto

We still remember the wise words said by Indonesian first president, Sukarno, "Hang up your dreams as high as the stars in sky". However, a professor in my institution, IPB, had advised by changing its arrangement into a rather concrete and higher expression, "...hung up your stars on your dreams". Apparently, the similar series of wise words also whipped up the fighting spirits of Senior High School students in the ginseng country that increasingly heated up toward the entrance test selection in this cold season. "Climbing up to the sky" is the expression for the students who are peering to the upper level of institution that become their dreams. If it is possible to mention three of several other institutions that are considered occupying this position i.e. Seoul National University, Yonsei University, and Korean University.

The metamorphosis of elementary to middle education, which bears the candidates of undergraduate students that should face the stratified selection criterion and various specific types of selection toward the candidates. Therefore, the phase of climbing upwards heading to the level of “sky” university is not sufficient if just supplied by the passing achievements that was achieved in Senior High School, the progress report and certificate, but should show the other supreme achievement. Moreover, merely possessing high score in the national examination a la Korea peninsula style for only five lessons are not enough. It is because the battlefield to enter the university was opened wide, as wide as the achievement and as deep as the experience to the supporting supreme component from the students.

Only those who pass national examination with high score based on the standard established by this supreme university, who could continue to the next battle, while the rest are invited immediately to bury their dreams and choose other universities in accordance with their score. Furthermore, participants that pass until the final stage of this increasingly conical still have to fight for their chosen universities to “compete” with other candidate. In this final round, the style of area selection form is displayed; begin with interview, evaluation of non-academic supporting component, artwork, scientific paper and other supreme achievement. In short, all participants let out their “lethal charm” with certain competitive advantageous value. Finally, the supreme achievement will promote their opportunity to get the chosen university. Even for this last qualification, each university has their own respective criterion.

Two Worlds

The supporting component that become the last weapon could be showed in various forms start from the foreign language proficiency, computer skills, achievement in scientific writing competition, sport, art to the interest toward the environment and social aspect. Active in the social service as the social worker, in the fire extinguisher service, and the cleaning service are the substantial supporting component that can improve the track records of the candidates.

Picking up the dream and going ahead to the ideal university do not just rely on brain distillation in the class. Fighting spirit, hard work and high discipline become the absolute requirements. The dense schedules become the daily menu for Senior High School students. Although officially, the learning time in the classroom is only eight hours, but apart from this time the students are made busy by the extra classes especially to material that would be tested in the national examination to enter the university and various increasing certificate skills activities as well as the other supporting component. The time that still remains is used by them for self-study. These daily activity begins since leaving the house at 8 am until returning home at 11 or 12 pm. So, around 15-16 hours a day is spent at school, whereas the house is only a place to get rest.

Based on the harsh picture of the competition to enter the best university in South Korea, there is an interesting lesson. That is to say, beside determined efforts, strong motivation becomes the absolute condition. The motivation in measuring the target is not enough if it is just by having the best academic score in Senior High School and by

having the best value in the certificate or high score in the national exam as the filtering to enter the universities. However, the motivations to get high achievement in all fields and occupy the best position are also the important thing. In other words, it is not only the reports, certificate, score that were pursued but also by breaking record of achievement!

Cumulatively, the best achievement is not only reflected in the report, certificate, score, but also in various supporting components. Moreover, the last component mentioned before also becomes the final determiner before being appropriate to be called as the student. Therefore, with the balanced achievement provisions between curricular and extracurricular, the candidates could despise the “stars” in the goal that open to the road to enter the higher education gate in the ideal university. It is hoped that some valuable lesson could be reaped from the “stars” in this ginseng country.***

The Kwanak Mountain valley, Seoul November 15, 2004

Two Worlds

is the egg that produced from chicken that is fed with ginseng root. It is amazing, isn't it?

* *Achtung!!!* This paragraph is based on my stupid thought. Don't take it too serious*. Knowing the fact concerning ginseng egg, the writer once thought that if chicken were able to pass on their ginseng quality into eggs, is it possible for human as a more sophisticated creature to have the same ability? If it is possible, maybe it is better for young mother to consume ginseng persistently, so that her ovum gets all the benefit of ginseng and finally possessed by the baby.

The fact that ginseng is good for health has been tested in a large number of researches. However, following the wise men (or the old men, supposing the premise that the old men are wise people is valid), who said that not all people find the benefit of consuming ginseng. In ancient China philosophy, human body consists of *Yin* and *Yang*. *Yin* is soft and cold, while *Yang* is hard and hot. The people with more dominant *Yang* are suggested not to consume much ginseng because it makes the body hotter. Perhaps, this matter is also necessary to be proved by research. Practical advice that I get from my mother, do not eat ginseng when the inside fever. Apart from all the advices above, it's better to follow the medicinal advertisement on television says that "If the illness gets worse, call the doctor".***

Peaceful Daejeon, October 26, 2004.

**Industrial Landscape:
Combined Cycle Power Plant,
Shinincheon, Incheon**

Qodarian Pramukanto

KOSPO or Korea Southern Power Co.Ltd., is one of the supplier companies for electricity requirement in Korean peninsula. In a complex manner of electricity generator that was located in coastal bank in Seo-gu district, Gyungseo-dong sub-district, Incheon was named Shinincheon Combined Cycle Power Plant. The region is widely in area around 360 ha partly was the coast reclamation land. Constructively dyke (embankment) that stemmed sea was unfolded area where 12 stack (chimney) from 12 generator of this electricity factories stood. This electricity generator of gas power was one of several other electricity generators that available in Korea, that is wind and nuclear.

Two Worlds

This generator produces electricity with Combined Cycle Power system, that is combination between turbine that moved by gas (generator, GT) and turbine that moved by steam (steam, St). In producing electricity, this system uses the energy source from natural gas that 100 percent import from Indonesia. Liquid natural gas that known as LNG was used to produce the main electricity product with move the turbine with combustion system in the high temperature with the burning of gas in atmospheric pressure.

In this burning process, it produced hot emissions with high temperature. These hot emissions were channeled to water heater fireplace (boiler) to produce steam. The vapor produced was used to move the vapor turbine as the second electric generator. With this two types turbine combination system could increase efficiency in production more than 10 percent. As the production efficiency picture in the single generator system (only relied on the gas turbine motivator) was produced 35 percent, whereas when combined with the vapor turbine could reach 52.39 percent or with the proportion 2 (GT): 1 (St) process (GT=generator, ST=steam).

The Production

From this electricity generator with 12 combined cycle power plant produced this system generator as big as 12 GW (Giga Watt) and supplied 60 percent Incheon city requirement or equal to 13 percent of 60 GW that is the national electricity requirement.

This electricity generator system was one of the whole electricity generator systems in Korea where among each the centre of electricity generator had a joint distribution network system. With this network system, the lack of supply in certain territory will be supplied from the centre of electricity generator from other territory, vice versa.

The Base Location

The location election of this sole of foot electricity generator was based on the availability of supporting process resources of the electricity power production that is water and air factor. Water was needed to generate vapor that would move the turbine, cooler in the condensation process (the change from vapor phase became liquid phase) but also the turbine cooler. Besides water, the air current was needed in cooling down the turbine. It was based on the two requirements the location election to the coast area became the appropriate alternative.

The Environmental Impact

The environmental factor that used in deciding the location of this electricity generator in fact still has a weakness. This weakness must be overcome and become other condition to reduce the environment impact.

One of the important problems was the impact caused by the existence of water temperature difference that intake and in discharge back to water is still quite high with the difference of 6 degree. As learnt, the

Two Worlds

existence of water temperature difference was very critical matter in the water physical quality criterion for water ecosystem. The influence of the water temperature change resulted in the habitat disturbance of the kinds of fish and other aquatic fauna. Moreover, the disturbance of this habitat gave social effect on the fishermen livelihood. This case became the sharp focus of NGOs and asked the company immediately to carry out efforts to minimize the negative impact that emerged.

Conclusion

From observation to this Combined Cycle Power Plant had several matters that were have to paid attention to. The difference temperature problem between waters and sewage (discharge) in fact could decreased with constructively cooler system took the form of cooling tank. However thus refrigeration technique still caused the other impact that is the increase of air temperature nearby the wide land to establish this cooling building structure.

Apparently, the problem that related to the first thermo dynamic law - the energy conservation law - that is energy transfer, energy could not be destroyed but could be changed from one form to other form into the chain of problem that must be handled. Efforts to control emissions energy from this production process must be transferred and reduced to a safe and comfortable level. There are several thoughts as the alternative proposal to reduce the air temperature increase in that could be considered through the technique engineering**) and biological, that is:

A. The Technique Engineering

1. Construct a cooling tower that supplemented with the fan or flowed through special channels. This channel could take the form of closed channel - there is the hot pipe of the metal escort of finned tube - that was dipped in water at lower temperature or in the open air, depend on its heating load.
2. Like Cooling Tower above but channeled air into the open channel, took the form of water canal
3. The combination both of them. Several industries or factory used the combination both of them, even was in his ditch equipped with water fountain as the medium functioning in the heat exchange system with air. Moreover as the indication of the physical quality of water quality from this channel, was used by fish as the indicator of temperature compatibility. So as nearby functional also contained the aesthetics value.

B. The Biological Engineering

1. Constructing the support system (buffer) took the form of green belt system that will stifle hot that was produced from emissions to this cooling tank system. Therefore, it needs research on tree tolerant vegetation kinds towards this environment condition. This system was hoped for could "isolated" hot.
2. This solution effectiveness will be better when combined with the layout study that counted on the circulation of air pattern (wind) that contained steam from sea that could become the hot absorber agent.

Two Worlds

3. To build increasing equipment of hot absorbed agent through the increase of air humidity by spraying water to air, for example constructively fountains.

The Environment Monitoring System

The monitoring of environment quality was applied by taking the form of the equipment censor with sophisticated technology like the plum observer censor, and the use of nature censor to monitor the environment quality, like the waters quality by analyzing the biota indicator, and the use of aquatic vegetation floated took the form floating island (*ingkongbudo*). ***

- * Reportage on PERPIKA visit to Combined Cycle Power Plant Electricity Generator, Shinincheon, Incheon, May 12, 2005.
- ** Thank You was delivered to Agus Pamitran for the correction and control the proposal's technical problems.

Kwanak Mountain Valley, May 13, 2005

Two Worlds

Many Koreans wanted to have drink alcohol, but in fact, they more like the person whom they asked to drink with than the alcohol itself.

When Koreans drink alcoholic drink, they felt not only was drinking-alcohol but also drinking the feeling of the person whom they was asked to drink with, so, drinking together will be involved the feeling of them.***

Harvesting Methane in Haneul-Noeul Twin Hill, Changing Waste into Blessing

Qodarian Pramukanto

The discussions concerning trash and urban areas waste of the homeland, from the abundant production; (still) lower utilization management level, until the tragedy of Leuwigajah waste that caused disaster, are basically related to the incorrect understanding about the waste.

In daily life, humankind and waste could not be separated. Human caused the waste as the part of the resources utilization process for various interests, in the scale of household, office, market, and industry. However, ironically, most of us deny or do not care of what we have contributed to our surrounding environment. As a result, this waste really became "waste", including the waste place with finest designed

Two Worlds

and finally became the “waste”, even the abbreviation of *TPA* is more appropriate as the “the last place of disposal” than was interpreted as “the last place of processing” of waste.

To understand the important meaning of waste, we should take note on the valuable experience in responding the waste from the peninsula country that is famous with its ginseng, South Korea. At least, there are several lessons in against waste, begin from the developing of the society’s awareness through educational agency to spectacular efforts that lifted the nation status.

It was started from “war” against the waste that became part of *Saemaul* Movement or *Saemaul Undong* (a community movement in Korea during Park Chung-hee Government, eds.). The form of this movement is no longer regarded waste as waste, but makes waste as beneficial resources and could be used. We could find everywhere the poster and the advertisement that is written “Do Not Neglect the Waste!”.

Starting from primary school, this movement was invested through environment conservational learning. With the slogan “Let’s Clean Up Our Villages”, the students did not only learn to care and practice the environment conservation, but also knew how to re-use the second-hand thing and the recycling process.

The students were educated to be small volunteers that periodically gathered and brought certain items from house to school, such as the

plastic bottles of drink or aluminum, newspapers to be accommodated by the factory and watched the recycling process until become the other beneficial things.

It is not the end. Then, the students also used these recycling products. For example, from paper recycling, students will get notebook or from metal recycling, the school will get several free recycling aluminum seats. In the democratic and autonomy era 1990's, the Korean politics policy issued the support of environmental transformation through various green movements in increasing the diversity and quality of the parks and also green open space.

There were various green program oriented to society interests is being accelerated, such as changing the various military facilities, the expanse of asphalt plaza and concrete, as well as the facilities of water resources and the wasteland became parks and green open space.

For Seoul city, one of the green policy topics that were campaigned through the Seoul Green Vision 21st, is the war against the waste with various steps. The campaign that propagandized the improvement and the quality increase of this urban environment reached one of its climb peaks in the huge World Cup Football of 2002.

By the success of Korean in holding Seoul Olympic Games 1988, the government of Seoul carried out the spectacular engineering transformation environment through plan of Seoul World Cup Park.

Two Worlds

This monumental park was set up through the long environment metamorphosis in Nanjido region, at down stream of Han River.

In accordance with his name, Nanjido (*nanj* = the orchid and the fungus, *do* = the island), before 1978, this region was the island that was known with the fragrant aroma of orchid flower and the fungus cultivation, was rich with various other flowers. Besides that, the waters region around it was known as the stopover of various migration poultries, the goose, the duck, and the family of other water birds.

Afterwards, over 15 years, the status of this island changed into the waste landfill area of Seoul that had more than 10 million populations. The accumulation of more than 92 million cubic meters pile of various waste of the city, from the household waste, building material, to industry wastes with non-sanitary technically accumulation which produced alkali water seepage and poisonous gas.

The increase of alkali water that could cause landslide and subsidence, beside air and water pollution that damaging surrounding ecosystem was realized by the Seoul Metropolitan Government. Therefore, the activity that has piled this 272-hectare area was stopped in 1993. The restoration of damaged Nanjido region finally was proclaimed by the metropolitan government through "Landfill Recovery Project" and made it as a park of the city that friendly to environment.

During 1991 to 1996, there was carried out a reclamation program of this pile of waste through the alkali water current control by constructing the vertical barrier and the contaminated waste processing, the closing of the surface with land, extraction, and poisonous gas management, and the slope stabilization.

The reclamation efforts of waste finally resulted twin hill with more than 90 meters of height. These twin hill with the peak that was made similar in ziggurat form was the reborn of Nanjido region in the shape of World Cup Complex Park, or that was known as Millennium Park.

The two hills that became the base of this complex park was the sub-park that holds the important role among other three sub-parks in the complex. The twin hill that was named Haneul Park (19.2 hectare) and Noeul Park (34 hectare) not only have the functions as park and open green space, but also as the giant tank for the methane gas mining (CH-4).

Since 2001, from that two landfill twin hills was harvested methane gas through 106 extraction wells with 40 to 60 meters depth that spread out in interval distance, 120 meters.

The gas from these extraction wells was carried through the collector pipe installation that was buried inside the landfill through the central facilities of LFG processing. Then, the methane gas was channeled as the supplies the heating and cooler source of energy for three

Two Worlds

complexes, they are Seoul World Cup Stadium, 6,000 houses in the settlement of the sub-district Sangam region, and Digital City Media (DMC).

The sincerity of Seoul Metropolitan Government in increasing the quality of city environment that accepted full support from the society in the development of this World Cup Complex Park as the victory symbol of the pro-movement to society and friendly environment.

Moreover, the transformation that produced ecology park (Eco-Park) from this waste hill was dedicated to the world stage through prestigious event of 2002 World Cup. The width of Seoul park area and open green space became 25 percent from the total city width (62,700 hectare), or almost as wide as Jakarta (64,000 hectare).

It is hoped that the analysis above can increase the understanding that the waste produced will not be consider with the image of waste as waste. The waste view must be left and replaced by the new methods in viewing the waste as useful resources and commodity. Many aspects that could be carried out, from discipline in choosing and sorting the trash and the waste until their utilization as resources, and develop the benefit of the second-hand thing (reused), recycling, until gaining the blessing through the regenerate benefit in form of compost and methane gas energy.***

Gam, Ggachi and Local Wisdom

Qodarian Pramukanto

At the end of the fall season (*gaeul*), in *kimchi* land, there still left behind the uniqueness of nature. One of them was persimmon booming—which is known as *kesemek* in my homeland. Having been observed, its appearance was rather different in its size, color, form, and taste from what we usually found in Indonesia. In a glance, its form and color look like the local tomatoes. In my homeland, the same fruit that we often see is generally colored in greenish-yellow to fully yellow, it tastes sweet with little acid, rather hard and its skin was itchy and sticky, that is why, before being eaten, it should be puffed with powder on it—consequently, it is often called the “flirtatious fruit”.

Actually, from its colour, persimmon which is called *gam* (홍시) in Korean, when it is ripe, not too different with *kesemek*. The colour of ripe *gam* is greenish-yellow that is similar with *kesemek*, but its skin

Two Worlds

was not sticky, has softer flesh than *kesemek*. However, the *gam* that is sold seems to have different color and measurement. There was *gam* that is colored in canary yellow, red, and there are also in small and big size.

Red *gam* is the *gam* that is harvested before its ripe period and has been through certain process after harvesting. Beside the change in its skin colour into red which looks slightly like tomatoes, its flesh also gets softer. This kind of *gam* which has been through the special treatment is called *hongsi* (홍시 | hong = red, si = fruit).

Gam is not only a favourite fruit for humans, it is also food for fruit-eater birds, one of the birds is *ggachi* (까치) that was believed by Koreans as fortune bird. These birds could be recognized by the color of its feather on its back with the black head, meanwhile the part of its chest and some of its long tails are white. If people hear the twitter of these birds in the morning, it is believed that the sign of coming fortune on that day. Except *ggachi*, there are other kinds of birds that are believed as the cause of unlucky, with their black feather, seems like the crow named *ggamagui* (까마귀).

In Korea peninsula, those two kinds of birds could be found everywhere, in rural areas or cities. Moreover, *ggachi* with its ability to adapt in the environment causes its population increase. Therefore, at this time, its population is abundant. In several places, like in pear plantation, this kind is the pest. Furthermore, it is often causes the problem in

urban areas because it often builds nests in the electricity transmission that endangered the installation system.

Release from the belief of those two kinds of birds presence, and its status as pest or intruder, its existence as a part of ecosystem chain keep to getting attention in Korean community. The community interest could be seen in the guaranteed matter on food availability for these birds. One of the proofs could be found in Koreans habit in harvesting *gam*. If they have *gam* tree that was having fruit, they are not used to harvest all of them, but leaving some of the fruits to feed the birds. In this way, the scenery during the fall in *gam* plantation, only the falling leaves that left the fruits on those trees.

Similar local wisdom is often encountered by us in the traditional community life in our homeland, as can be found in one area in West Java. Environmental ethics that is applied by the traditional community in reaping the leaves from a tree or harvest in forest is to reap only the fruits that could be reached by certain length of stick. The fruits that higher than the length range of the stick might not be reaped. It is allocated as the food for other animals, like birds, bats, monkeys or others.

Hopefully, this form of local wisdom continues to be kept in our country, so one of the vanishing cases of bat's "tourism destination" (*Pteropus vampirus*) from Bogor Botanic Garden that looked for food in the fruits producer area of *Sukaraja, Gunung Geulis, Sentul, Babakan Madang,*

Two Worlds

Ciawi and surrounding area will not happen again. They did not only harvest all fruits, but also cut off the trees until there were no branches left and occupied the foraging area for this only winged-mammal, and called this area as *Bogor Lake Side*, *Gunung Geulis Country Club*, *Sentul Highland*, and any other nice terms, without noticing the local wisdom.

The Kwanak Mountain valley, November 11th 2004

Inkongbudo, the Controller of Biological Water Pollution

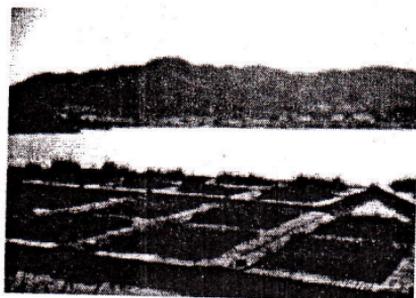
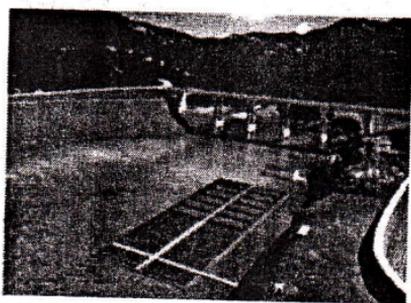
Qodarian Pramukanto

The water pollution in the lakes, *situ* (such kind of lake), swamps, and rivers by the waste of industry and household was serious problem. Various forms of pollutant, both physical (mud), organic material and chemical compound including the poisonous one such as metal, must be immediately overcome before the dangerous accumulation to the waters in our homeland. One of the real and easy steps to be carried out in handling water pollution was through the biological system by spreading water hyacinth in water, like was delivered by Prof. Otto Sumarwoto in the seminar "Rumen and Lake Reservoir Management" in The R&D Center of Water resources some times ago. By the technique, it is hoped that these plants could neutralize pollutant substances especially from the waste of industry and household (*Pikiran Rakyat*, 19 October 2004).

Two Worlds

The idea of using of water plants as the biological filter has been done since a long time ago and was not doubted anymore. In several countries, like USA, Germany, Japan, and Korea, water has often been expanding as the bio-filter concept using water plants in the form of artificial floating island. This technique, in Germany, was called *schwimmkampen*, and in Japan was mentioned as *ukishima*, whereas in Korea it was known as *inkongbudo*. *Inkongbudo* (Artificial Floating Island) was formed by a group of water plants that was put in an easily floating medium and at the same time, becoming the growth place (the Picture 1).

Picture 1. The Structure of *Inkongbudo* in River and Lake



Initially, this technique was inspired by the nature phenomenon that was often encountered as the natural floating island formed by the groups of water plants. For example, in several watery areas, like *Pening* swamp in Salatiga or Lake Swamp in Banten, the structure like this was often found. Several water plants with minor mass contain air cavity in the root, stem and leaves, like water hyacinth (*Eichornia*

crassipes) and *kiambang*¹ (*Salvinia molesta*), not only easily floating in water surface but often formed mass plants that similar with an island. Its structure is usually not permanent. Because it was really difficult to maintain the plants groups to remain and stable, because it is easily broken by the wave crash in water or the blow to the edge. However, in certain condition, if the wind blows gently and the calm wave are able to form the mass gathering plants. For a long time this structure was increasingly stable and joined to form some natural floating island.

Nevertheless, in several cases of the presence of this natural floating island is often difficult to be controlled and rarely produce the descendant impact to the environment. With the fast growth rate, the covering of the water surface by the plants mass becomes dominant. Furthermore, the biomass of dying plants will settle as the organic material and speed up the trivializing of waters foundation because it is difficult to be disentangled because of the small amount of oxygen. Although in the condition of anaerobe still enables the occurrence of organic sediment settlement, but this process will produce the poisonous compound. Then, if these compounds will have the lifting process into the surface could endanger the water organism above, like *karamba*² fisheries or the floating nets, so that in such

¹ Plant formerly found in abundance in stagnant or slow-flowing waters, the leaves of resembling lettuce

² A basket put in a stream for raising fish

Two Worlds

situation the existence the water plants will change into the dangerous weed of water.

Different from the natural floating island above, *inkongbudo* technique as the artificial floating island becomes popular because of its environmental role is more restrained. Moreover, its presence is not only as the purifier and as filter technology of water, but also creates niches for the wild life habitat. Beside that, it also will increase the aesthetics value of water landscape, prevents the erosion of water bank slope, and could even function as biological disinfection.

The *inkongbudo*'s role as absorber, trapper, purifier, or filter of water is not apart from the appropriate factor of plant selection that relate to the tolerance elements that will be refined, but also the other characteristics. The existence of hanged stem system and flow in water, with layers as if labyrinth was the filtering shape with wide surface. This root filter does not only refine the most protracted element, but also takes the substantive of mud and land that is not soluble, with absorbed mechanism and keeps the flowing particles. Further than the root (*rhizosphere*) area, there is uncounted bacterial population in that has a role in the water purification process through this microorganism activity.

For this reason, there are many countries apply *inkongbudo* technology in their watery territory. One of *inkongbudo* that is built by the government of Seoul in Paldang reservoir located in the upstream part

of Han River outside the city. Its development spent 200 million won or around 1.6 billion rupiahs. The *inkongbudo*'s presence in the reservoir that stemmed the biggest river which divides the Seoul complete the water purifier facilities supply of clean water for Seoul.

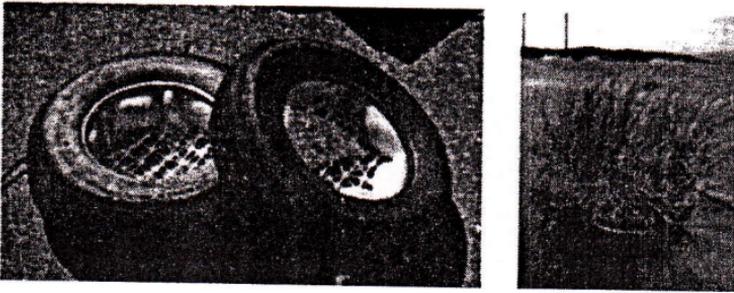
Among experts who investigated *inkongbudo*'s role in the improvement of water quality was Mueller *et al* (1996). The research in Japan at lake waters that was in damage, in the form of "fertilization of water territory" (*eutrofikasi*), green-blue algae and turbid explosion, and the sting smell that reduced commercial function of waters for recreation and fisheries could be overcome by constructing artificial floating island installation. The results were showed by improvement quality of water in water clarity level, and the community improvement of phytoplankton, zooplankton, prawns, and fish. The result of this research also supported by the report of *US Dept. Of the Interior Bureau of Reclamation* (2002), that researched the water quality in Mead Lake that shows the low level of the compounds concentration that cause *eutrofikasi* in the waters territory under the floating island structure.

Nevertheless, one thing that must be remembered, that the accumulation of pollutant substances in plants was not permanent. Plants only played a role as "catcher" and accumulated the soluble and insoluble good elements during live of these plants. However, after these plants died, this element could not be disentangled and release to nature, so that, there should be a replacement of plants periodically not only to prevent the waters foundation sedimentation, but also to

Two Worlds

remove these pollutants. Furthermore, the harvested plants were gathered in the special storage or also could be used as the raw material of craft, like paper, plastic pocket, and bag.

The picture 2. The utilization of second-hand material as the *inkongbudo* medium



To build *inkongbudo* could be done with cheap cost through the utilization of second-hand materials that more available around us. The material that needed was easily floating materials, did not contain chemical pollutant of waters, not corrosive, and did not easily be broken by the microorganism. For example, the artificial floating island design could be made by use the used tires of cars as its medium (the Picture 2).

This medium was made in such a way to float in water surface with the centre gravity was in the central part. However, keep leaving module in upper part that not flooded or emerged in water surface around 10 cm. Several modules could be combined according to the need the form that was wanted. Then, to maintain this floating island

position in waters must be tethered with an anchor that could suit the floating position with the rise and fall of the water height.

Furthermore, into this medium put in a growing media in the form of natural fiber, like coconut husk or cork piece. Although the kinds of water plants that were planted in this module were rather different with the plants in the natural floating island, but these plants were often found in various waters in our homeland. Several of these plants were cattail (*Typha latifolia*), dentures (*Phragmites karka*), wild rice (*Oryza rufipogon*), wild grass (*Paspalum sp*), and jajagoan (*Echinochloa crus-galli*) and other kinds of water plants.

Hopefully, that this *inkongbudo* technique became an easy and effective technology that could be immediately applied to control open waters pollution. Beside developing the following potential that accompanied the water purification process, like the niche creation for various of wild life, and also the beauty show of plants above or the attraction of presence various faunas and it was hoped became the inhabitants of this floating island. Finally, it is hoped that the experience from this ginseng country could be used as an alternative in the process of the various waters management in our homeland.

Two Worlds

During living in Korea, there is an interesting thing, which I think can only be found in Korea, there are some 'love-days'. Many countries celebrate the 14th of February as Valentine's Day, the day with full of affection, the day where each couple expresses their loves. Perhaps, only in Korea that we can find "love-days" except 14th February.

I do not know when those days are celebrated enthusiastically by Korean young generations. At least there are five 'love-days', included Valentine's Day. Say, 14th February, Valentine's Day that is celebrated by women all over the world by giving chocolate to her boyfriend. Then, 14th March (White Day) is celebrated by men by giving something (flower, doll or gift) to his girlfriend as the reply of Valentine's Day. There is a Black Day (14th April) which is specially for those who have not got lovers yet (possibly in Indonesia, it will be called as "Jomblo" Day) by eating *ccajangmyon*, a kind of noodles with sweet black soybean sauce.

Beside that, there is also the Rose Day (14th May). From the name, it is clearly express; *Say it with flowers*. Then, the next "love-day" is Silver Ring Day (14th June). It is the day where each couple says their vow. Possibly...

There will be many changes if Lee O-Young's essays compared with situations nowadays. Nowadays, 'loving' seem not enough to be shown with expression of face or in silence, but also with flower, gift or by saying ' *Nan norel sarangheyo* ' or ' *Saranghe...* ' (I love you).

The *Gildong* Ecology Garden: Nature Grew became Teacher

Qodarian Pramukanto

After walking around 1.5 km from subway station in *Gildong* district, eastern part of Seoul, we arrived in the dense swampy valley area that filled up by water plants. In the land around 24.000 pyong or approximately ten times of football field, there was a low part where there are small ditches empties and several springs that flow out of rather mountainous area around it. This place became famous since the construction of ecology garden that functioning as the nature laboratory by the metropolitan Seoul government.

Gildong Saengtae Gongwon was the Korean name for this ecology garden. The city garden that became one of the best educational environment

Two Worlds

gardens from several similar gardens available in Seoul. It was the result of restoration and protection of available resources in the city. This garden functioned to accommodate various scientific activities in the form of observation of plants, fauna, and nature environment.

The shape of the garden that carried out this special mission was really different from the usual city gardens or other public spaces. The picture of many visitors, activity of the food and souvenir peddler did not exist completely, except only a small number of people and one or two cars being parked in front of the main gate. This atmosphere could be felt when arriving in the main gate of this garden.

Even its holiday, the visitors that came, only small groups of family consist of parents with two or three children. In fact, this garden is open for anyone free of charge, but that could only be done after registered minimal a week before. "Usually, visit reservation at the week end and holiday always full", said the official of garden manager. "And at that time, the visit was special for public visitor, that is the family and individually. For the students or the experts, the visit is only in the working hours".

The visitor who was registered will be categorized into public and special group. The public category was the visitors who came just to use of the garden without having the ecology knowledge background. Moreover, the special groups visit the garden for an observing and studying the ecology.



According to the schedule, the visitors based on the group category will be guided by a trained volunteer. This discriminative visit procedure was applied on based on the reason to maintain the natural atmosphere and “security” of a lasting manner habitat. More than that, with the guiding system, beside the activity of visitors will be more controlled, it also really help in the interpretation and appreciation environment.

After the participants were given a guide leaflet, the exploration of the garden is begun. At the leaflet, there was a route explored map, free observation area and restricted observation area, observation facilities, observation objects, kinds of habitat, attraction and the nature phenomenon, that was accompanied by a series of related questions and instructions. “The visiting activities, besides being distinguished based on visitor types, was also based on the characteristics of observation area (free or restricted observation areas)” said the manager official.

Guided observation activity for public group was restricted only in the area that was determined before. Moreover, the special visitor groups could do various activities even in the limited observation area. Apparently, it distinguishes the ecology garden from the other gardens in generally. The activity in the public gardens could be done freely with more enjoyable atmosphere than the education nuances like in this ecology garden.

That morning, when sun rises, there was a group of student visitors ready to explore through the route with coiled (looping) circulation pattern.

attraction of the booming of several insects, like butterfly and dragonfly, which have finished the end phase of their metamorphosis. At other time, "laid out on the sky, the fire-fly flickering decorated the sky of this garden in the night", said the guide.

The activity in observing birds being done in the shelter observation, or by using the telescope (binocular), that was directed to certain target. The observation target was the muddy swamp area that become the place of the poultry to scraping food (feeding ground), nested, or just rested, swimming and played. If being lucky, several kinds of waterfowl like duck, the king of prawns (King fisher) and various kinds of heron appear in waters that were grown cattail (*Typha sp*), dentures (*Phragmites karka*), wild rice (*Oryza rufipogon*) and wild grass (*Paspalum sp*). Wet land waters as large as the half of ball field were the place to share dwelling between poultry as occupants, with coming seasonal poultry.

Various forms of nest, both the natural from offal or straw and the artificial one as the initiation and the beginning stimulation, to invite the presence of the fauna, are often encountered all along the explored route. From the heap of organic offal (*mulsa*), for a kind of wood beetle, the woodpile that hollowed for the stick driller, to the bee house with the unique form, natural bird nests, or the nest box and bat house that was hung in the tree branches was the comfortable residence for these faunas. Based on this nest model styles, there was one of the unique questions at the guiding leaflet that compare the artificial nest models with the two wings faunas, that is the poultry

Two Worlds

and bat, the only wings mammal. "Why the hole's door of bat house was underneath, whereas birds generally have the hole's of door nearby?"

Biodiversity that was present at this garden was enriched by various floras, land vegetation (terrestrial), epiphyte, and water vegetation. From the low-level plants, like moss, algae, and fungus, to high-level plants (*macrophyte*), such as various grass, herbaceous, bushes, to the unique mixture of trees. Recorded around 31.000 trees and spreading vegetation that consist of 64 species, and herbaceous plants and wild bushes around 188 000 that represent 138 species as the occupants of this garden.

The dynamics of the nature presenting was not limited to the fauna, but also the various numbers of vegetation. From the leaves form features that long, round, oval, heart, and stuck out, to the color changes of leaves that accompanied the season change. "Why the leaves changed in color?" was one of the questions in the leaflet that became the key in understanding the nature phenomena in the form of vegetation responds towards the environment change.

Some of this garden area also allocated as displays of feeding ground. A land mapped that was planted with corn, millet, sorghum, barley and field rice was the food barn for the seeds eater fauna. The oak trees, that became the baskets with fruits for several acorn eater faunas. Beside that, there was also various plants blossomed as the nectar source, to cellulose source in the form of wood humps.

With simple language and was adapted with the participants' capacity, the guide gave direction on main questions, or instruction in the guiding leaflet. The answer to the mystery will be expressed after going through some simple scientific procedure. Begun with the question or instruction, fathoming, a set of observation or doing certain action that was accompanied by reasoning, will be received the conclusion as its answer.

The interactive discussions among the participants or with the guide always colored the scientific nuances in each observation. The questions and instructions that were written in the leaflet are as follows: "Try to search where a kind of fauna hid?"; "If peanuts was in the land, when blossoming, where is the location of its flower?"; "What is the function of skin color change that happened to the animal at certain time?"; "Show the characteristics of the animal fish eater! "; "Why was the mushroom called as the nature cleaner in the ecosystem chain?"; or, "Focused on the difference of mushroom form the different habitat!".

After exploring more than two hours with rests for a while in the middle of the exploring land area, we finally arrive at the end of nature interpretation route. The place that was equipped with the pergola with its calm canopy of spreading plants. In this place, while resting, the guide invited the participants to ask questions or the necessary matters that need further explanation and asked for impression, suggestion, hope, and comment from participants.

Two Worlds

From the description above, it is needed serious attention to the importance of the presence of natural element in urban areas. The development was not only for developing dwelling unit and the supporting facilities for the city community, but also maintaining and creating habitat niches for the wild life in the form of ecology garden that stood side by side.

Its presence not only became the environmental education media by digging up experience from nature, but also produced public space with ecology principles that is improving the quality of the city environment, creating the wild niche and increasing the lasting biodiversity the city. The concept of this ecology garden was very suitable and appropriate to be applied in the urban region in the homeland. There are some areas in Jakarta like *Kemayoran* swamp field, *Pesangrahan* forest city, *Sunter* Lake, and many other potential wet lands to be developed to be like this kind of garden. So as for the community in general, and special for the student and the scientist, the presence of this ecology garden could be defined as the window to the watch city natural environment, like a *Minang* saying that "the nature developed into teachers". It is hoped that the picture that adhered as "*nature is your best teacher*" to this garden really realized, not only for Seoul society but also for the cities in our homeland.

The Kwanak Mountain valley, Seoul August 11th 2004

Tightening the Jakarta Green Belt: Learned from Seoul

Qodarian Pramukanto

The green belt is one of the concepts in city planning that separated cities from the green route as the background of this city. The presence of green belt ought to be gazed at not only from the physical function as the city barrier, but also the ecology function and social function, such as accommodating the means of natural recreation, agricultural production, protection function, and forest function.

In many cities of the world, the failure in maintaining this green belt function was caused by the increase of the development rate that accompanied by the city's population growth. Population explosion was indicated not only as the main cause of problems in urban areas in three sectors: housing, services, and transport, but also will shift the

city's borders. In line with expansion of population out to the city, the function of city's green belt can be disappear.

The difficulty in maintaining the city's green belt function was experienced by some big cities of the world, including Jakarta. The change of land use that happened in *Jabodetabek* area had caused difficulty in tightening the stability of green belt function. As the statement of Director of the National Space Planning (*Depkrimpraswil*), Ruchiyat Djaka Permana, the green belt application in urban areas was difficult to be done. Hence, in building green areas the regional government must start to apply firm policy like abolishing new permission to open land in green areas and tightly apply basic coefficient rule for buildings (*Kompas*, August 11th 2004).

To straighten out this problem, we should learn from the success stories of several cities especially in Asia, such as Bangkok, Tokyo, and Seoul. These cities' experiences, at least taught us about how to define, maintain, and manage the green belt that surrounded the city as support areas to coping natural disasters, pollution and various problems that caused by the increasing concentration of population and industry in the city.

There is an interesting phenomenon when observing the population explosion in several cities of the world. London as the city which its green belt was successful, the population increased above eight million people in almost two centuries (1800 - 1990). In Asia's cities such as Tokyo, Shanghai, Bangkok, and Seoul quickly could increase their population into the same level only

Two Worlds

in less than half of a century (1950 - 1990). Jakarta, according to Dharmapatni and Firman (1995) with 6.4 million populations in 1980 could reach the same level in 1990 with the population 8.2 million people.

In many cases, population explosion could not be concentrated to the central area of the city and immediately expanded to border area of the city. The village-town type (the mixture of urban and rural) was the change of specific land use pattern in most outskirts of Asia mega-cities, including Jakarta. It implied to various important functions of green belt immediately changed and it was difficult to be maintained in line with the growth of its main city.

This phenomenon could be explained by paying close attention to the trend of population distribution. Population density in mega-cities decreased in the city centre but increased in the outskirts of the city. The decline of population in the city centre has been reported by Murakami *et al* (2004). In Jakarta, population density dropped from 198 people/ha in 1970 to 153 people/ha in 1998. The similar pattern happened in Bangkok, where in 1970 the population became 222 people/ha and descended into 155 people/ha in 1998. On the other hand, the increasing of population density that happened at the outskirts area of the two cities, around 1,525 km from the city centre, showed the similar increasing pattern.

Tokyo is one of the first cities which implemented the green belt plan. Tokyo started to develop the green belt since 1924. After going through

several success phases, it was ended with failure. Based on the master plan of 1939, the green belt as the part of the open green space plan of the city played a role as the warfare protection, including the controller of fire that was caused by the war, the protection for refugees, and created protection routes. This green belt was composed continuously with the green finger system through the radial green strip of city (river corridor and parkway). The concept that will create the city's green linkage system almost made Tokyo as the greenest city in the world (Yokohari et al, 2000).

Seoul was the success example of the green belt implementation. The city has 62,700 ha territory or its wide almost the same as Jakarta. Seoul began the green belt development since 1960. After issuing the city planning regulations in 1971, Seoul government began to develop the green belt region seriously and treated it as Limited Development Territory. The aim of Seoul green belt development was for controlling the city's development growth, protecting the environment of the city, as national security function and defense facilities protection.

After going through four development phases, from 1971 to 1976, the green belt of Seoul Capital Region in radius 15 km from city centre has been successfully built. This 153,000 ha green belt or 29 per cent from the total area (540,000 ha) was the co-operation among Seoul and 24 surrounding satellite towns in two provinces. The success in defining the green belt massively, Seoul is proper to reap the predicate as the

Two Worlds

only city in Asia that was successful in building the green belt city at this time.

There are at least three things we could consider as the background of the success of Seoul in building its green belt, they are; the comprehensive development territory planning, the framework of firm law, and national security factor.

The Comprehensive Development Territory Planning

The decision for determining the area of green belt region was taken in three levels of authority, that are central government, Seoul metropolitan government, and surrounding regional governments. This agreement was presented in the plan document of green belt region to each territory's administration which has different wide of region. There were two categories of land allocation that was maintained to green belt, that is the use of appropriate land (like for agriculture, forest, and nature recreation), and the use of inappropriate land (like housing, industry, road and various facilities/city utility). The difference of area that was maintained for this green belt area of Seoul Capital Region could be seen not only on how big the contribution of a certain territory administration is, but also on the proportion that was contributed toward the relevant territory administration. For example, Kyongang city administration was recorded contributed the biggest area, that is 13,500 ha, but it was only 17 per cent of the city administration area. Whereas Hanam New City, although only contributed 8,600 ha, it was almost 99 per cent of this city area.

Framework of Firm Law

The success in the green belt development in Seoul also caused by the existence of strong law instruments and tested validity, without compromising. Law enforcement was carried out firmly to the lands with determined status. The policy implementation in defining the change of land use of an area carried out through very tight license process. In addition, the community's support was very high, as being expressed in national survey results where more than 80 per cent of population supported green belt presence.

National Security Factor

Base on national security reason, the green belt was regarded as the safe fortress if the war happening. Moreover, the green belt territory next to the north of Seoul was maintained as the very restricted area of development due to its close to North Korea border. The presence of green belt psychologically supported a lot in creating the guaranteed security atmosphere in the war situation in Korean peninsula. This factor gave to contribution to this program significantly.

The analogy with security function has been applied by Bangkok in the context of human kind safety and security towards the threat of natural disaster by protecting two segments of city green belt in west and east. The development of city green belt in the form of protection zone was not leant on the efforts to control the city development, but in the interest to maintain the water system function especially in controlling the seasonal flood from Chao Phraya River.

Two Worlds

For Jabodetabek case in Indonesia, the similar analogy was very suitable to be applied, considering various forms of the threat to the comfort, safety and security of population which are not only concentrated in Jakarta as the main city and its satellite towns such as Bekasi, Depok, Serpong, but also has spreaded to the city's borders. Through re-orientating of development in Jabodetabek that leant on back on development of green belt concept, it is enabled to mixture the demarcation of some administrative territories in the common green belt framework where each city territory contributed proportionally. The size of contribution certainly considered optimization of the ecology, physical and socio-economics roles from each territory in the green belt.

For example, for some of Southern Jakarta territories and South Jakarta (like Depok and part of Bogor regencies) the ecological role such as the absorption area which controlled the water system function must be used as the foundation in defining the border and the size of territory that are used as green belt. Whereas in the dry season, it guaranteed the supply of the ground water continuously and controlled flood during the rain season.

In East Jakarta district and the eastern Jakarta (like Bekasi) which are first class land have been re-activating as green belt of rice barn and agriculture production. Whereas, North Jakarta, West Jakarta, and a part of western of Jakarta (Tangerang and Serpong) have green belts with protection function to maintain the balance of water system,

parked water area, to prevent sea water intrusion which has already reached a third of the capital land, to prevent deeper subsidence, and other various protection functions, such as protecting forest (mangrove forest), nature reservation, as well as delimitations of rivers and coasts.

It is hoped the explanation on green belt from the experiences of several countries could be take as lessons, at least for the Jakarta Special Capital District government and cities in Jabodetabek area in tightening the green belt circle in their cities.

The Kwanak Mountain valley, September 03rd 2004.

Two Worlds

Moreover, she quoted the article that had been written by Ayu Utami, that marriage was not the end of all the life problems that was understood by society at this time. The marriage could be the beginning of the new problem of life. Many marriages were full of the happiness but not little of them that were full of betrayal, dishonesty, incompatibility and even the domestic violence. Finally, it could be assumed that divorce, sometimes death, is far from the perfect end.

Getting married and maintaining a family needed big courage. Perhaps, it was not wrong if Ayu Utami refused to get married by saying that marriage was too sacred to be filled with betrayal, violence, and divorce. However, it was also not mistaken to marry, to have the family, and to grow the children. All of this was the part of the life process that needed time to achieve the aim, which is happiness. Happiness is unlike instant noodles that only needed 5 minutes after pouring with boiled water before being eaten.

I was also reminded of an email from my friend that I received some time before. He wrote, "I will choose to get marry. Why? Because I have ever felt the happiness be in the family warmth (but, of course, have felt its unpleasantness). However, there was no happiness than by taking part in creating my family happiness in the future. Moreover, the marriage could be a way to share thoughts, feelings, and responsibility if it was gazed as the place for learning in order to get happiness.

Dangpung: The Nature of Landscape Language

Qodarian Pramukanto

Dangpung is a term in Korean language for defining the phenomenon of color change in many kinds of leaves during the fall or *gaeul* season that is at the end of summer (September) until early winter (November). This short time autumn phenomenon, becoming one of the typical characteristics of Korea, happened at stages and created some particular environmental response towards the plants. The broadleaf plant, or deciduous, gave different environmental response towards the change in temperature, relative air humidity, and the condition of the place where it grows. The stages of environment change during the fall have increased its physiological resonance by dropping the leaves, and then followed by the color change on the leaves that happened at stages.

Two Worlds

During the process of leaves dropping, happened an atmosphere of various color change. It is the expression of various pigment substance contained in the leaf cell. The pattern of the color change may happen individually of one type, between the types, and different group of plants. The change in leaf color of one type plant varies, at least there are two types i.e. experiencing two color changes and three colors changes.

Special for the second type, before its dropping, three leaf color changes, can be taken as an example on maple tree (*Acer sp*), the symbol in Canadian flag. This stick out of leaf tree, is colored in green at the beginning, and then turned to yellow, and finally when they fall, the leaves turn red. The uniqueness of the color change on the leaves makes this type of plant called *dangpung*, means the color change. Next, the uniqueness of the color change pattern of the maple becomes the indicator of the coming fall, so that the term *dangpung* widely used in Korea to describe the atmosphere of the color change during the autumn.

Various particular patterns can be recognized in groups of plant growing in the nature. When we observe the landscape during the autumn, we will find out particular pattern from the mosaics describing the place where this group of plants grows. There are a number of plants growing near the water sources, such as at the riverside. However, there are also plants growing around the steep slope, on the top or the ridge of the hills. Particular plants grow only in the high land of 2000 meter at

sea level. Meanwhile, others grow only along the coastal area or the low land along the beach.

The existence of plant in different places reflected the differences of habitats. In a relatively wide landscape such as valley landscape, hills, mountainous landscape, peninsula, or island, the specialty of the spreading out of mosaic pattern from this group of plant can be easily recognized.

Therefore, if it is allowed, the term *dangpung* can be defined broadly based on the mosaics of different group of plants. It is because the change does not only cover the temporal change on the leaf color through physiological process in certain period, but also in spatial change in the wide landscape. So, at least, there are two types which can be leant on *dangpung*, that is, in its relation to temporal pattern (time, season) and spatial pattern (space, place, location).

The specialty of plant spatial-temporal phenomenon in this natural performance contains some intangible and valuable component. The intangible component that is usually difficult to be quantified contains sensuous of quality value that can be observed by sight, taste, smell, sound, and touch. The beauty of the plant, the environmental aesthetics, and the scenery are some examples of the intangible qualities that can be directly observed visually. Besides, there are also intangible components with benefits that cannot be enjoyed right away; but it requires specific knowledge and understanding on the

Two Worlds

nature infrastructure that is constructed in a complicated and complex arrangement. For examples, the existence of plant mass, such as forest as nature reservoir, oxygen manufactures, air pollution filter, water purifier, and water pump in a flooded area.

Hopefully, we can be the human beings who do not only recognize the beauty of God's creation but also the ones who can appreciate, preserve, and use it for the goodness of all man kinds.

From the Picturesque Beauty of Kwanak Mt., Seoul, Oct 28th 2004.