



2014年度グリーンアジア国際セミナー 学生セッション報告

Group A

<Discussion Topic>

Resource, Development and Conservation

<Member>

Kim Choonghwan (Coordinator),
 Yuki Uchida, Shin Sakiyama, Ni'Mah Ayu Lestari,
 Hatem Omar Amin Mostafa Elserafy (Presenter)
 Rina Takizawa, Kazuhiro Tanabe,
 Anis Syazwani Binti Shuhaimi, Zayda Faizah Zahara,
 Mostafa Mahmoud Atia Tarek (Presenter),
 Hiroki Gima, Hiroya Nishikawa, Lu Ying Ching, Ben Li

We discussed about Resource, Development and Conservation.

We were arguing about which has a higher priority, how to set the infrastructure and to answer some questions. We made some definitions about three topic words. Resources were all about financial, Human resources, material and energy resources. Development was all about designing a new product develop an existing one. Conservation was about maintenance, environment and safety issues. These topics were included too large range, thus we set the limits our discussion to a company and that company has three departments which control three topics each. This means that we focused on the profitability, any other than reputation, pollution and other aspects.

We talked about how this company achieves goals. The first thing is how to be connected with all three goals each other. Resource department provided a report about resources use and the scarcity of them. Then development department knew state of inventory and made the plan to use. Then they sent a report to resource and conservation departments verifying the possibility of mass production. The conservation department considered about the safety and sustainability of the product. Finally, they discussed about result with chief executive.

In our group judged that development has a higher priority than conservation, which is the answer to the second key word. This conclusion was decided by voting, after we discussed about the advantages of each. Finally, we all agreed with the answer of third keyword.



The key to achieve the all goals is education. Human resources, under the resource department, will provide some technical courses to each department about the other two, in order to prevent subjectivity from any department.



Group B

<Discussion Topic>

Heat Transfer Types for Passive Solar Home System

<Member>

Takafumi Yamamura (Coordinator),
 Yuta Sato, Satoshi Takeichi,
 Kibria Mohammad Tawheed, Cheng Xiaoyang,
 Zhang Jianxun, Ryota Yoneda,
 Ryan Imansyah (Presenter), Azizah Intan Pangesty,
 Tungjiratthitikan Pennapa (Presenter),
 Takanori Hanada, Lee Chan Min,
 So-Ichiro Nakanishi, Kohei Mizuta

Definition of solar passive house is a sunny, creative, low-energy home that uses the natural heat and light of the sun to both warm and brighten a home. It incorporates passive systems to maintain interior comfort. It reflects the practical aspect of saving energy and money as well as the delightful characteristics of bright interiors.

Passive solar home system is integrated by combination of house features to reduce or even eliminate the need for mechanical cooling and heating and daytime artificial lighting. Designers and builders pay particular attention to the sun in order to minimize the need for heating and cooling. Despite the design is simple, it involve knowledge of solar geometry, window technology, and local climate.

In fact, ancient civilizations had been using passive solar design. What is new are building materials, methods, and

software that can improve the design and integration of passive solar principles into modern residential structures such as additional glazing, added thermal mass and larger roof overhangs. Passive solar house require less mechanical heating and cooling capacity. This kind of savings can be accrued from reduced unit size, installation, operation, and maintenance costs. Passive solar house may have a higher initial cost, but they are less expensive with the lower annual energy and maintenance costs.

Sunlight can provide ample heat, light, and shade and induce summertime ventilation into the well-designed home. Passive solar house can reduce heating and cooling energy bills, increase spatial vitality, and improve comfort. Passive solar design principles is inherently flexible and typically accrue energy benefits with low maintenance risks over the life of the house.



Group C

<Discussion Topic>

Life, Education, Economy and "Water Problems"

<Member>

Yusuke Nakamuta (Coordinator),
Hong Bingzhou (Presenter),
Takayuki Maekura, Islam Md Amirul,
Omar Mohamed Ali Mohamed Ibrahim,
Natsuhiko Hamada, Yu Narazaki, Khanam Marzia,
Animesh Pal, Shigenobu Fujimoto, Ryuichi Nagata,
Tsuyoshi Sato, Atsushi Fukushima, Yoshinori Kimoto

Water is the foundation of life. Yet, all around the world, far too many people spend their entire day searching for it. Today, nearly 1 billion people in the developing world don't have access of pure water. All of the group members shared their water issue experiences according to their country's perspective. The discussion topic was summarized according to the following three key points assigned for our group:

(1) What is water issue, particularly in developing country?

Water issue can be categorized into two sections: (a) Lack of enough water (quantity) (b) lack of access to safe water (quality). The total amount of available freshwater supply is decreasing in some countries because of their geographical location (non-coastal areas) and climate change. The cost of water purification plant is very high and thus most of the developing countries do not have sufficient purification plants. Sewage disposal and release of health hazardous materials in water is also a great issue.

(2) Why do those kinds of problems exist?

Development of industries are obvious for the economic growth of a country. Moreover, this is also responsible for releasing sulphur, asbestos, lead, mercury, nitrates, phosphates, oils and other poisonous chemicals to the pure water which is very harmful for human as well as marine life. Most of the countries do not have hard rules and regulations for dumping industrial wastes, thus this type of pollution is increasing day by day.

Some wastewater, fertilizers and sewage contain high levels of nutrients. If they end up in water bodies, they encourage algae and weed growth in the water. This will make the water undrinkable, and even clog filters.

Usage of pesticides and chemicals to soils are washed deep into the ground by rain water. This gets to underground water, causing pollution underground.

Groundwater and glaciers have become more developed sources of freshwater, becoming the main source of clean water. Groundwater is water that has pooled below the surface of the Earth and can provide a usable quantity of water. Glaciers provide freshwater in the form meltwater, or freshwater melted from snow or. More and more of these sources are being drawn upon as conventional sources' usability decreases due to factors such as pollution or



disappearance due to climate changes. The exponential growth rate of the human population is a main contributing factor in the increasing use of these types of water resources. Groundwater depletion may result in many negative effects such as

increased cost of groundwater pumping, induced salinity and other water quality changes, land subsidence, degraded springs and reduced baseflows.

(3) How to solve water issues and what are the role of government and international organizations, such as WHO, JICA in this problem?

Dealing with water pollution is something that everyone (including governments and local councils) needs to get



involved with. Learning about the issue is the greatest and most important step to take. If someone follows the rules like: Never throw rubbish away anyhow, use water wisely, do not throw chemicals, oils, paints and medicines down the sink drain, or the toilet, instead of using harmful chemical fertilizers and pesticides use natural and organic materials, planting a lot of trees near water sources, can help to prevent water pollution.

Governments must deploy very strict laws that help minimize water pollution. These laws are usually directed at industries, hospitals, schools and market areas on how to dispose, treat and manage sewage. Advanced waste or sewage treatment plants must be designed and planted to minimize water pollution. Beside the government, organizations like WHO, JICA can help educate people on the dangers of water pollution. It is always great to join these groups, because they regularly encourage other members of their communities to have a better attitude towards water.



Group D

< Discussion Topic >

Relationship between Poverty and Resource Management

< Member >

Aung Zaw Myint (Coordinator),
 Takaya Fujisaki (Presenter), Yoshiaki Takahashi,
 Konadu Kojo Twum (Presenter), Kitjanukit Santisak,
 Tomy Alvin Rivai, Masahito Tanaka, Sendy Dwiki,
 Yusei Masaki, Shinji Matsumoto, Ruan Hongcheng,
 Yuki Furutani, Tomoaki Hirakawa

Recently, the economic growth of developing countries in the world has been astonishing. In contrast of their economic growth, their civilians have suffered a serious problem from poverty and still cannot find their way to a solution. This will affect their resource management for low-income country, relating the natural resources degradation and management. Ideally when the country

reaches “developed” point, means that it has more than average income GDP, natural resource degradation tends to decline. It happens because they already have environmental awareness that makes their keep innovating about technology relating environment and attempt to restore the degradation of nature resources. However, in practical developed country tends to produce more pollution than developing country.



Based on the income, countries in the world are divided into three categories, i.e. low-income, middle income, and high income countries. Countries use the capital which is classified as natural, produced, and intangible capitals to maintain their economic growth. Dependency of low-income country to natural capital is higher than the others, based on published of UN report data. In reality, poor people that mostly exist in the low-income countries exploit their natural resources that make them vulnerable for environmental damage.

In another point of view, rural livelihoods and natural resources degradation also have close relationship. By exploitation, both of renewable and non-renewable natural resources can create employment or livelihood in the rural area. This causes dependency, either directly or not, of rural people on natural resources exists. In developing countries, rural people are close to poverty and have difficulty to access the education. These reasons cause rural people who work in utilization of natural resources only consider about economic aspect in the way they exploit natural resources. There is almost no consideration for other aspects, such as environment and sustainability of livelihood. By ignorance of environment consideration, degradation problem on land, water, and air will comes in conjunction with pollution caused by mismanagement of natural resources exploitation. As the final result, nature cannot be exploited anymore because degradation makes it lose the potential.

The problem of environmental destruction driven by poverty in developing countries is a serious issue that needs to be addressed. Various policies have been introduced in

Ghana, for example, to control this problem. Policies like environmental education for people involved in artisanal mining “galamsey”, new job opportunities, stricter sentences for people caught polluting the land and others have all failed to work to the expected level because of sudden policy change and lack of adequate support by political leaders, systematic corruption and the unwillingness of people involved in artisanal mining to change to less paying jobs. A new comprehensive policy that has the full support of the leaders, people and international partners of developing countries is needed to safe guard the environment. One of the proposed policies that look promising is poverty-environment mainstreaming policy.



Poverty-environment (PE) mainstreaming is the iterative process of integrating poverty-environment linkages into policymaking, budgeting and implementation processes at national, sector and subnational levels. For succeeding, the process may need more than years, depend on the acceptance level and also the political condition within the country. Thus make it problematic to be conducted, since the actors might be changed for such long-time project. PE mainstreaming actors have vital role, for each party, since not only they need to continue the process of assimilation but also the actors have to pass down the ideology and also the continuation the project itself.

Main actors of PE mainstreaming at national level could be divided into several parties: government, non-government and development actors. Central government, in this case is important; however local authorities where the implementation in the first gate takes place become more prominent particularly for decentralization local government. The entire policy making regarding the issue about environment, finance – or budgeting and planning bodies are on the hand of government, so this make the government has major role in the PE mainstreaming. Non-government actors consist of civil society, academia society, environmental NGOs and finance institutions and business. This group of actors has unique part that difficult

to be replaced by each other. Last actor is the development actor or development cooperation agencies. Development actor tends to have high influence on whether and how developing country government challenges the PE mainstreaming.

In developing countries – mostly classified as low to middle-income country, their development strategy mostly focuses on economic development. It seems to be impossible for developing country to focus on both economy and environment at the same time. Budget is the reason behind these unbalanced development strategy. Environmental development and remediation often cost a lot of budget, so the company may consider ignoring this. “Anywhere, not in my backyard” this phrase usually used to describe the characteristic of opposing resident to a proposal for a new development, just because of it is near them. But the phrase also can be used to imply to the lack-of-social mind company. When they dump the waste into nature or anywhere far away from them, they are not the one who suffer from the pollution, but the villager that live around there are. Another thing is environment pollution law still weak. Some industries always dig in the hole of the law and evade the punishment. In order to help rural people understand the problem, government have to generalize the knowledge and benefits by organizing event or campaign. . Consequently, collaboration of the actors to unify vision of PE mainstreaming in order to succeed the implementation is the key point that should be reached.

To sum up, there are big relationship between poverty and natural resources, especially in the developing country. The most important thing to solve this problem is a basic education for developing country people to comprehend the importance of the balance of economical and environment and cooperation of a lot of people such as government, non-government and development actors. These two things are not independent but must be inextricably intertwined with each other.

