



# SUSTAINABLE COMMUNITY DESIGN

IATSS FORUM - 51<sup>st</sup> BATCH

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## Table of Contents

|  |    |
|--|----|
| 1. Introduction.....   | 3  |
| 2. Sustainable Communities .....   | 5  |
| 2.1 Background .....   | 5  |
| 2.1.1. Lesson Learnt from Toba .....   | 6  |
| 2.1.2. Lesson Learnt from Nishiyodogawa .....                                    | 6  |
| 2.2. Sustainable Communities Elements, Factors and Characteristics .....         | 7  |
| 3. Society with High Mobility .....  | 12 |
| 3.1. Background .....  | 12 |
| 3.2.1. Human .....   | 12 |
| 3.2.2. Nature .....  | 14 |
| 3.2.3. Economic .....  | 15 |
| 4. Society with High Mobility to Achieve Social & Environmental Sustainability.. | 18 |
| 5. Conclusion .....  | 20 |
| 6. Recommendations.....  | 21 |
| 7. Postscript.....   | 22 |
| Reference .....  | 24 |

## 1. Introduction

The need to prioritize sustainability has never been more urgent than it is today. This is particularly true in today's society with high mobility, which is entering a period of mass urbanization that could not only dramatically raise productivity and standards of living but also poses environmental and other threats that could significantly reduce rapid economic growth benefit. ASEAN as emerging markets in the world are under certain pressure to pursuing sustainable development, which means economic growth that improve lives without exhausting the environment or other natural resources. But this pressure often come with the absence of accepted framework that enable ASEAN countries to evaluating their economic growth and technological advantage which prevent them to immediately discovering and implementing effective solution for sustainability issues.

During almost 55 days program conducted by IATSS Forum, we have been through an intense and continuous series of thinking and learning together experience. Under the grand theme of Sustainable Community Development, 51<sup>st</sup> IATSS Forum Program divided into three steps, they are:

### ❖ Step 1

The first step consists of two lectures and one workshop. The two lectures titles are "Japan's Economic Development and its Social and Environmental Changes" and "The Reconstruction of Sustainable Communities". In addition to the lecture, during the Kansai Field Trip another workshop also conducted under the title "Creative City - Sustainability & Creativity in Communities." The purpose and objective of both lectures and workshop is enabling us to gain the background, basic information and knowledge needed to conduct the rest of the theme study.

### ❖ Step 2

The second step consist of two field study, they were located in Toba and Nishiyodogawa. These field studies aims to gain a first-hand experience by learning about two specific community design cases in Japan.

### ❖ Step 3

The third step, the group study research and discussion were conducted as the last part of the theme study with main objective to answer four questions regarding the Sustainable Community Design. The four questions are:

1. *What are "Sustainable Communities"?*
2. *What are the essential factors that make communities sustainable?*
3. *Is "sustainability" achievable in "a society with high mobility"?*
4. *How can a society with high mobility achieve social and environmental sustainability?*

Yet, this report is the result of extensive discussion conducted as the third step based on the theme "Sustainable Community Design" of the 51<sup>st</sup> IATSS Forum Program. Our group name is "TESTLAB" and it was decided from the initials of all members name, which are Trang, Ejah, Shima, Tyas, Leak, Air and Ben. The group was organized in June 2014 during the 51<sup>st</sup>IATSS Forum. Similar with the other two groups, we also have been through an intense and consistence series of learning experience from the lecturers, workshops and two field studies.

Our group consists of seven members and also originated from seven different countries, each of us might have different views about the four main questions, which later on were harmoniously structured and reflected in this report without diminishing its core purpose to identify and suggesting the most appropriate answers. We acknowledge that much still remains to be learned, particularly about the best way on engaging society with high mobility around the sustainable community issue. Nevertheless, we think this report has moved the sustainability issue towards better quality of life in ways that can be develop through inevitable high mobility. Thus, one clear message from this report is that human being or people are the most important focus, including their diverse needs and their wider effects of their activities. Therefore, in order to achieve economic and environmental sustainability, society with high mobility shall require synchronization from every elements and factors which undertake by collaboration among all stakeholders actively throughout the way. As IATSS are committed to make a concrete recommendation about this two major issue together, we hope that this report will help to clarify each area and role for further collaboration. It is also our hope that each of our respective countries will continue to learn and work together in order to achieve economic and environmental sustainability in today's society with high mobility.

## 2. Sustainable Communities

### 2.1 Background

The history of sustainability concept was originally coined in forestry, where it means never harvesting more than what the forest yields in new growth. The word *Nachhaltigkeit* (the German term for sustainability) was first used in 1713, concerning preservation of natural resources for the future is perennial, as the ancestors worried about their prey becoming extinct, and early farmers must have been apprehensive about maintaining soil fertility. Traditional beliefs enjoined thinking in terms of stewardship and concern for future generations.

Sustainability (without necessarily using the word) is a natural topic of study for economists: concern on the scarcity of resources is of central concern to the gloomy science. A famous example is the work of Thomas Malthus, who published his theory about looming mass starvation (due to the inability of available agricultural land to feed an expanding population) in 1798. A theory on the optimal rate of exploitation of non-renewable resource which is still relevant today was formulated by Harold Hotelling, an American economist, in 1931.

A milestone in capturing the attention of global public policy was the report of the Club of Rome, which predicted that many natural resources crucial to our survival would be exhausted within one or two generations. Such pessimism is unbecoming in public policy which is, after all, supposed to be about improving things. Therefore, the report of the UN World Commission on Environment and Development, better known as the Brundtland Report after its chairperson, was welcomed for showing a way out of impending doom. It was this report which adopted the concept of sustainability and gave it the widespread recognition it enjoys today. The Brundtland Commission provided a definition of sustainable development that has been widely used: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Later in 1991, World Conservation Union provided influenced definition of sustainable development, which is “improving the quality of human life while living within the carrying capacity of supporting ecosystems.”

Urban policy also adopted the sustainability concept where resulting in “sustainable communities” terms. Community can be defined as a group of people living in the same place or having a particular characteristic in common. The terms communities used to sense the interacting localities and neighborhood that make up towns and cities. That is why the terms of sustainability have been applied to the local level.

As for Japan itself, after suffer devastated impact of World War II and afterward directly started the country reconstruction efforts under the goal of “enriching the nation”. Taking advantage of the position in the Cold War period as an ally of Western free nations, Japan achieved remarkable economic growth. Some of the present multinational firms in Japan were born as small businesses in the economic reconstruction period, such as Honda, Panasonic, Sony and Toyota. As a result of this period, Japan became the second largest economy after US in the late 1960s and enjoyed the protracted period of high and medium growth rate until 1990s.

Furthermore, Professor Fumihiko Adachi in his lecture about Japanese Economy mentioned that in Japan “Rapid Economic Growth” period (1954 - 1973), the government is always

involved with economic activity, and protects it. Regarding the environmental issues, we should be aware that it has been formed by closely related to the way of the state to try to protect the industrial and economic activity. Yet, the environmental issues are not simple, not only polluting the surrounding environment by production activities of factories. In the background of environmental issue in wide range, there was speculation of the government / nation to prioritize the development of the economy and industry. However, against the rapid economic growth, serious environmental issues have occurred of course and expanded quickly in Japan which was recognized through a long history. As a result of this condition, Japan now consider to shifting their oriental wisdom happiness from merely economic stability and material into more sustainable happiness.

### **2.1.1. Lesson Learnt from Toba**

Toba is a city located in Mie Prefecture, Japan on the northern half of Shima Peninsula in far eastern Mie Prefecture, facing Ise Bay of the Pacific Ocean. The area is famous for oysters and cultured pearls. Much of the city is within the borders of the Ise-Shima National Park. As of September 2012, the city has an estimated population of 20,557 and a population density of 190 persons per km<sup>2</sup>. The total area is 108.03 km<sup>2</sup>.

As explained by Deputy Mayor of Toba City and Toba Chamber of Commerce during the field study, all stakeholders in Toba such as government, citizens and private companies work hand in hand enhancing development. Started by identifying local uniqueness like natural resources and cultural such as AMA-culture, the community managed to continue economic development by preserving both natural resources and promoting cultural resources.

### **2.1.2. Lesson Learnt from Nishiyodogawa**

Nishiyodogawa is one of twenty four ward in Osaka City. The ward is on the city's west end, in the Hanshin Industrial Zone, which is one of Japan's four major industrial zones.

This region is characterized by large factories mostly in the heavy industries along the Osaka Bay coast, while inland there are small and medium-sized companies in the machine industry and other industries. One more feature is that the region is crisscrossed with major highways. Traffic includes many large trucks, and the intersection of route 43 has daily average traffic volumes as high as about 85,000 vehicles.

Nishi-Yodogawa environmental case which we learnt during our field study, is one of the cases that clearly show the negative impact of rapid economic growth policy. A lot of people discussed various things and acted to improve the environmental issues as reaction to people condition. At first, the voice of the people complaining of pollution was ignored from the defendants, including the government. The government was standing in private company side to win in broader international scale competition. However, pollution victims paid sustained efforts to collaborate with private companies, residents, and lawyers which later on resulted in a settlement of this case in 1995.

Environmental problem arise because human being have overestimated the capacity of nature, just as disasters take place because humans have underestimated the power of nature. Japan has learned a lot of things from the environmental issues which occurred as negative impact of focusing only to rapid economic growth. If people only focus on economic development, people will suffer from pollution. On the other hand, if people only focus on zeroes of the

environmental issues, economic strength will be reduced which eventually affecting people's quality of life. In addition to that, now people also face an inevitable condition as one of the technology development that eventually form a society with high mobility.

## 2.2. Sustainable Communities Elements, Factors and Characteristics

With regards to both field study that was undertaken as mentioned before, we noted some differences between Toba and Nishiyodogawa as follows:

1. In Toba, environmental awareness as an act of prevention. The awareness on losing local/natural resources when catching the sea life make them realize how importance to limit their needs. While in Nishiyodogawa, environmental awareness as an act of redevelopment. They experienced very bad pollution because of industrialization eras and fight back for their life and their next generations.
2. Toba prioritized on synergizing economic, social and environmental aspects of life while preserving local culture such as eco-tourism. Nishiyodogawa at 1<sup>st</sup> prioritizing economic development (i.e. industrial zone). After facing lawsuits, they re-structured again to be more harmonious.
3. Toba considered as rural area with "slow" economic growth as they concern on fisheries and agricultural, while Nishiyodogawa considered as urban area with "fast" economic growth.
4. Toba facing decreased population due to movement of the young people to the other cities, while Nishiyodogawa having high level of movement of the people within the area itself due to its economic activities.

Despite of the differences, sustainable community design in both places Toba and Nishiyodogawa also have similarities. All of them consist of people living in a certain geographical area, and this area gives a sense of "we-feeling" or local pride to them. Even when they living out of their town, they feel like want to go back again to their hometown and served for the community. For example, the efforts of brilliant eco-tourism pioneer in her town. Each community has their own uniqueness such as Ama culture, and it fuels the community. Efforts are initiative to promote better condition/quality of life, through or by communication, awareness, education and others. Each of the community is interdependent because of limited resources. Redevelopment and rejuvenation needs long period of time, therefore commitment of each and every one in the community and among stakeholders are essential.

Inspired by the sustainability context of Brundtland Report, the sustainable community concept has been interpreted as incorporating the three key elements, namely social, economic and nature. The relationships between these three key elements are interdependent and draw strength from each other. Each decisions or actions of one area always affect the other simultaneously. Therefore, recognition of human needs alongside with environmental concern is more preferred rather than preserved the environment and placing limit or sacrifice on economic growth which affecting human needs. In other words, continue the enhancement of human condition by improving quality of life while at the same time preserving stocks of ecological capital (i.e; natural resources) to fulfill current and future needs.

When considering sustainable communities, it is important to determine these three main issues related to the previous discussion on the relationship of the key elements;-

1. *The relevance of geographical units for considering the environmental effects of human activities*
2. *The nature or significance of the effects being considered, eg: quality of life*
3. *The relationship between economic, social and the nature whether they can be mutually supportive or are they competing priorities with fundamental tensions and trades off involve?*

A certain balance level needs to be found between the three key elements, but not pretending they are two sides of the same coin. A major question is to what extent the one compensates for the other, which will lead to unsatisfactory conditions. Thus, there's a need to include acceptable ratios upon embedding such synergies within the three key elements. It is almost impossible to balance all the key elements at the same time; therefore we suggest that sustainable communities' relationship need to be synergized and synchronized between its elements and factors.

During the whole process, we identified that the first step needed in developing sustainable communities is by identifying local uniqueness as the fuels and strength points of the community by wrapping local uniqueness with sophisticated means in order to enhance economic growth. Collaborating arts, sciences and businesses are important to keep on innovations and creativity from the locals. For example, the effort of brilliant eco-tourism pioneer for eco-guide Sugashima Island, Miss Kiku Ezaki turning the unique combination of local attraction and education into business. Communication efforts start among and between the initiator and society. However it is time consuming process, and not instant as flipping our hands. But it is a necessary step that needs to be taken in order to be sustained, as mentioned by Prof Ishihara (Director of Toba Folk Museum) to sustain we need to be patient. The communication process results are consensus of a certain degree of quality of life wanted and how it will be achieved or what action to be taken by the community. This can be seen through emerging of environmental friendly activities by the communities itself such as; reduce, reuse and recycle activities, energy saving and resource management efforts, sustainable farming, and others.

Collaboration and commitment between all stakeholders involve needed in order to ensure its continuity for future perspective for the next generation. Taking into consideration of all these characteristics, we conclude that essential elements of sustainable community are social (including humans), economic and nature, or environment are affecting and influenced to and by each of its characteristics and factors.

Before we go further on the definitions, we need to have brief identifications on the characteristics and factors of the sustainable communities. Therefore we found that the characteristics of sustainable communities are:-

1. *Adaptive/Flexible/Changeable, in order to face the modernization and globalization, the communities needs to be adaptive, flexible and changeable.*

2. *Creative/Innovative (Art, Science, and Business), from the Creative-City Workshop we learned that we can add the element of art, science and business in the community to make it more creative and innovative and also livable.*
3. *Uniqueness, each community has its uniqueness that makes them special.*
4. *Continuous improvement of Quality of Life, everyone has their own level of satisfactions and happiness in their life. Satisfaction and happiness varies in each person, so if everyone continues on improving their quality of life they can find their own satisfactions and happiness in the end.*
5. *Time Consuming, developing sustaining communities not an immediate action, it need time to build and requires time to enhance its continuity with regards to numbers of stakeholder involved.*
6. *Environmental Friendly (Energy saving, resource management, etc.), in order to sustain the communities, humans need to do their part in preserving the natures and environment. Environmental friendly efforts in daily life such as recycling activities, saving energy in daily life routines and managing natural resources is important to preserve the natural resources for current and future needs.*
7. *Future Perspective of all elements for the next generation, as mentioned before each element is interdependent and relate to each and another to fulfill needs not only current but also for the next generations.*

As from the characteristics and factors of sustainable community that have been elaborated, we see the sustainable community at a fairly broad level of understanding, with regards of different ASEAN countries. We didn't primarily concern with the practicalities of the implementation and the policy tools that required delivering sustainable community right away. We also didn't restrict our discussions to the scope of any particular government department or to the responsibilities of neither stakeholder. Our discussions was almost deliberately cross-cutting and holistic point of view, since we fully understand that this is the nature of the sustainable community which later requires cooperative and collaboration action by different tiers of society, department government and private companies.

By taking into consideration of all steps undertaken related to the theme study, our group discussion come up with essential factors for sustainable communities, they are:

### **1. Education/Awareness**

The education and awareness we put under one category because is like a part and parcel. We need education to increase awareness among the people and when the awareness is there, the education become part of the awareness. Education can be formal and informal. Formal education we receive at schools while informal educations can be spread by stories of experienced/ previous generations to the younger generations or effort by NGO through campaigns, talks and others.

### **2. Communication/Collaboration**

Communication is very important to build relationship and trust between each and another. From communication we can convey real information to the people and avoid

misunderstandings. Collaboration together with communication between different stakeholders is important in order to sustain the community.

### **3. Infrastructure**

Infrastructures such as roads, utilities, public amenities such as schools, hospitals and others needed to facilitate the movement and needs of the communities.

### **4. Technology**

Technology can be used to support the quality of life. Like in Toba, they change the swim suit to protect themselves and more secure when go to the sea. In Noshiyodogawa, the technology used to control pollutions.

### **5. Leadership & Initiative**

Strong leadership is important to manage and plan the community developments. If the leader has good vision and good initiative to develop the community to be sustainable, the community will be well-improved and developed.

### **6. Economic**

Economic issues include good jobs, good wages, stable businesses, appropriate technology development and implementation, business development, etc. If a community does not have a strong economy, then it cannot be healthy and sustainable over the long term. From an environmental standpoint, a community can be sustainable over the long term only if it is not degrading its environment or using up finite resources.

### **7. Environment**

Environmental concerns include protecting human and environmental health; having healthy ecosystems and habitat; reducing and/or eliminating pollution in water, air, and land; providing green spaces and parks for wildlife, recreation, and other uses; pursuing ecosystem management; protecting biodiversity; etc.

In our context of definition, we conclude that sustainable communities as a community that synchronizing economic development, socio-cultural aspects and preservation of natural resources by adapting appropriate/suitable Information & Technology in order to achieve high quality of life not only for now but also future generation. High quality of life consists of economic, convenience, pleasant, sustainable environment and safety.



## 3. Society with High Mobility

### 3.1. Background

Through the understanding of the elements of sustainable community which includes economic, social/human, nature/environment and how these three elements needs to synchronized in order to achieve a sustainable community, comes the part of society with high mobility. The factors of the society with high mobility illustrated in the next segment show the positive and negatives aspects of it and how it eventually link towards the 3 elements of sustainable community. The factors are: environment, human, nature, technology, infrastructure, economic and communication. All these mentioned factors are not stand alone factors but rather they function in a “spider-web” manner which interrelates to one another as well as the elements of sustainable community.

According to dictionaries, the terminology of mobility can be divided into two categories, they are the quality or state of being mobile and the movement of people, as from one social group, class, or level to another or the movement of individuals or groups from place to place, job to job, or one social or economic level to another. With regards to this definition, in general our group’s first impression was that the society with high mobility have tendency to over exceeding information and technology advantage more than human and nature. It seems that sustainable community and society with high mobility are like two different pole and also have tendency to contradicted one to another. Therefore using mind-map, our group discussion tried to identify each factors along with their positive and negative side from each factor related to society with high mobility.

### 3.2. Factors and Characteristics of Society with High Mobility

#### 3.2.1. Human

##### ❖ Education

It’s not uncommon that education is always the fundamental factor to be discussed in term of human resources development in one society. Moreover, it’s much more interesting if we talk about education in the society with high mobility. How does the society with high mobility affect to the individual? Therefore, positive and negative effects are always together.

First, if we think about the positive effects to the human, there are several points that have been brought up. When people are living in the society with high mobility which the information is everywhere, they can gain more knowledge and experiences. Moreover, it’s easier for the people to build up the awareness of one perspective within their own society. Moreover, they can also have equal choices or opportunities to choose. Besides, both the individual and the state can also get a financial advantage by learning through online instead of travelling around which cause a lot of money sometimes. However, it depends on whether they want to catch it or not.

Next, along with the positive, the negative effects are also pointed out. There is a case of losing our own traditional language in the education curriculum while we are living in the society with too high mobility. For example, Indonesia, Singapore and Malaysia do not have the traditional language or aesthetics in the part of curriculum

anymore. However, Japan, Cambodia, Lao, and Vietnam still keep the traditional language or aesthetics as a part of curriculum till university degree.

### ❖ **Occupations**

After describing education, of course, occupation should come next naturally. It is the same as education in which the people are living in the society with high mobility, there are more choices and opportunities for individual to get the job and also the organization/company will also be able to choose their most suitable employee too.

However, while we are having more opportunities, the individuals would also be able to face with the challenge of high competition which can put a high pressure on the people sometimes. Meanwhile, the company/organization's level can be affected if the number of employee turnover is too high.

### ❖ **Communication**

In the situation of society with high mobility, the communication can be considered as the important factor that we cannot overlook. As everyone already has experienced, it is really easy for people to interact or to keep the connection although they are living far away from each other since there are mass Medias (TV, Newspapers, etc) where they can get a public information about the country/society, social Medias (Facebook, Twitter, etc) which they can share even their daily activities, internet, smart phone, etc. Because of all these tools, it would also enable to get or access any promotion as well as to transparency either the information or the data of one specific perspective too. It means that the society is becoming more opened in term of flat communication and full of multi-tasking.

Then, if we look at the negative points of society with high mobility touches to communication, it can be a serious issue. While the people have their own smart phone connecting to the internet that they can interact with the other people who are living in the different place, they will not be able to pay attention on the people who are near them eventually. In another words, it can be said that the society with high mobility can be the solution of the far distance issue, and the same time it can be the root of making the gap within the close distance too. Another word, it can be said "less face to face communication". Furthermore, it is able to give a bad impact to young generation in term of violence, sex, etc. One more thing, viral and uncensored information can be recognized as same as the distraction or less-focused can be happened along the way too.

### ❖ **Behavior**

Here, the behavior of the human in the society with high mobility is thoroughly discussed. It is common to see the adaptable, flexible, and changeable behavior of humans in this kind of society. Then, innovative and creative ideas will come along with the technology and information which can bring them to see, to touch, and to experience in new things in this world. By seeing these things, it's a factor to motivate people to grow. It can be called "Social Status".

On the other side of the negative effects of the society with high mobility on the human's behavior, it shows that this society can be able to put the human into "the danger" like ego-centric or selfish. In addition, "Social Status" in the negative meaning illustrates the gap between poor and rich within one society which may lead to discrimination and/or give a high level of stress to human sometimes. That's way, the suicide can be found as a result ultimately. For the time being, people seem to take a temporary based as their living style. They may not want to stay in one place permanently in the society with high mobility. Consequently, they have less sense of belonging. In order to overcome the above negative issues, the proper early education both formal and informal ways can be the best solution to help human to think and to make a right decision in their life.

#### ❖ Culture

Generally, culture is the root or spirit of the society which cannot be easily changed or adapted by the outside environment. However, it might be easily affected by the high mobility. It is not easy to think of positive influences by the society with high mobility in the context of "Culture". Anyhow, there are several points found after the discussion. Firstly, exposing by the other culture can be the good thing to enrich the experiences individually. Secondly, the new culture can be created contemporary by utilizing each community elements.

In a different way, less-uniqueness can be considered as the bad influence of the society with high mobility even though culture is not easy to be changed. Another point is losing the originality like social norm when the people are indulging in the society with high mobility normally. Lastly, it will be the cause to threaten the harmony within the community as a whole.

### 3.2.2. Nature

#### ❖ Environment/ Natural resources

High mobility is a factor to support industrializing and modernizing the society. With the fast pace of development, increasing trends of consumption in the world could conceivably cause shortages in natural resources. People will need more cars, more fuel consumption, and more consumer goods, more of everything. Natural resources have a finite limit therefore it will eventually influence global population, energy output and consumerism. Low availability of raw materials might not be in the near future, but if society with high mobility continues to modernize countries at a steep rate, accessibility to resources may become an issue. To a large degree the pace of mobility will directly correspond to the consumption and depletion of natural resources. Besides, environmental issues such as pollution and contamination will also a big concern in the high mobility society.

However, society with high mobility increase people convenience, it helps connects people and allows the exchange of ideas, and spread the awareness. Therefore, people have more sense of awareness of preserving nature. More people should be able to help solve problems associated with natural resources. For example, more scientists from around the world would be able to work on a common goal. Regional and global communication would theoretically decrease the time required to solve

problem. Discovery of alternative and renewable resources could be a solution to sustain the society with “high mobility”.

#### ❖ **Cultural resources**

Information technology will sweep away cultural boundaries and therefore created the possibility and even the likelihood of a global culture. Global culture shapes the perceptions and dreams of ordinary citizens, wherever they live. There are many reasons to think that a society with high mobility might undermine cultural diversity. Multinational corporations promote a certain kind of consumerist culture, in which standard commodities, promoted by global marketing campaigns exploiting basic material desires, create similar lifestyles. Strong cultures in the world will become dominate and override local traditions.

But there are also good reasons to think that high technology will also foster diversity. Interaction across boundaries leads to the mixing of cultures in particular places and practice, and therefore might create new culture. The Internet and information technology in society with “high mobility” will help spreading of values, norms, and culture, it helps promote and develop the local cultural resources. Integration and the spread of ideas and images improve people awareness and therefore stimulate actions and resistance of local people.

To some extent, the issue of diversity and protection of local cultural resources is unlikely to be settled. Whether diversity diminishes depends on human themselves. If diversity has itself become a global value, and be promoted through international organizations and movements, different local resources may actually operate in tandem or even reinforce each other.

### **3.2.3. Economic**

#### ❖ **Information & Technology**

Information & Technology is a driving factor in the society with high mobility. The advanced technology developments have facilitated efficiency gains in all sectors of the economy. Technology improves our capacity in term of time efficiency and productivity. Another positive element is the interconnectivity of the world. Geography is not as challenging as it used to be with the emergence of technology. News, insights, information, and communication are able to be spread instantly fast with the presence of information technology.

Technological innovation has opened the doors for an increasingly trans-national collaborative effort in the areas of communication, research, world-wide development, and production. IT drives the innovative use of resources to promote new products and ideas across nations and cultures, regardless of geographic location. Creating efficient and effective channels to exchange information, IT has been the catalyst for integration and innovation. Technology is now the forefront of the modern world creating new jobs, innovations, and networking sites, however, it also reduces the need of manpower. If machine replaces low skilled human labor, it might cause massive unemployment.

The society with “high mobility” accelerates the change of technology. It seems that a new technological innovation is being created faster. The pace of change will occur so rapidly many people are always playing catch up, trying to purchase or update their new devices. People become addicted and depend on the IT devices, online shopping, banking, record-keeping, school registration, data storage, etc. Technology makes people vulnerable, without proper security, our identities and information is exposed in the higher risk of cybercrime. People in society of “high mobility” also become more egocentric since with the technology, they can be independent and do not need the support from anyone. The disparity between individuals, cities, and countries who have access to technology and those who do not is also a significant problem. The lack of technology is literally going to isolate those who cannot afford to be alienated by progress.

### ❖ **Transportation**

Transportation will play a major role in society with high mobility. Personal and public transportation will improve dramatically. Transportation vehicles are now built to be faster, safer, more fuel efficient, more affordable. Transportation in high mobility society makes human life easier, brings the opportunity to know the world and around the world. It saves time and makes human life faster moving. With faster transportation, people can go to the job in further place from home. The fast and convenient transportation will also support international trade. It will increase the volume, capacity, speed and efficiency of trading goods. Transportation makes the world shrinking and less geographical boundaries. Transport also changes the way we do business, increases the scale of trade between countries. As a result, trade becomes increasingly international and trans-national.

Modern vehicles will bring a lot of advantages but it cannot avoid the air pollution, noise pollution and the disposal of the vehicles are bringing the vulnerability to the natural environment since conventional transportation technologies usually involve the use of fossil fuels for vehicle propulsion. Too many vehicles will create more traffic accidents and congestions and create high pressure to the infrastructure system.

In the other hand, rising fuel prices and fossil fuel depletion will cause awareness and interest in alternative transportation technology. The society with “high mobility” accelerates the change of technology. It seems that a new technological innovation is being created faster. Innovations in transport will make transport more environmental-friendly by utilizing things such as solar power, electricity, and ethanol fuel.

### ❖ **Accessibility**

The convenience of information technology and transportation will increase the accessibility. Accessibility can be measured as the quantity of economic or social activities that can be reached using the transport and information system. In term of global and regional perspectives, improvement in accessibility will increase the market size for manufacturing, tourism and labor, leading to increased competition and centralization. On the other hand, the impact for the region concerned could be both positive and negative, depending on its initial level of competitiveness. In term of individual perspective, accessibility improves the quality of life. People can access

to the same sources of information or job opportunities wherever they live. With the convenient transportation, people are equal in accessibility to social facilities such as health and education. The accessibility will help people in rural and remote locations, or students with disabilities overcome the educational disadvantages.

High accessibility brings a lot of advantages, but over access on information might “polluted” psychologically. The lack of control over the distribution and unrestricted access of inappropriate material can be detrimental to children and internet users. Even though the accessibility using information technology has the potential to make our lives simple and convenient, it also holds the power to control us. Its influence on us is mostly dictated by the choices we make while receiving those information. With prudent use, people can manage to harness its unlimited potential and steer clear of its adverse effects. Furthermore, high accessibility might increase trans-national crime also. With the advance communication technology, people can access and buy things like drugs, human trafficking, weapons, etc easily on internet. Those issues become more difficult to control in high mobility society.

### ❖ **Economy**

High mobility society provides new ways of reaching out to customers and competing for market share. Information system establishes itself as a powerful marketing tool. It can be a boost for the success rates of entrepreneurial ventures and addresses the hidden needs, becoming a powerful driver of economy growth.

Technology employed within companies help to streamline business processes and improve efficiency. The advanced technology developments have facilitated efficiency gains in all sectors of the economy. The improvement of our capacity in terms of time efficiency and productivity make goods become cheaper and more affordable for everybody. In the technology driven economics, the disparity between individuals, cities, and countries that have access to technology and those who do not is also a significant problem. The lack of technology is literally going to isolate those who cannot afford to be alienated by progress. It might create economic status within society. Unhealthy competition between multinational companies and local companies might destroy the local economics.

## 4. Society with High Mobility to Achieve Social & Environmental Sustainability

Mobility is almost universally acknowledged to be one of the most important prerequisites to achieving improved standards of living. Enhanced personal mobility increases access to essential services as well as to services that serve to make life more enjoyable. It increases the choices open to individuals about where they live and the lifestyles they can enjoy there. It increases the range of careers that individuals can choose and the working environment in which they can pursue these chosen careers. Enhanced goods mobility provides consumers with a greatly wide range of products and services at more affordable prices. It does this by enabling people to market the products they grow or manufacture over a much wider geographic area and by reducing the cost of inputs they must use. The vast expansion in the number of automobiles and trucks over the last one hundred years has been one of the most important manifestations of this desire for enhanced personal and goods mobility. These vehicles have provided their users with unprecedented flexibility in terms of where they can go and when they can go there.

But people are now increasingly aware that their enhanced mobility has come at a price. This price has included the financial outlay that mobility users must make to providers of mobility systems and services to permit them to supply such systems and services. But it has gone beyond this. Enhanced mobility has tended to be associated with increased pollution, emission of greenhouse gases, congestion, risk of death and serious injury, noise and disruption of communities and ecosystems.

We acknowledge that society with high mobility consists both positive and negative sides as describe before. However, we found that these characteristics mainly influenced by different convenience levels started from individual level which eventually spread into their society as communal convenience and afterward become national, regional and international levels. Individuals are able to access to modern technology that makes life far more convenient and better than when technology was simpler. In the past, information, science, and medicine were far less developed making the death rate higher and people less educated. Now with modern technology lets breakthroughs in medicine happen more frequently and people have much more education, frees people up to do other things, and more leisure activities or use this technology to communicate or get in touch with colleagues, friends, families and so on in far distance very fast and easily. Besides that, people can use more convenient transportation to move from one place to other places conveniently, fast and easily, which can help the community to access to market, save time and can accelerate the economy as well.

Society – people will have more options as there is more variety of goods, education levels, foods, technology and so on. It seems people in the society have more freedom or convenience to do or choose what they like and make their own decisions with their own power of thought. The people have to be more adaptive or changeable to suit with current situations. While in the national level – as the country can use the high technology to develop its infrastructure, transportation, information, and so on. This can help to strengthen the country's security, increase healthy economy as the number of companies, factories, stores and so on are also increased. The country has opened more for investment and broadened the trans-national cooperation with other countries more effectively and efficiently. The political system can also be improved to be more transparent by applying proper technology or social media.

Regional and international level – when the society with high mobility consists of convenient accessibility, it will make all people in the region as well as all people around the world can trans-travel and communicate easily. This will affect the globalization and make our world borderless. This means people in a region. For instance, people in ASEAN countries can cross border to visit other countries without VISA and able to apply for a job or work in other countries freely and easily as well.

Our group discussion put the stressed point on the human being or made people as the center of two ideas and not merely the object, both in sustainable community and society with high mobility. Human being is a social-creature, we are “programmed” to be a “we-species”, a social networking species with an innate need to connect and communicate. Our form of socialization when formalized into a more structured figure will emerge in the form of society or community in certain geographical area. In the other hand, human being also “equipped” with survival instinct to ensure their continuous existence in this world. Information and technology advantage was one proved of this, which in positive way will inevitably contribute for better quality of life. Therefore utilizing positives advantages of information and technology to benefit human well-being should be always enhanced.

Human being also blessed with conscience and intelligence that enable them to choose between right or wrong, which in communal impact form in the socio-cultural values or norms that live within a society or a community. These values or norms based on our group discussion will and should be used in order to make sure society with high mobility achieved sustainability, in both economic and environmental aspects. How does it works is by using these value or norms to overcome all negative impacts of society with high mobility.

Transportation can be used to illustrate challenges in both of these aspects of mobility – its benefits as well as its costs – as well as some of the relationships that have characterized them – at least until the present. It also reveals points of leverage that, if exploited, can modify some of these relationships in ways that enhance mobility’s benefits and reduce its costs. We will describe these points of leverage in more detail later, but they are worth mentioning briefly here. First, transport services can be made more efficient, increasing the amount of economic growth supported by a given volume of transport services. Second, the level and composition of “induced” mobility demand can be channeled in ways that fulfill growing mobility needs but create fewer transport impacts. Third, the level of adverse economic and environmental impacts associated with any given level of transport activity can be greatly reduced - for example, through significant technology shifts. Undertaking any or all of these can reduce – and perhaps eliminate totally – the threat that adverse economic and environmental impacts would be sufficiently great that transport services would be hindered in enabling economic growth. If this could be accomplished, mobility could be said to be sustainable

## 5. Conclusion

We acknowledge that economic growth might create environmental issue, as everything will when human over exceeding the nature. Therefore the level and composition of “induced” high mobility demand should be channeled into many ways that will appropriate and suit growing mobility needs and at the same time inhibits the negative impacts of it.

By taking into consideration of all elements, aspect and diverse condition among our team members in the respected countries, we believe that there are no one fits all formula or method to achieve economic and environmental sustainability in a society with high mobility. By analyzing conditions and policies taken by each government in order to achieve sustainability, we identified that demographical and geographical conditions play major roles to achieve common level of sustainability in each country which causing each country to use different criteria to determine what constitute as sustainable.

An encouraging conclusion of our discussion is that sustainability does not come at the expense of wealth. Most of the critical indicators that drive sustainability such as wastewater treatment, mass-transit usage and environmental awareness were not directly affected by level of economic development. To that end, we came up with proposed indicators needed by society with high mobility to achieve economic and environmental sustainability as follows:

| Categories                                 | Indicators  | Description of the Indicators   |
|--|---|---|
| <b>Basic Needs</b>                         | <ul style="list-style-type: none"> <li>✓ Water supply</li> <li>✓ Housing</li> <li>✓ Health</li> <li>✓ Education</li> </ul>                                    | <ul style="list-style-type: none"> <li>✓ Access to clean water</li> <li>✓ Living space (square meters/capita)</li> <li>✓ Number of doctors per capita</li> <li>✓ Student-teacher ratio</li> </ul>   |
| <b>Resource Management</b>                 | <ul style="list-style-type: none"> <li>✓ Power</li> <li>✓ Water demand</li> <li>✓ Water recycling</li> <li>✓ % GDP of heavy industry</li> </ul>               | <ul style="list-style-type: none"> <li>✓ Total electricity consumption (KWH/capita)</li> <li>✓ Water consumption (liter/capita)</li> <li>✓ Ratio of industrial waste recycle &amp; utilized</li> <li>✓ Heavy industry GDP/total GDP</li> </ul>  |
| <b>Environmental Cleanliness</b>           | <ul style="list-style-type: none"> <li>✓ Air pollution</li> <li>✓ Industrial pollution</li> <li>✓ Wastewater treatment</li> <li>✓ Waste management</li> </ul> | <ul style="list-style-type: none"> <li>✓ Concentration of SO<sub>x</sub>, NO<sub>x</sub> (mg/cm)</li> <li>✓ Industrial discharge/GDP</li> <li>✓ Wastewater treatment rate</li> <li>✓ Domestic waste collected and transported</li> </ul>        |
| <b>Built environment</b>                   | <ul style="list-style-type: none"> <li>✓ Urban density</li> <li>✓ Mass-transit usage</li> <li>✓ Public green space</li> <li>✓ Building efficiency</li> </ul>  | <ul style="list-style-type: none"> <li>✓ Person/square kilometer of urban space</li> <li>✓ Passengers using public transportation</li> <li>✓ Public green space (square meter/capita)</li> <li>✓ Building heating/cooling efficiency</li> </ul> |
| <b>Commitment in future sustainability</b> | <ul style="list-style-type: none"> <li>✓ Green jobs</li> <li>✓ Environmental Awareness</li> </ul>   | <ul style="list-style-type: none"> <li>✓ Number of environmental professionals per capita</li> <li>✓ Environmental/ecological content in formal &amp; informal education</li> </ul>   |

## 6. Recommendations

Communities throughout the world are developing sustainability and implementing more sustainable practices because of critical environmental and community problems facing them locally, regionally, nationally, and globally. These problems occur across many different segments of the community and society and cannot be solved easily within our society. Collaboration is needed among the communities among the community because such problems are multi-disciplinary, multi-agency, multi-stakeholder, and multi-sector in nature. This collaborative process focuses on current and future generations' needs by integrating and synchronizing social, economic, and environmental issues which provides a promising opportunity to address any problems.

Working in conjunction with high mobility, the term "sustainable community" is often defined uniquely by each community, on the basis of its individual interests, needs, and culture. Most sustainable community focuses on long-term integrated systems approaches, healthy communities, and quality-of-life issues by addressing the elements of economic, nature/environmental, and social/human issues highlighted earlier. The concept recognizes that economic, environmental, and social issues are interdependent and integrated and it needs to be synchronized in order to achieve a sustainable community

The types of issues addressed in sustainable community projects can vary significantly. Most sustainable community efforts try to address a range of issues and processes like economic development/redevelopment, environmental management, recycling, lifestyles etc., in order to recognize the complexity and range that need to be addressed in evolving to sustainability. To address such issues, communities may focus on education, technology development and implementation, and changing practices and behaviors of individuals, government, and/or businesses.

Most sustainable community efforts involves a process in which every member of the community is encouraged to participate. The focus is on consensus building for the community. The emphasis is on communication and cooperation among many different interests and stakeholders from the community and also from those outside the geographic community if their actions might affect the community. Compromise is also the key where necessary. All the different segments of the community at the local and regional level, including businesses, individuals, environmental and community groups, and government, need to work together cooperatively to move toward sustainability. There is also the recognition that communities are not isolated; they are interdependent with their region, the country, and the world. The phrase, "Think long term and globally, and act locally" applies in this context.

## 7. Postscript

### ❖ Discussion Flow

During the group discussion, we used different methods to collect ideas from team members included brain storming; mind mapping and post-it notes. Those are some methods that program have been introduced to us in various group discussions during the seminar. Based on experience of some team members in the workplace, they also recommended different analytical methods like 5W1H and SWOT, depends on the situation and topics that we selected the most appropriate one. After the brain storming section, we tried to categorized, generalized, make the connection to come up with a conclusion. All the ideas from team member were included. The group consensus was the main factor for every decision that our team made, therefore we worked together all the time during the group discussion, presentation preparation. We only divided in the report writing. Our team always kept our working environment relax and enjoyable so that we could come up with fresh idea.

### ❖ Challenges

The challenges for us mainly because the terminology that was used. We have the different interpretation of the topic. Beside, sometimes we also got lost because of the topic is very broad and we was confused about what direction should we go to meet the expectation.

### ❖ Lessons learnt from the Group Study

All the way through the group study, we obtained a lot of lessons learnt. The first should be the facilitation skills. It's a good time for all of us to improve our facilitation skills which include time management, conflict management, being an effective listener, etc. For example, we took turn to be a facilitator based on the discussion. Sometimes, there was a conflict in term of the different understanding and interpretation individually. Therefore, the facilitator and other members tried to explain to make sure that everyone has the same understanding. Another way was we took a short break to overcome it. The second point is team work included the mutual trust and understanding, respecting and tolerance each other within the group. All ideas are always put under consideration and discussion. The third lesson learnt is diversity. We came from the different countries, different culture, and different backgrounds that make us to have different perception and interpretation. However, the positive effect of diversity is being able to see all the aspects from different perspectives. Last but not least, our group have never ever forgotten the word "FUN". "Having FUN" helped us to enjoy making all the work done eventually.

## **Executive Summary**

Environmental problems arise because human beings have overestimated the capacity of nature, just as disasters take place because humans have underestimated the power of nature. Japan has learned a lot of things from the environmental issues which occurred as a negative impact of focusing only on rapid economic growth. If people only focus on economic development, people will suffer from pollution. On the other hand, if people only focus on zeroing out the environmental issues, economic strength will be reduced, which eventually affects people's quality of life. In addition to that, now people also face an inevitable condition as one of the technology developments that eventually form a society with high mobility.

This report is the result of extensive discussion conducted as the third step based on the theme "Sustainable Community Design" of the 51<sup>st</sup> IATSS Forum Program. We "TESTLAB" were organized in June 2014 during the 51<sup>st</sup> IATSS Forum. Our group name was decided from the initials of all members' names, which are Trang, Ejah, Shima, Tyas, Leak, Air, and Ben. As the other two groups, we also have been through an intense and consistent series of learning experiences from the lecturers, attending workshops and two field studies. Series of lectures and workshops enable us to gain a certain level of knowledge as a basic background information. The next step was conducted field studies that basically combine a reality check of the basic background information provided earlier and also at the same time simultaneously observe additional data and also information directly from speakers through firsthand experience. As a result, this report was the final product of carried out group discussions which held intensively but by keeping in mind the mutual understanding among each member and the fun part of it is we were very much enjoying all the process.

As a group consisting of seven members and also come from seven different countries, each of us might and does have different views about four main questions, which later on harmoniously structured and reflected in this report without diminishing its core purpose to identify and suggest the most appropriate answers. We acknowledge that much still remains to be learned, in particular about the best way on engaging society with high mobility around the sustainable community issue. Nevertheless, we think this report has moved the sustainability issue towards better quality of life in ways that can be developed through inevitable high mobility. One clear message from this report is that human beings or people are the most important focus, including their diverse needs and their wider effects of their activities. Therefore, in order to achieve economic and environmental sustainability, society with high mobility shall require synchronization from every element, factor, and stakeholder actively throughout the way. It is also our hope that each of our respective countries will continue to learn and work together in order to achieve economic and environmental sustainability in today's society with high mobility.

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