

## **A New Sustainable Approach**

### **- Challenge of Subtropical Region -**

Before 1970s, we think resources and energy are unlimited. We believe sustainability is certainly. The advanced western countries use the resources to develop their life style. We call it industrialization and urbanization. By means of international trade, the wave of comparative advantage, every country produces their special products and promote them to the whole world. It makes the whole world has the same urbanized civilization. Because of the successful experience of the advanced western countries, let all the less-developed countries envied the way of western life they have been going. Under this kind of marketing, the less-developed countries import the goods from the advanced western countries. It influences their value and culture, also makes the whole world in the same model. However, the western model can't match the local climate and environment. We can't release from the deep influences under the international trade and the principle culture. It leads the constructions of the whole world to the same. The construction can't not only be compatible to the local environment, but also cause a waste of resources.

We can have a clear picture of the phenomenon through the next three following papers. One is by Professor Kazuo Iwamura from Japan, the other is by Professor William Lim from Singapore, the third is by Professor Wan-Ki Chow from Hong Kong. The construction of western model can't be compatible to the subtropical region and it is not our best solution and choice. It is the same in my country, Taiwan.

This is the reason why the President Mr. Chun-Shin Lin founded the Archilife Research Foundation and he is also a thinker, an architect, a banker, an artist and a Rotarian. He devoted himself to find the solution of being sustainable for Taiwan and our region. After 24 years, we finally have results to show all these efforts. We believe that pursuing the different regional civilization is not correct. We shall understand our characteristics and local environment. The constructions and equipments should response to the local climate. Moreover, it will lead every country's import policy, affect the industrial items and our demands on resources. If a country can be sustainable or not will focus on whether the resources can be recycling or not.

Based on this concept, we devoted ourselves to establish a knowledge bank since 1979, support research scholarships, recruit high-level talents and appoint research projects. Eventually, we have reached a basic achievement in 1989. After that, we opened a ten-year research project to find "The Model of Next Generation". Till 1996, we formed a SONGS team, stood for "Specifications of Next Generation Settlements". The SONGS team compiled 155 papers and caught the results of 26 research projects. Through 34 meetings, they proposed "The Declaration of SONGS"<sup>1</sup>, in which 20 indices were offered as the basis for dialogue with our environment. Moreover, in order to extending the research's achievements, since 1990, 175 outstanding keepers began to compile index books to integrate the knowledge. Then, we realize we should catch the natural law about the biological sense and try to build a symbiotic high efficient recycling system. We call it "Symbiosis".

It is based on the biological sense. We have a Vertical Planting System beside the construction's wall. Through the dry toilet, our output will be the nutrition of the plants, and the output of plants will be our food. We hope through this high efficient recycling system, it might help to release the burden of the environment. Also, by the evaporation of plants, it might help to cool down the high temperature. Besides, as to the construction, learning the wisdom that both of

subtropical aboriginals and ancient Romans control the temperature and humidity, we build a chamber to prove its possibility and test its performances. All the results could be adopted by a new community. We believe that Symbiosis will make our living free from the burden of environment. This is what we have been approaching. And, we also reach a conclusion that composing the Green Building and “Symbiosis” will be the formula for pursuing Sustainable Building.

The last four speakers are my colleagues, Professor Kuo Chao- Lee, Professor Yu Chao-Ching , Professor Chiang Che-Ming, and Professor Su Ching-Hua. They all come from Taiwan. And they will explain that Symbiosis might be workable. Although the tangible achievements of these efforts could not be completed in time for this conference, I can guarantee that we will have results, whether successful or not, to share with you all at SB2004. I have mentioned about the formula that GB plus “Symbiosis” will be SB. For this conclusion, I would like to propose three key points as following :

1. Localization ;
2. Team Work ;
3. Symbiosis

#### 1. Localization

Buildings should have the ability to respond to its local environment and climate, while also providing for the comfort and health of its inhabitants.

#### 2. Team Work

Sustainability is a complex issue. It needs to be discussed on many different levels and aspects in order to come up with a comprehensive solution. Moreover, real dialogue with our environment will require continued experimentation, refinement, implementation and feedback.

#### 3. Symbiosis

“Symbiosis” is a micro-scale symbiotic approach with mimicry of nature. It requires that people establish an intimate symbiotic relationship with the biological world, and particularly with the vegetables and fruits. It is in order to

minimize their impact on nature and ensure environmental sustainability. Finally, I hope that Taiwan and countries in the subtropical region can from small area to large area transfer the environment, resource, and energy policy of the country. This is my college classmate. Now, he is the president of Taiwan, Mr. Chen Shui-Bian. He catches our Archilife Research Foundation's idea and gives Taiwan a new name "Green Silicon Island". It is also his political vision. We have furthermore mapped out Taiwan's first "Green Map" for him. It could change the living community and ecological environment. Perhaps this can also serve as a reference for advanced Western countries, and lead all of us to a sustainable future.

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<sup>1</sup>The Declaration of SONGS

Next generation (by the year 2025) will encounter problems such as deterioration of the natural environment, depletion of geographic resources, the vicious cycle of ecosystem, transformation of the socio-economic structure, and the development as well as world wide employment of new energy resources and technologies. The scarcity of petroleum energy resources and the popularity of computer networks can be two opposite forces that may lead future settlements centralized or decentralized patterns. Specifications of next generation settlements should be able to reduce demands to the nature, satisfy our needs of safe, healthy, cost- and energy-saving, economic, and identity-related dwellings; protect and enhance our bodies and spirits.