

ภาค 5:
(Section E)

การพัฒนาที่อยู่อาศัย และชุมชน

Management of Cultural Landscapes as the Means for Sustainability and Community Resilience Building

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Abstract

This study aims at illustrating complex processes of cultural landscape transformation in a parallel with holistic pictures of community resilience to the impacts from global changes, and the statement of sustainable development. Three communities in Asian countries that were chosen to be the case studies include Mukugawa, an upland Village in Japan, Khiriwong, a mountain village in the Southern part of Thailand, and Diura, a small fisherman village in the Batanes Islands, the Philippines.

The three case studies show that management of cultural landscapes has been based on sets of local knowledge. Cultural landscapes are not static. They have been transformed through times. Affected by changes in local, national, regional and global level, communities have played important roles in managing spatial structures and other resources. Grounded on cultural and social capital, various kinds of community groups have worked for adapting local knowledge, combined with other set of knowledge, and then produced new sets of knowledge.

In order to build effective collaborative management, the bonding and bridging among groups have been created, while the linkage between local groups and outside organizations, especially governmental and non-profit organizations have been properly formed. According to the three case studies, it can be stated that inventive practices in managing cultural landscapes provide benefits to community resilience building. Meanwhile, proper management of change ensures economic, socio-cultural, and ecological balance that leads to statement of sustainability.

Keyword: cultural landscape | community resilience | sustainability

การจัดการภูมิทัศน์วัฒนธรรม ในฐานะเครื่องมือในการสร้างความยั่งยืนและ ความยืดหยุ่นต่อการเปลี่ยนแปลงของชุมชน

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บทคัดย่อ

การศึกษานี้ต้องการที่จะทำความเข้าใจถึงกระบวนการ การแปรเปลี่ยนของภูมิทัศน์วัฒนธรรม (cultural landscape transformation) โดยพิจารณาประกอบกับความเข้าใจในเรื่อง ความยืดหยุ่นของชุมชน (community resilience) ต่อผลกระทบจากการเปลี่ยนแปลงของโลก กับ การพัฒนาที่ยั่งยืน (sustainable development) ชุมชน 3 แห่งจากประเทศในทวีปเอเชีย 3 ประเทศ ที่ได้รับเลือกมาเป็นกรณีศึกษาประกอบด้วย หมู่บ้านในพื้นที่สูงในประเทศญี่ปุ่น คีรีวง หมู่บ้านในภูเขาทางภาคใต้ของประเทศไทย และ ดุระ หมู่บ้านชาวประมงขนาดเล็กแห่งหนึ่งในหมู่เกาะบาตาเนส ประเทศฟิลิปปินส์

กรณีศึกษาทั้งสามแห่งแสดงให้เห็นว่าการจัดการภูมิทัศน์วัฒนธรรมอยู่บนพื้นฐานของชุดความรู้ในท้องถิ่น ภูมิทัศน์วัฒนธรรมเป็นสิ่งที่ไม่อยู่นิ่ง มีการเปลี่ยนแปลงอยู่เสมอ จากผลกระทบอันเนื่องมาจากความเปลี่ยนแปลงในระดับต่าง ๆ ทั้งในระดับท้องถิ่น ระดับชาติ ระดับภูมิภาค และระดับโลก ส่งผลให้ชุมชนได้มีบทบาทสำคัญในการจัดการโครงสร้างทางกายภาพในลักษณะของการใช้พื้นที่ รวมไปถึงการจัดการทรัพยากรด้านต่าง ๆ ในกรณีนี้ กลุ่มองค์กรในชุมชนได้มีการปรับใช้ความรู้ในท้องถิ่นผสมผสานเข้ากับความรู้จากภายนอก จากนั้นจึงมีการสร้างชุดความรู้ขึ้นมาใหม่ โดยอาศัยรากฐานจากทรัพยากรทางวัฒนธรรมและทรัพยากรทางสังคม

ในการที่จะสร้างการจัดการพื้นที่อย่างมีประสิทธิภาพนั้น จำเป็นจะต้องมีการเชื่อมโยงการทำงานระหว่างกลุ่มองค์กร ตลอดจนเชื่อมต่อกับองค์กรภายนอก โดยเฉพาะหน่วยงานภาครัฐและองค์กรไม่แสวงหาผลกำไร กรณีศึกษาทั้งสามแห่งชี้ให้เห็นว่าการจัดการภูมิทัศน์วัฒนธรรมอย่างสร้างสรรค์นั้น ก่อให้เกิดผลดีกับการสร้างความยืดหยุ่นของชุมชนต่อการฟื้นตัว และการปรับตัวจากความเปลี่ยนแปลงต่างๆ ที่เกิดขึ้น ในขณะที่การจัดการความเปลี่ยนแปลงอย่างเหมาะสมช่วยให้เกิดความมั่นใจว่าจะเกิดความสมดุลทางเศรษฐกิจ สังคม-วัฒนธรรม และระบบนิเวศ อันจะนำไปสู่สถานะแห่งความยั่งยืนต่อไป

คำสำคัญ ภูมิทัศน์วัฒนธรรม | ความยืดหยุ่นของชุมชน | ความยั่งยืน

1. Introduction: Cultural Landscapes, Sustainability, and Community Resilience

Cultural landscape is a complex social-ecological system, which is defined as “a concrete and characteristic product of the interplay between a given human community, embodying certain cultural preferences and potentials, and a particular set of natural circumstances” (Mitchell *et al.*, 2009). Cultural landscape is a system of settings within which particular systems of activities taking place in space and time, incorporating particular proximities, linkages and separations, and boundaries among settings. It reflects and influences communication, and also has meanings (Rapoport, 1992). According to these notions, it can be stated that the formation of the landscapes are grounded on human patterns of intervention and disturbance of nature. To create geographical sites meets the requirement of socio-culture and economy; people learnt along trial-and-error processes, then collected and established sets of traditional knowledge and resource management systems. Initial cultural landscape has not been designed by any designer. It has been co-designed and co-produced by people in the society.

Commonly, cultural landscapes are known as the pretty picturesque landscapes with outstanding values. Nevertheless, the current conception of *cultural landscape values* has been considered in terms of *cultural-natural integrity and diversity*, rather than aesthetics and outstanding heritage. In the cases of Asian cultural landscapes, we should neither evaluate *aesthetics* of cultural landscapes by using general references, nor raising their beauty as outstanding values. Such landscapes are the landscapes expressing *cultural process* reflecting day-to-day activities, the needs of people, local techniques, as well as belief systems¹. Aesthetics in this sense are based on *integrity* referring the intactness and the wholeness of the man-made landscapes integrated in natural features and cultural preferences. Moreover, *cultural diversity* through sub-cultures thus is one of the factors induced the beauty of each community.

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¹ See more discussion about cultural landscape and cultural process in “*Studying Cultural Landscapes*” (Robertson and Richards, 2003: 2), and “*Landscape and Meaning, Context for a global discourse on cultural landscapes values*” in **Managing Cultural Landscapes** (Taylor, 2012).

From the view point of *sustainability*, people have carefully put mimic man-made features into natural landscapes, as well as exploited natural resources yielded at natural renewable balance. Cultural landscapes, which have been created with the human living in humorous balance with their environments and the wise use of natural resources, thus meet the concept of *sustainability*².

In recent decades, a number of rural communities in Asia have faced with an ever-growing number of challenges in conserving their values and cultural preferences caused by globalization, socio-economic and environmental changes. Internal and external factors caused the communities have been in unsustainable statement in managing spatial structures and natural resource systems. Actively responding to the continual changes with uncertainty and unpredictability, community (citizens, social system, and institutions) build their *community resilience* (adapting and absorbing disturbance until they can remain their essential function, structure, identity, and feedbacks) through their capacity building and social learning. Community thrived resources in an environment under continually changes (Walker *et al.* 2004; Berkes and Ross, 2013).

Social, economic and environment capitals from sustainability affect the ability to adapt and response to situations of communities, however, this research concentrates on cultural capital which is a subset of social dimension and social capital itself. *Cultural capital and social capital* are seen as essential ingredients of community resilience. *Cultural capital* relates to adaptations and means to deal with the natural environment which is passed down through generations (Berkes and Folke, 1991). *Social capital* is a community capacity for collective action and obviously this mutual help has embedded in communities, especially in the *bonding* group cohesion, *bridging* or ties between groups and *linking* vertical relationships (Wilson, 2012, 23).

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2 See more details in the current studies about cultural landscapes in relevant with sustainability, for instance “*Cultural Landscape Mapping: The Basis for Managing a Sustainable Future?*” (Hendriatiningsih *et al.*, 2010) and “*Cultural Landscape in the Times of Sustainable Development*” (Krajobraz *et al.*, 2013).

Three from five communities are chosen from the API Regional Project: “*Community-Based Initiatives toward Human and Ecological Balance.*”³ The three communities have common characteristics of rural settings among these three locations—*Mukugawa*, a small mountainous village in Japan, *Khiriwong*, a village in the mountain ranges in Southern part of Thailand, and *Diura*, a village in Subtan Island, the Batanes Islands, the Philippines. These villages highly depend on the uses of natural resources, based on local knowledge, tradition, norms, belief systems and ideologies.

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³ The Asian Public Intellectuals (API) Collaborative Research entitled “*Policy Brokering of Community Knowledge for Sustainability Transition in Indonesia, Japan, Philippines, Malaysia and Thailand*” was conducted during June 2013 - July 2014. This grant was under the API Regional Project: “*Community-Based Initiatives toward Human and Ecological Balance,*” granted by the Nippon Foundation.

The collaborative research was aimed to support the efforts of API fellows in consolidating community building, serving the public good and generating social transformation in Asia, in response to the region’s key challenges especially environmental change and disintegrating communities. The project specifically aimed for a better understanding of the logic of sustainability transition, and how the various facets that influence the process will help build our thinking about how to change the Asian society’s patterns of production, consumption and everyday way of life and living. Five participating fellows were from five countries—Indonesia, Japan, Philippines, Malaysia and Thailand.

The research methodology was comprised of:

Primary stage: Identify existing problems about the destruction and conservation of environment of the site studies, in accordance with the contexts of the sites. This involved interaction with local residents who live and take part in creative, collaborative activities that address the environmental and social changes;

Second stage: Conduct field activities and site visits in five sites. The brainstorming workshops and field excursions were held as the schedule:

- Workshop 1 Kalicode Community, Jogjakarta, Indonesia 25-27 July 2013;
- Workshop 2 The villageTasik Chini, Pekan District, Pahang, Malaysia 21-24 September 2013
- Workshop 3 The village of Khiriwong, Nakhon Si Thammarat Province, Thailand 25-29 September 2013
- Workshop 4 The village of Diura, Batan Island, the Philippines 23-29 March 2014
- Workshop 5 The village of Mukugawa, Shiga Prefecture, Japan;

Last stage: Through joint research and creative works, the participating fellows analyzed and discussed. Then each fellow created their own papers. Finally, the presentation of all papers were held at a Plenary Session “Policy Brokering of Community Knowledge for Sustainability Transition in Indonesia, Japan, Philippines, Malaysia and Thailand,” The 14th (Science Council of Asia) SCA International Conference “Future Earth: Research for Global Sustainability and a Holistic Understanding of Sustainable Development in Asia”, June 17-19, 2014, Kuala Lumpur, Malaysia.

The author took part in the project as one of the participating fellows. By choosing the three sites from the five sites including Khiriwong Village, Diura Village and Mukugawa Village, the author developed the study and presented a paper at the 14th SCA International Conference, and then adapted some parts of the presented paper to be this article.

These three cases provide us deep understanding on “*why and how good management of cultural landscapes can be the proper means for supporting community resilience and creating sustainability?*” To gain the understanding, two main issues were considered. The first is *the formation and transformation of cultural landscape systems* responded to the resilience—resisting changes or reverting to normal after crises. The second one is *the management of changes of cultural landscapes* in order to maintain equilibrium of spatial, as well as social, cultural and ecological systems.

2. Case Studies

In this section, what we can see from the three case studies are several forms of cultural landscapes. To protect and manage geographical sites with well-balance land uses, local communities conserve essences of cultural landscapes. Consequently, they conduct innovative processes and products according to co-produced knowledge.

2.1 The Village of Mukugawa, Shiga Prefecture, Japan

Mukugawa is a small village with only 60 people in 33 households, located in the northwest of Biwako Lake. The village represents the landscape in the hill side areas (*satoyama* landscape—a typical landscapes of Japanese rural communities). Such landscape comprises padi fields, pastures and grasslands, woodlands, rivers or ponds and ditches. Moreover, it is the place of the hamlets with traditional thatch-roofed houses (Ministry of Environment, Government of Japan, 2009). *Satoyama* landscape not only supplied food and important appliances for a large population, but also being the natural lands with variable plant and animal species in a sustainable way (Kobori and Primack). For centuries, *satoyama* landscape in the upland areas in Japan provided important resources for retaining sustainability of the communities including food, charcoal and firewood, and medicinal herbs. To access natural resources and manage spatial structures not to overexploitation, the community has practiced the traditional methods. One is *yui* system, a mutual help and labor exchange. Another is the rights of *iriai* forestlands. Under the rights, the villagers can manage their natural resources in forestlands, wilderness, river, irrigation system and fishing according to the ways that the groups concern their specific rules⁴. Due to the

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⁴ The *iriai* forestland system to manage and sustain the communal woodlands was used until the period of modernization (Meiji era, 1868-1912). Later, the *iriai* rights and land ownership were invalid after enactment of the Law in 1966. Since then, communal woodlands were transformed to private lands (Goto, 2007).

concrete and characteristic products of the interplay between the residents, cultural preferences and natural circumstances, *satoyama* landscape can be considered as cultural landscape.

2.1.1 Landscape transformation and adaptive response to adversity

During the two decades after the Second World War, *satoyama* landscape dramatically changed. Rapid economic growth, modernization and industrialization were main factors forcing people to migrate from rural villages to urban and industrial areas all over Japan. Owing to population outflowing to urban areas, rural villages faced a lack of workers, especially the workers for agricultural sector. Agricultural lands, forests and other ecological features of *satoyama* landscape thus lacked of concern. In the 1960s, the national government's afforestation policy to support the timber demand replaced natural forest with massive cedar and cypress. This caused the vastly changed of ecosystem and people livelihoods. Moreover, the practices of human intervention—utilizing and maintaining the forest, such as *slash-and-burn* (*hottorayama*), technique, as well as customs and traditional knowledge to manage agricultural lands and to make a living harmony with nature, have been abandoned.

2.1.2 Management of cultural landscape

Mukugawa is also one of the rural villages which experienced modernization with new roads, new agricultural tools, population outflow migration and the replacing mono-cultural forest with natural broadleaf forest. Adaptive responses to the adversity had been occurred during the mid of 1970s when the collective agricultural management, later became a community organization namely "*Mukugawa Nosan*," was established. This organization initiated programs to hire aging residents who are no longer able to work in the farmlands to do some small works. It helped to manage abandoned padi fields and paid pension to landowners, introduced new machine to overcome the lack of communal labors, as well as distributed agricultural products to the markets. It can be said that agricultural management in Mukugawa is an inventive concept. However, even it takes thirty years since it had been launched; there is still no parameter to sustain social, economy, and ecology of Mukugawa.

In April 2008, Mukugawa village gained some positive signs when a new community organization named "*Yui-no-sato Mukugawa*" was found. The organization members were composed of the villagers and urban people. This organization aimed at transmitting cultural practices, cultivation in padi fields and forests, as well as traditional livelihoods to future generations, e.g. traditional dance and music, traditional dishes,

and traditional measures of rice harvesting. It revived local festivals and promotes them to public. Hence, values of rural villages were presented to urban residents, especially, the villagers who moved to urban areas.

In accordance with all practices of Mukugawa in establishing community organizations and creating various kinds of programs, two important issues from the practices to restore socio-cultural and economic systems should be highlighted here include: *essence of cultural landscape*, which is a self-reliance and a sense of inclusiveness, as a spirit of upland communities; and *contemporary meanings, functions, and structures of the cultural landscapes*, which are the new *yui* concept and contemporary *satoyama* landscape.

- *Essence of cultural landscape: self-reliance and inclusiveness as a spirit of upland communities*

Essence of cultural landscape, which can be considered as an identity of community, is *a sense of self-reliance* and *a sense of inclusiveness*. The upland villages in Japan developed these characteristics along with self-governance and the *yui* concept in order to manage communal areas, to access natural resources, and to help each other in remote mountainous areas since the Edo period (1603-1867) (Cunningham, 2007: 3-4).

In the current situation, strong senses to help communities to continue living have been declined since Mukugawa and number upland villages in Japan have turned to *abandoned villages (genkai shuraku*⁵). According to the intensive interviews, the village key persons Village seriously concerned about this problem. In their opinions, to conserve and manage cultural landscapes has to firstly consider on how to revive the life of communities, not to leave them to be neglected communities and unexploited farmlands and forest lands.

“What we should consider is an overall value of community, instead of considering only on agricultural sector. If we only pay attention to how we can produce high number of agricultural products, we cannot accomplish it. We should think about the contributions from making a living in the watershed areas, harmonious living with nature, richness of local customs, as well as high value of yui system. Hence, to revive rural villages and cultural landscapes should start from conveying a new set of attitude of better living in rural communities” (Inoue, 2014).

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⁵ *Genkai shuraku* implies abandoned villages in the Japanese word which indicates more than half of the population in villages is above the age of 65.

- *Contemporary meanings, functions, and structures: new yui concept and contemporary satoyama landscape*

Based on a sense of self-reliance and a sense of inclusiveness that helped to maintain cultural landscapes, Mukugawa villagers created contemporary meanings, functions, and structures. One is *recreation of yui system*. In the past, *yui* was a collaborative work covering farm works, e.g. transplanting and harvesting rice, non-farm works, e.g. repairing thatch roof, and social works, e.g. organizing local festivals. The current *yui* system was recreated in order to fulfill some vanished mechanism. The contemporary *yui* emerged in a form of new communal works to solve depopulation and aging problems which lessened community self-reliance. The new *yui* concept provided chance to new settlers to practice inclusive activities, such as communal works serving for the shrines. At the same time, the new *yui* was sufficiently applied in various community groups. For instance, “*Mukugawa Nosan*” managed farmlands by subsidizing pension to aging farmers, while encouraged new farmers to join the group. In such innovative activities, conservative and radical agricultural methods have been exchanged. “*Yui-no-sato Mukugawa*” has main function in creating pioneering socio-cultural activities, such as a meeting for passing a set of local knowledge, especially traditional agricultural and day-to-day living practices, from elderly to young people and to public.

The new *yui* also included the way that the community members accept the new settlers who respect local codes to be one of their members. Hence, the new *yui* helped to tightening a bonding inside group cohesion and bridging various kinds of groups. Moreover, the new *yui* strengthened the linkage between local people and to outside authorities through a number of state-led and local initiative programs.

The other imperative concept to revitalize village’s cultural and natural resources is *re-establishment of new meanings and new engagement between people and satoyama landscape*. Caused by political, socio-cultural and economic factors since the post Second World War period, *satoyama* landscapes in upper regions have gradually lost their values. A number of natural forests turned to massive cedar plantation with low biodiversity and the unused grasslands. *Slash-and-burn*, a way of shifting cultivation by cutting and burning of forests and meadowlands, has been declined. Along gradually change of Japanese society, numerous villagers stopped practicing farming and forestry. With high intention to solve these problems, there were some pioneer studies in 1960s in order to revive *satoyama* model (Ibid.). Since 1980s up until now, there has been a long movement of local people to revitalize *satoyama*, which aimed at bringing back human intervention into local forests, grasslands and farmlands that can be considered as “*secondary nature*.” On the other words, it was dealt

with the ideas of using local knowledge on the right kinds of disturbance of forests and the utilization of natural resources for serving livelihood.

In recent times, upland villages gained advantages from the revision of Forest Law (2001). The amended law changed the concept on how people engage with the forest from “*preserve the forest (hozon)*” to “*maintain the forest*” Due to such concept, the forest is served for multifunction—including for conservation of ecological, cultural, historical, recreational and spiritual values (Fujiwara, n.d.).

In Mukugawa, local people used religious ceremonies and inventive festivals as a key tool to overcome a problem of neglected forest lands. In the festivals, local inhabitants and move-out villagers had great chances to discuss ways to revitalize *satoyama*. Apart from local initiative activities, Mukugawa also joined the government widely promoted program that so called “*The Satoyama Initiative: A Vision for Sustainable Rural Societies in Harmony with Nature.*” This program paid attention to consensus-based multi-stakeholder decision making particularly focusing in local communities. Mukugawa as well as other mountain villages has been encouraged to established management council, zoning to achieve a balance among utilization, conservation and regeneration, and provision environmental education (Ministry of Environment, Government of Japan, 2009).



Figure 1: Rice paddies, ponds, forests and traditional thatch-roof farm houses in the village are the components of *satoyama* landscape. These days, cultural landscape of Mukugawa is in the context of land management. To manage farmlands, woodlands and other natural control systems e.g. irrigation, Mukugawa villagers use innovative tools and creative communal activities, whilst revive *yui*, the traditional collaborative work system and *iriai*, the rights to harvest in communal forestlands.



Figure 2 (A and B): In Mukugawa, traditional harvest still be kept and transmitted to young generations through various kinds of activities held at the community center, *Okkin Mukugawa Koryoukan*.



Figure 3: Today, Mukugawa villagers and new comers still maintained religious ceremony.

2.2 The Village of Khiriwong, Nakhon Si Thammarat, Thailand

Khiriwong is a hamlet located in the watershed of the Khao Luang Mountain in Kamloan subdistrict of Lan Saka district, Nakhon Si Thammarat Province. The population of Khiriwong is 2,162 people in 262 households in four communities, including *Ban Khiriwong*, *Ban Khirithong*, *Ban Khun Khiri*, and *Ban Khiri Tham*. Based on three-hundred-year settlement, one of the valuable inherited cultural heritages is the *practice of suan som rom*, the traditional system of mixed orchards including fruit

trees and other useful plants with indigenous trees in tropical forest. In the early days, to ensure the security of living and working in mountainous areas and to work together in accessing natural resources, as well as to control limitation of communal and private uses of the resources, the villagers created a practice of collective working and mutual labor exchange. Another system was the upland and lowland exchange system. Local village journeyed downriver to barter with the coastal communities, particularly the communities in Pak Phanang delta, called the *long rua nua*. In the journey, Khiriwong villagers carried fruits and forest products and exchanged these for rice and sea products.

2.2.1 Landscape transformation and adaptive response to adversity

Natural disaster can be stated as the main cause the severe changes of socio-economic and ecological systems of the mountain region⁶. A heavy storm hit Talumphuk cape and Khiriwong in 1962 caused vast damage of houses, fruit orchards and forests. Moreover, it caused the river way changed its direction and became swallow. From that cause, *long rua nua*, a trade to lowland by boat came to an end. Then again, in 1975 and 1988, highly destructive typhoon and catastrophic floods caused water to gush down from the forest and sweep away *suan som rom* areas and the entire village. In each time of the natural disaster, the villagers reconstructed their orchards, houses, roads and other structures. According to the disasters, geological experts persuaded Khiriwong villagers to relocate from the area, but the villagers indicated their intention to stay in their lands (Julagam, 2008).

In relevance with the suggestion to relocate communities in Khao Luang Valley and to reserve watershed areas, the government designated the Khao Luang National Park in December 1974. The park covers the watersheds and several communities. The park's boundaries cordoned off the *suan som rom* areas belonging to the villagers. Thus, the villagers were forced to not access the forest and do traditional agricultural practices of their *suan som rom*. The designation brought about conflicts between local people and the park authorities (Trichot, 2014). Local people fought for asserting the right to continued access and practice of *suan som rom*. In 1998, a cabinet resolution passed granted conditional land title deeds, 68 per cent of the farmers have been granted land title deeds. Then, in 2009, due to collaboration between the Provincial Administration Organization and community leaders, a committee was set up to help for issuing the ap-

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⁶ The Khoa Luang range is a core of granite covered by the loose soils. When the land was lashed by monsoon rain, there is high potential of landslides.

plications for additional land title deeds. These circumstances identified the importance of *suan som rom* and traditional practices, which support local livelihood and cultural identity.

One of the imperative factors effecting *suan som rom* cultural landscape is the change of agricultural tools. Since the 1960s, the villagers could easily find some modern tools, e.g., chain saws, motor vehicles and other electrical tools. These tools changed the traditional way of agricultural practices as well as the way of living. Using the modern tools, people rapidly cut the trees and converted the forests to the orchards.

The other crucial threat to devalue *suan som rom practice* has been caused by new farming system including mono-agricultural practice and over-use of insecticides and chemical fertilizers. Under the new system, farmers have been gradually changing the way they cultivate their orchards in *suan som rom* to grow only fruits supporting high demand. To do so, they replaced traditional cultivars with new ones. This system has been diminished biodiversity and made the village in a risk of landslide and flood.

Moreover, environmental and social impacts have been caused by excessive tourism. In Khiriwong, tourism based on cultural and natural resources has been new economic activities since the 1990s. The amount of incomes generated from hospitality in a form of homestay and many sorts of tourist services. In 1998, the village of Khiriwong was awarded the first price of cultural tourism village from Tourism Authority of Thailand (TAT). Even tourism brought about prosperity to the village, some tourist activities, such as restaurants and hotels, especially the ones which managed by outside developers, caused severe problems in terms of the disturbance of living and environmental degradation.

2.2.2 Management of cultural landscape

To avert natural disasters, Khiriwong villagers created innovative approaches to ensure sustainable balance in the uses of natural resources not to overexploitation. A number of innovative approaches were used to achieve these goals. One of them is to pass on the traditional practices in *suan som rom*. Another approach is to establish effective network of community organizations. Today, over 30 community groups work for several purposes⁷, but for the main accomplishment in maintaining a sustainable statement of using *suan som rom* and living under the threat of disaster.

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⁷ The community groups can be divided into four broad categories: mutual support groups supplying financial resources to the villagers; income-generating groups, e.g., handicraft groups and organic food production groups; environmental and natural resources groups undertaking activities of natural restoration and reforestation; and youth groups (Issarathumnoon, 2014: 233-234).

- *Essence of cultural landscape: a sense of togetherness to be “Khiriwong people” and the concept of self-sufficiency*

In Khiriwong, the essence of cultural landscape enhancing community spirit is a *sense of togetherness*. It helps to unite the residents to be “*Khiriwong people*.” A *strong sense of community* has been developed along its history. The assemblage of mountainous hamlets has been formed based on strong bonds of kinship and mutual help. Also, they maintained the ways of living in *self-sufficiency concept*, based on equilibrium of the utilization of natural resources not to exceed the limits of the sensitive environment of the mixed orchards. Moreover, self-sufficiency was grounded on communal works in the farms, supported by beliefs, local wisdoms, and local ways of life, in particular making-merit ceremonies.

Apart from preserving and adapting local ways of life and community’s system according to social and economic changes, self-sufficiency concept has been created along with the connection between communities and outside society in the forms of outside aid and distribution of agricultural products—the past, the barter system in *long rua nua* boat journey; today, the current export system. Agricultural products, particularly durian, mangosteen as well as handicrafts are highlighted exported products.

Based on a sense of togetherness and self-sufficiency concept, Khiriwong villagers work together in managing and overcoming common problems. To maintain the community is an ongoing process that is now in their hands and they have to pass it on to future generations.

- *Contemporary meanings, functions, and structures: re-interpretation of suan som rom*

In response to market demands, Khiriwong farmers produce and distribute fruits serving global market. Traditional practices in the mixed orchards have been changed to new practices that depended much on high cost of production and employment of laborers. Some farmers replaced indigenous durian species with more poplar species. In some orchards, the farmers change the portion of trees to contain more portions of the fruits in high demands, especially durian and mangosteen trees. This led to the decline of biodiversity, and consequently effect to the land erosion problem. Moreover, it seems that the attitude of farming has been shifted significantly to be based on the market demands. The farmers aimed at gaining high amount of production in high season. As a result, the current ways of living along the self-sufficiency concept have been changed.

From those changes, several local initiative works have been created. Some concerned farmers established the “*Natural Environmental Conservation Group*” to collect traditional knowledge, to train the farmers in *suan som rom* practices, to conduct activities to restore the forest, as well as to develop electric energy production depends on water supply.

Many community groups and small local enterprises created the products made from orchard resources, such as natural soaps, herbs, dyed clothes and sweets. Additionally, Khiriwong Village promoted eco-tourism, especially homestay that allow tourists to stay with their families and join farming activities. The network of homestay has been built up from a number of participating families, managed by “*Ban Khiriwong Cultural Tourism Club.*” The new economic activities can be seen as one of the good means to control expansion of orchard areas and make best uses of natural resources (Ibid.)



Figure 4: The village of Khiriwong has been inserted in the mountainous areas, a part of Khao Luang mountain range. The contemporary practice in *suan som rom* is the great way in preserving and disturbing natural resources without overexploitation or causing the risk from natural disaster. Such proper agricultural methods also help the villagers to maintain their body of knowledge and belief system.



Figure 5 (A and B): *Long rua nua* ceremony, an inventive festival held along the third lunar month ceremony. It is used as one of the effective means for raising awareness of the traditional way of life that based on the exchange of local upland products and those from the lowlands. It also provides chance for the villagers to remind themselves about the destructive natural disasters in the past, while to exchange ideas about the future of the village.

Another group providing education and raising awareness on moderate uses of local natural resources is a youth club, so called “*Look Khun Nam.*” This club created events dealing with natural disaster prevention. It also passes on a body of traditional knowledge and way of life to children through various kinds of activities. Activities of the youth club were supported from outside authorities and from social enterprise business (Bunchaloei, 2013).

According to several practices, it can be stated that *suan som rom* is now in a phase of turning to new concept. It can be seen that *suan som rom* is not only served for local private and communal needs, but also widens to serve global demands. Additionally, *suan som rom* is highlighted to be a cultural identity of Khiriwong. Along the years, a number of quests come to Khiriwong to learn and exchange.

2.3 The Village of Diura, Batan Island, the Philippines

Diura is a small village in Subtan Island, an island in the Batanes Islands. The Batanes Islands is located in the northern part of the Philippines, separated from the main island of Luzon. It is located close to the Balintang Channel near the border of Taiwan. Diura is located on Valugan Bay, on the east coast of Batan. It faces the Pacific Ocean where the waves are bigger and more dangerous compared with the west coast facing row South China Sea. The Batanes Islands has unique landscapes, which has been formed by the villagers with the interaction with the natural environ-

ment based on local methods. The landscapes include the seascape, pasture lands and farmlands.

According to topography and climate, this area is suitable for catching *dorado* (*arayu*). Due to well preservation of *Ivatan* (indigenous group of people) culture, Diura is one of the four villages that remains *mataw* fishing, a traditional *Ivatan* method for catching *dorado*. The practice of *mataw fishing* is based on strong belief of guardian of the sea. The villagers follow traditional way of catching *dorado*. They maintain the collective work of the ritual to open and close the sea, and use only traditional tools and boats. To pay respects to guardian, they will not sell dried *dorado* fillets until the end of fish season. Since most of farmlands in Subtan Island are in small plots on slope terrains, farming activities needs intensive labors. The farmers created *payuhwan*, collective working groups to support various kinds of works—including fish catching, providing rotating assistant in farm works, and other day-to-day activities (Mangahas, 2006).

2.3.1 Landscape transformation and adaptive response to adversity

In Diura, as well as other villages in the Batanes Islands, social and economic systems have been changed according to external factors. Batanes has gained more influences from the main lands. In particular, Batanes got infrastructures including roads and other public and governmental buildings from the national government. Before the road accessed to the coastal villages, the villagers depended their life on traditional living. Modernization and convenient transportation encouraged young people to find jobs in other cities in the main lands. In recent years, a number of villages changed traditional fishing to modern way by using motor boats and new fish catching tools. Only four villages including Diura can maintain traditional *mataw* fishing.

2.3.2 Management of cultural landscape

The seascape and landscape of Diura Village has been built strong relationships with tradition, believes and local knowledge. The villagers have maintained the landscape along with preserving traditional practices. A *Mataw* fishing group, namely “*Diura Farmers and Fishermen Association*,” is a local organization which has an important duties in controlling local rules and making open and close ceremonies. The organization also helps to unite the group of fishermen which used to be separated to several groups based on the way of fish catching practices, as well as train new fisherman to practice in correct and safe method. Apart from *dorado* fishing in high

season, the villagers work in farmlands on the hill areas in the off seasons. However, they mainly earn incomes from selling *dorado* (Fainsa, 2014).

- *Essence of cultural landscape: strength and persistence of traditional beliefs*

The spirit of Diura Village is the strong beliefs and sets of traditional knowledge of *mataw* fishing. In the viewpoint of sustainability, *mataw* fishing helps to maintain sustainable of economic, social, and ecological aspects of the villages. The traditional *mataw* fishing controls the fishing methods and controls the number of fish that will be caught at a time not to be excessive. The most importantly, *mataw* fishing helps to maintain prosperity of the community. Even though *mataw* fishing is practiced in summer season, it is in relevant to economic and social systems of the communities. During the *mataw* fishing season, fishermen gain economic support and working assistances from other social groups. After fishing season, the fish is used to compensate the boat owners, the labors of farmlands, and other supporters.

- *Contemporary meanings, functions, and structures: revive mataw fishing culture under outside supports*

According to the practical works of the *mataw* fishing group, the number of young fishermen in Diura has been increased. The increase of the number of young fishermen assures the sustainable statement of the social and systems⁸. Recently, the landscape of the island has been redefined by the management plan, initiated by local government (at provincial level). Its objective was “to find a balance between the drive to develop the province with the strategic need to conserve Batanes’ unique biodiversity and cultural heritage.” Additionally, management plan was aimed to stop the loss and degradation of important habitats and cultural resources while allowing environment-friendly and culturally sensitive economic activities and governance by local officials to continue.” Apart from the management plan, the local government prepared a nomination for being inscribed on the World Heritage List.

The creation of the management plan and the World Heritage nomination processes indicated that the local government expands local knowledge and practices to national and international concerns. New approaches to preserve the cultures

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⁸ In 1993 when Diura Farmers and Fishermen Association was found, the number of *mataw* fishers numbered 20. In 2010 there were 45 members. This data was collected from the local government office at Diura, 2014)



Figure 6 (A and B): The landscape of Diura comprises seashore, farmlands (small plots on slope terrains), meadowlands and village.



Figure 7 (A and B): In Diura Village, vernacular houses and narrow walkways still retain.

and landscapes including conservation zoning, management plan, as well as tourism were introduced.

3. Analysis and Concluding Remarks

As regards with cultural landscapes in the selected case studies, the transformation of cultural landscapes and local initiatives in management of cultural landscapes that have significant relation to community resilience and consequently lead to sustainable statement are addressed as follows.

a) Transformation of Cultural Landscape

Based on the three rural communities from the case studies, *transformation of cultural landscape can be considered as processes of change in relevant with community resilience*. The transformation of cultural landscapes has been affected by internal and external impacts, including some stresses from resource depletion, local and international marketing competition, some shocks such as natural disasters. In some cases, cultural landscape transformation is a consequence from the reverting to normal after a crisis, while it means resisting of change in some situations. Affected by the changes, some cultural landscape systems lost their imperative characters and transformed into a new system, whereas some retained their identity without turning to other structure. Cultural landscape can be seen as *a dynamic spatial system*, conceptualized as *organizations of space, time, meaning and communication, intertwined with an entire system*.

b) Local initiatives in management of cultural landscapes

The case studies indicated that the system for protecting and managing geographic sites and spatial structures is a part of the mechanism to maintain local social-ecological and economic systems. The *management of change and conservation of natural resources and spatial structures* are aimed at retaining equilibrium of the system, without loss of distinct characters and functions. Substantive points in the management of cultural landscapes are as below.

- **Essences of cultural landscapes as the contribution to community resilience**

Essential materials of cultural landscapes help to maintain equilibrium of spatial, social and ecological systems. Based on essential characters, communities are able to adapt their conditions under the external forces. Some communities quickly recover from difficulties. In the case of Mukugawa, *a self-reliance and inclusiveness as a spirit of upland communities* are the strength for revitalizing the community. A

sense of togetherness to be “Khiriwong people” and self-sufficiency help to reconstruct the community from severe disasters, while strength and persistence of traditional beliefs help Diura Village to maintain its prosperity.

- **Contemporary meanings and new engagement between human and landscapes**

Under process of transformation of cultural landscapes, people perceive landscapes in different ways, thus they re-create *new meanings* of cultural landscapes and *new engagement* between human and landscapes. The current conditions of *satoyama* in Japan indicate the declining relationships between people and the hilly farms and forestry which used to be the lands for cultivating necessary materials for their livelihoods. Consequently, they *invent new yui concept and contemporary satoyama landscape*. Khiriwong people might *perceive the contemporary suan som rom as the orchards* that can produce fruits serving international trade, rather than serving household needs. However, *suan som rom* in Khiriwong still retains their identity of agroforestry and has been controlled to not be overexploitation. In contrast, the seascape and landscape in Diura Village still closely related to the villagers. Due to the changes of the meanings and relationship, the management of landscapes thus should be *re-thought to fit with the current conditions under outside authority supports and the future trends*. These new systems consist of details as follows:

- **Co-designing / co-producing knowledge**

To find the solution to sustain local geographical sites, and social-ecological and economic systems, communities conduct co-designing and co-producing knowledge by applying local wisdom from their cultural capital with the knowledge from different resources, and then making a new synthesis. The inventive sets of knowledgemight not be similar to the general sets of knowledge in educational system. It is appropriated with socio-economic and ecological contexts. The three communities share local knowledges to many levels of agencies. Mukugawa can be a good example in transmitting traditional practices to future generations. In particular, they exchange local knowledge among the villagers, new comers, and urban people. In Khiriwong, the most success program is the transmission of local knowledge to young people organized by local youth club. Moreover, Diura villagers co-produce the systems with their local government.

- **Collaboration between all levels of agencies**

Regarding the case studies, individuals, community institutions, and other higher levels such as government agencies and non-profit organizations, were es-

tablished with different functions. All of these mutual help which embedded in social capital actively support complex systems in the communities.

- Re-interpret & re-produce local natural and cultural resources

To create new products grounded on local knowledge and resources is one of the key measures for communities to survive in the modern society. The creation of new products on one hand provides incomes and prosperity to the local villages; on the other hand, maintains tradition knowledge merging with today technology. Successful production and tourism bring back local pride and sense of belonging. Khiriwong is the case to show such success. All the three cases show strong awareness in careful selection of natural and cultural resources, and commodity methods that are not to diminish their values.

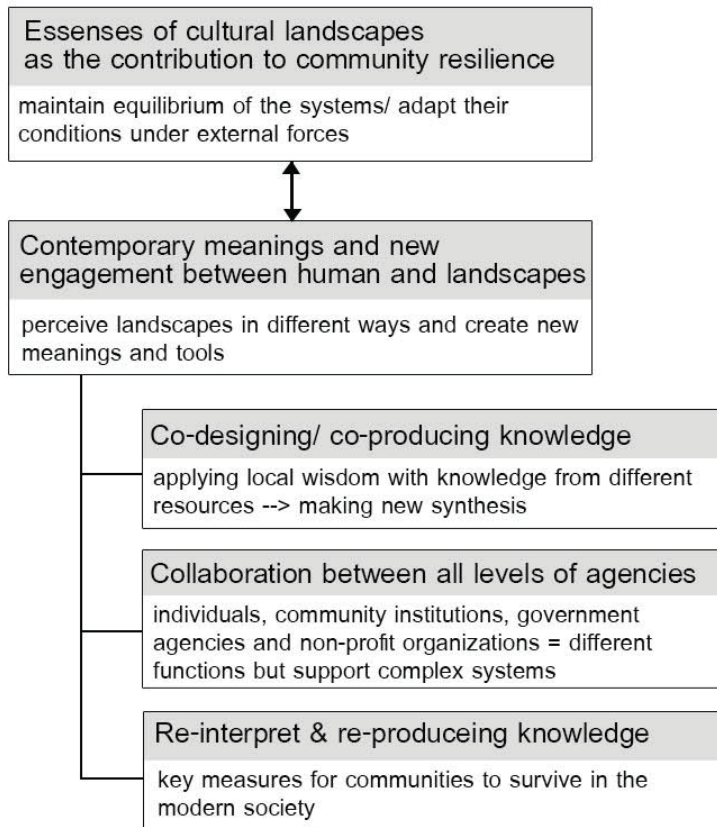


Figure 8: An analysis diagram of the local initiatives in management of cultural landscapes according to the three case studies

To conclude, transformation of cultural landscapes with local initiatives in management; its essences of community resilience with new tools and meanings help these three cultural landscapes to return to the normal stage. Local knowledges are adapted with new conditions by re-interpreting and re-producing, then the new local initiatives is created. Collective actions inside and outside communities are also vital dimensions to drive and maintain the landscapes.

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