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## Article

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## **Conservational Exploitation as a Sustainable Development Strategy for a Small Township: The Example of Waipu District in Taichung, Taiwan**

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**ABSTRACT.** The contemporary form of urban-rural interfaces is moving toward a more hybridized identity, since nowadays ambiguous places prevail. In particular, contemporary rural settlements are increasingly exhibiting urban characteristics in terms of their built environments. Many traditional agricultural landscapes in the world have thus been altered due to rapid urbanization, such that in order to maintain environmental diversity, the conservation of agricultural landscapes and their functions has become an important issue. Waipu District is located in the northwest of Taichung, a peri-urban area of Taichung City. This means that Waipu is rural in appearance at present but may undergo rapid urbanization in the near future. In order to protect quality local characteristics from land exploitation and move towards sustainable development, this paper depicts a strategy of conservational exploitation which is adopted to direct the future development of Waipu so as to maintain its characteristics and environmental sustainability. This paper also briefly documents the process of an experimental practice through which graduate students with landscape architecture, recreation, and urban planning backgrounds have taken part in an experimental project with professional social services in order to develop master plans for Waipu. By means of field surveys, interviews with local people, and discussions with local officials, a landscape master plan, a tourism plan, and a spatial plan developed by the students have been provided to the Waipu District Office. These plans are intended to help Waipu to develop its unique characteristics, improve local landscapes, and promote local economic development. In order to conserve rural landscapes, cultural landscaping and cultural tourism have been identified as development concepts for future development. Conservational exploitation which focuses on maintaining cultural landscapes and promoting cultural tourism can serve as the overall development strategy.

**KEYWORDS.** *Conservational exploitation, cultural landscape, rural tourism, Waipu District of Taichung*

## 1. INTRODUCTION

The contemporary form of urban-rural interfaces is moving toward a more hybridized identity, since nowadays ambiguous places prevail. In particular, contemporary rural settlements are increasingly exhibiting urban characteristics in terms of their built environments. Many traditional agricultural landscapes in the world have thus been altered due to rapid urbanization, such that in order to maintain environmental diversity, the conservation of agricultural landscapes and their functions has become an important issue.

Waipu District is located in the northwest of Taichung, and has a population of 32,000 and an area of 42.4098 Km<sup>2</sup>. In a sense, Waipu is located in the peri-urban area of Taichung City. This means that Waipu is rural in appearance at this moment but may undergo rapid urbanization in the near future. Before the consolidation of Taichung County and Taichung City on Dec. 25, 2010, Waipu was an agricultural township with picturesque rural scenery. In order to protect quality local characteristics from land exploitation and move towards sustainable development, this paper depicts a strategy of conservational exploitation which is adopted to direct the future development of Waipu so as to maintain its characteristics and environmental sustainability.

Between September 2012 and June 2013, 28 graduate students with landscape architecture, recreation, and urban planning backgrounds took part in an experimental project with professional social services in order to develop master plans for Waipu. By means of field surveys, interviews with local people, and discussions with local officials, a landscape master plan, a tourism plan, and a spatial plan were provided to the Waipu District Office, and some schemes from among those plans have already been selected to put into practice. Sustainable communities require unprecedented and simultaneous emphases on the efficient use of urban space, on minimizing the consumption of essential natural capital, on multiplying social capital, and on sturdy local economic development. This paper is thus intended to document the processes of the aforementioned experimental practices undertaken to help Waipu to develop its unique characteristics, improve local landscapes, and promote local economic development.

### *1.1. Conversion of Rural Landscape*

The fact that rural areas increasingly exhibit urban characteristics nowadays is well documented. Across the United States, large tracts of agricultural land are being converted for non-agricultural uses. This increase in developed land area has caused a precipitous loss in farmland and has far outpaced regional population gains (Ryan and Hansel, 2004). A large amount of deforestation and conversion from farmland to non-agricultural uses has occurred in urban fringe areas even when these areas were mainly designated for the conservation of natural and agricultural

purposes (Conway and Lathrop, 2005). Many cases in Italy have also indicated that urban areas tend to eject their spaces for business and leisure, such that shopping malls, entertainment venues and tourism centers become relocated in the countryside. Moreover, farm buildings do not differ substantially from urban buildings in relation to their aesthetic characteristics (Torreggiani, Dall'Ara and Tassinari, 2012).

With a large population crowded into a small area of easily developable land, the disordered land-use distribution and spontaneous development in Japan have raised highly important issues, especially in the nation's urban fringes (Saizen, Mizuno and Kobayashi, 2006). Even Satoyama landscapes, which represent the traditional Japanese agricultural landscape, have been subjected to drastic environmental changes as they have transitioned from agricultural to urban landscapes (Ichikawa, Okubo, et al., 2006). These changes have been especially common in paddy fields, such that even where paddy fields still remained in areas suitable for urban land uses after the high economic growth period ended, their conversion to other uses has continued (Saizen, Mizuno and Kobayashi, 2006). The aforementioned urban-rural conversions have also been occurring in Taiwan. Taiwan's rural areas, especially those located in the urban fringes, are particularly likely to be subjected to this form of conversion.

## **2. CULTURAL LANDSCAPING AS STRATEGY FOR CONSERVATION**

Under these circumstances, the issue of how rural characteristics can be maintained in rural areas has become an important one. The proper conservation of rural landscapes thus calls for the involvement of academic research. Landscapes are usually conceptualized as places of human habitation and environmental interaction and can be understood as valued resources that are currently receiving increasing interest (Penker, 2009). Although landscapes are seen as a complex concept in human geography and have been the subject of broad terminological discourse and contested conceptualizations, scholars have argued for the importance of landscape perceptions, particularly with regard to conservation development. Unfortunately, many rural communities have not pursued such alternatives (Zabik and Prytherch, 2013). Because culture is also a valuable resource and it is often well preserved in rural areas (MacDonald and Jolliffe, 2003), the concept of cultural landscapes may be suitable for the conservation of rural characteristics. The term "cultural landscape" refers to a spatial system of activity that is perceived by human beings as a unit and results from the interactions of humans with whatever is to be found in those humans' natural environment (Penker, 2009). In this sense, the landscape can only become a sort of brand for a place if it is abundant, unique and the only real strength of the place. Hence, only rural areas can promote their landscape as a brand and, therefore, connect their landscape to conservation efforts (Tobias and Wahl, 2013). As such, the promotion of cultural landscapes is

definitely conducive to the conservation of rural characteristics in rural areas.

The aforementioned Satoyama landscapes provide excellent examples for understanding and interpreting the notion of cultural landscapes. A Satoyama landscape is created through harmonious relationships between human beings and nature, and is a land use mosaic mainly composed of woodlands, paddy fields, crop fields, grasslands, and settlements (Ichikawa, Okubo, et al., 2006). Although Satoyama landscapes have been subject to change due to urbanization, they have long been recognized as providing scenic beauty and places for recreation in addition to agricultural production. Satoyama landscapes are nowadays recognized in terms of their ecological, social, cultural, recreational, and educational functions (Ichikawa, Okubo, et al., 2006).

One way to improve already-converted land for rural areas in urban fringes focuses on agri-civism. Agri-civism is an approach meant to provide a means for recovering the countryside; specifically, it consists of using elements of a rural landscape that come into contact with the city to refine the urban sprawl (Torreggiani, Dall'Ara and Tassinari, 2012). Agri-civism has many values, including economic, social, recreational, ecological, and aesthetic values. For example, the concept of agri-civism can be applied to integrate cultivated areas in parks and gardens (Torreggiani, Dall'Ara and Tassinari, 2012).

### **3. CULTURAL TOURISM AS STRATEGY FOR LOCAL DEVELOPMENT**

Tourism has become a development tool in rural areas to supplement declining traditional industries, and tourism should protect the environment, support host communities, maintain the profitability of business, and satisfy the visitors (Clark and Chabrel, 2007; MacDonald and Jolliffe, 2003). Because the concepts of culture, ruralism, and tourism are multidimensional and interrelated, culture and tourism then become resources for socioeconomic development in rural and peripheral communities (MacDonald and Jolliffe, 2003). It is true that tourists seek rural destinations providing pleasant experiences related to the natural environment, historic heritage, and cultural patterns (MacDonald and Jolliffe, 2003). Therefore, rural tourism is definitely integrated into local economies and cultures (Clark and Chabrel, 2007).

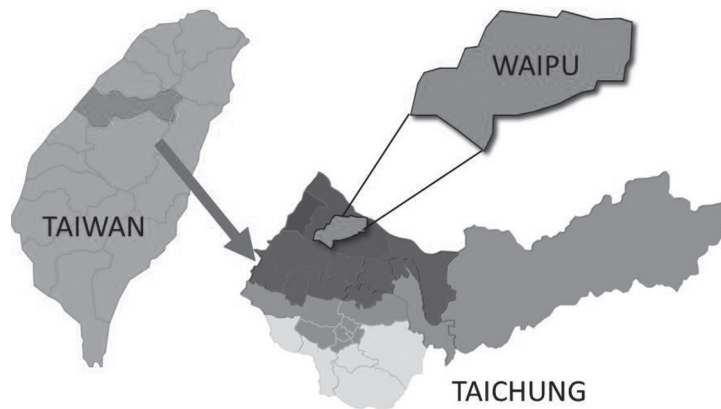
In order to further understand cultural tourism in rural areas, MacDonald and Jolliffe (2003) proposed a framework according to existing research findings. In stage one of their framework, a few residents recognize opportunities and integrate tourism resources into socioeconomic planning. In stage two, community groups plan and implement tourism strategies as part of economic development. In stage three, community partnerships are developed and a formal tourism body is organized to help turn the existing plans into enduring attractions. In stage four, the fully centralized, cooperative and long-term planning and marketing of tourism occurs. In

related research, Clark and Chabrel (2007) proposed seven dimensions of tourism integration, including networking, scale, endogeneity, sustainability, embeddedness, complementarity, and empowerment.

#### 4. WAIPU DISTRICT OF TAICHUNG

##### *4.1. Study area and problem identified*

Waipu District is located in the northwest of Taichung (as seen in Figure 1), and has a population of 32,000 and an area of 42.4098 Km<sup>2</sup>. In a sense, Waipu is located in the peri-urban area of Taichung City. This means that Waipu is rural in appearance at present but may undergo rapid urbanization in the near future. Before the consolidation of Taichung County and Taichung City on Dec. 25, 2010, Waipu was an agricultural township with picturesque rural scenery under the jurisdiction of Taichung County. As one out of 29 administrative districts in the current Taichung Special Municipality, Waipu is located in a rural area and is also adjacent to a dense urban core. Waipu, however, remains an agricultural landscape without the invasion of disordered industrial land use. This is because Waipu lies in alluvial plains between Da-An River and Da-Jia River, two major rivers in central Taiwan (as seen in Figure 2). The topography of Waipu consists of slightly hilly river terraces. Because of the river-terrace topography and the winding road system, Waipu is free from the invasion of manufacturing industries in terms of land use.



**Figure 1.** Location of Waipu District



**Figure 2.** Topography of Waipu District

Because Waipu is located in the suburban part of Taichung's metropolitan area, approximately 20 km from the center of Taichung, local people including district officials seem to welcome the possible conversion of rural areas into urban areas. The first step in such conversion is to ask for a budget from the city government to build straight and wide roadways across the district. A new roadway will be built with a budget of NT\$200 million to improve upon the original winding one. However, this straight and wide roadway will definitely lead to the gradual invasion of industrial land use in this agricultural landscape, as at least some city councilors have shown great interest in looking for more inexpensive agricultural land on which to build factories for manufacturing.

In order to protect quality local rural characteristics from land exploitation and move towards sustainable development, this paper depicts a participant planning process initiated by the university through which a strategy of conservational exploitation is adopted to direct the future development of Waipu so as to maintain its characteristics and environmental sustainability. This strategy is intended to introduce the concept of conservational development to local people and district officials in Waipu through a series of professional assistance efforts in planning practice offered by university faculty and graduate students.

#### ***4.2. Methods and processes***

One scholar has indicated a loss of control of local rural populations over their natural resources and has proposed the question of whether local populations still have a say in the governance of their landscapes (Penker, 2009). In fact, diverse and unique landscapes call for the involvement

of local preferences, traditions, knowledge, skills, and the local population (Penker, 2009). Therefore, the conservation of rural landscapes definitely requires the involvement of local people and officials. Because collective mental images drive transformations of landscapes, which in turn take on new collective images through complex relationships between action and representation (Torreggiani, Dall'Ara and Tassinari, 2012), the question of how to mobilize local people and officials becomes an important one for building the image of a given conserved rural landscape.

A teaching experiment designed by the authors and targeting the relevant problems both in terms of academics and practice has been implemented at Feng Chia University since 2003 (Liu, 2007). This experiment is intended to restructure the course content and to ensure students' active commitment to planning and design courses through their practical participation in real-world urban affairs and creative efforts aimed at solving urban problems. At the same time, the learning achievement in the class can provide the public sector with useful information and directions for future urban development.

Between September 2012 and June 2013, 28 graduate students with landscape architecture, recreation, and urban planning backgrounds took part in the experimental project with professional social services in order to develop master plans for Waipu. By means of field surveys, interviews with local people, and discussions with local officials (as seen in Figure 3), a landscape master plan, a tourism plan, and a spatial plan were provided to the Waipu District Office (as seen in Figure 4), and some schemes from among those plans have already been selected to put into practice. The ten-month activity was intended to create a discussion about the conservation of rural characteristics with local people and officials. Such conservation of cultural landscapes can be integrated with local economic development efforts and used to promote rural tourism. Students prepared a lot of successful cases in terms of sustainable and conservational development, both domestic and foreign, for the reference of the local people and officials. The final presentation was held in the Waipu District Office on June 18, 2013, and high officials of the city government were invited.





**Figure 3.** Discussion with local officials in Waipu



**Figure 4.** Final presentation of master plan in Waipu

#### **4.3. Discussion**

Strategies to protect farmland and other undeveloped areas from exploitation include regulatory methods as well as voluntary programs (Ryan and Walker, 2004). In the case of Waipu, voluntary programs are especially encouraged. Usually regulatory methods which protect farmland or natural resources are often controversial because of the perception that they restrict the rights of landowners (Ryan and Walker, 2004). In contrast, voluntary programs may result in innovative approaches to farmland protection. For example, local people and officials in Waipu are interested in protecting a stream to develop river tracing activities and attract tourists.

Farming is an important rural activity and plays various roles such as supplying fresh vegetables,

forming rural landscapes and providing buffers for disaster-control (Geoghegan, 2002). Therefore, the proper protection of farmland has become crucial in Waipu, especially with regard to those paddy fields in slightly hilly alluvial plains which construct unique rural landscapes in Waipu.

Since culture, ruralism, and tourism are closely interrelated, cultural landscaping and cultural tourism serve as important strategies for future development in rural Waipu. Moreover, because cultural landscaping and tourism need to be integrated into local economies, Waipu needs to promote its refined/quality agriculture and leisure agriculture. The need for a multifunctional form of contemporary agriculture, in particular one with tourist and recreational values, as well as marketing strategies, is currently proving very important in the characterization of rural settlements (Torreggiani, Dall'Ara and Tassinari, 2012).

Although the protection of farmland is quite important in urban fringe areas, planners need to balance such protection with increased demand for public recreational spaces and concerns about protecting natural areas. Successful implementation of rural landscape conservation will thus require developing partnerships among the private sector, the government, and local people.

## 5. CONCLUSION

Rural areas in the urban fringe have typically been neglected because of loose regulatory controls on land use in non-urban areas and because of difficulties in grasping the spatial relationships between land-use master plans and land-use changes. The contemporary form of urban-rural interfaces is moving toward a more hybridized identity, since nowadays ambiguous places prevail. In particular, contemporary rural settlements are increasingly exhibiting urban characteristics in terms of their built environments. Many traditional agricultural landscapes in the world have thus been altered due to rapid urbanization, such that in order to maintain environmental diversity, the conservation of agricultural landscapes and their functions has become an important issue. Waipu has a unique rural landscape and is located in the urban fringe. This paper documents the process of an experimental practice through which graduate students with landscape architecture, recreation, and urban planning background have taken part in an experimental project with professional social services in order to develop master plans for Waipu. By means of field surveys, interviews with local people, and discussions with local officials, a landscape master plan, a tourism plan, and a spatial plan developed by the students have been provided to the Waipu District Office. These plans are intended to help Waipu to develop its unique characteristics, improve local landscapes, and promote local economic development. In order to conserve rural landscapes, cultural landscaping and cultural tourism have been identified as development concepts for future development. Conservational exploitation which focuses on maintaining cultural landscapes and promoting cultural tourism can serve as the overall

development strategy. Because cultural landscaping and tourism need to be integrated into local economies, Waipu needs to promote its refined/quality agriculture and leisure agriculture. Therefore, the need for a multifunctional form of contemporary agriculture, in particular one with tourist and recreational values, as well as marketing strategies, is currently proving very important in the characterization of rural settlements.

## REFERENCES

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- Clark, G., Chabrel, M. (2007). Measuring Integrated Rural Tourism, *Tourism Geographies*, 9(4), 371-386.
- Conway, T. M., Lathrop, R. G. (2005). Alternative Land Use Regulations and Environmental Impacts: Assessing Future Land Use in an Urbanizing Watershed, *Landscape and Urban Planning*, 71, 1-15.
- Geoghegan, J. (2002). The Value of Open Spaces in Residential Land Use, *Land Use Policy*, 19, 91-98.
- Ichikawa, K., Okubo, N., Okubo, S., Takeuchi, K. (2006). Transition of the Satoyama Landscape in the Urban Fringe of the Tokyo Metropolitan Area from 1880 to 2001, *Landscape and Urban Planning*, 78(4), 398-410.
- Liu, L. W. (2007). Real-world Problem-solving, Competitive and Collaborative Approaches to Urban Planning Lab: A Case Study of the Dali Project, Conference paper in 2007 International Conference on Design Education, University of New South Wales, Sydney, Australia.
- MacDonald, R., Jolliffe, L. (2003). Cultural Rural Tourism: Evidence from Canada. *Annals of Tourism Research*, 30(2), 307-322.
- Penker, M. (2009). Landscape Governance for or by the Local Population? A Property Rights Analysis in Austria, *Land Use Policy*, 26(4), 947-953.
- Ryan, R. L., Hansel, J. T. (2004). Protecting and Managing Private Farmland and Public Greenways in the Urban Fringe, *Landscape and Urban Planning*, 68(2 & 3), 183-198.
- Saizen, I., Mizuno, K., Kobayashi, S. (2006). Effects of Land-use Master Plans in the Metropolitan Fringe of Japan, *Landscape and Urban Planning*, 78(4), 411-421.
- Tobias, S., Wahl, P. M. (2013). Can Place Branding Support Landscape Conservation in City-regions? A Case Study from Switzerland, *Land Use Policy*, 30(1), 266-275.
- Torreggiani, D., Dall'Ara, E., Tassinari, P. (2012). The Urban Nature of Agriculture: Bidirectional Trends between City and Countryside, *Cities*, 29, 412-416.
- Zabik, M. J., Prytherch, D. L. (2013). Challenges to Planning for Rural Character: A Case Study from Exurban Southern New England, *Cities*, 31, 186-196.