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## **LANDSCAPE AND PLANTS PROFILE ANALYSIS IN RURAL PERAK**

**Nur Huzeima Mohd Hussain<sup>1</sup>, Nadiyahanti Mat Nayan<sup>2</sup>, Suriati Ahmad<sup>3</sup>, Ismail Hafiz Salleh<sup>4</sup>**

*<sup>1, 2 & 3</sup>Department of Built Environment Studies & Technology, Faculty of  
Architecture, Planning and Surveying*

**UNIVERSITI TEKNOLOGI MARA (UiTM), PERAK BRANCH**

*<sup>4</sup>NMSA Landscape Design*

**57A, PERSIARAN DATARAN 4, 32610 SERI ISKANDAR, PERAK**

### **Abstract**

Landscape and plants portrayed the evolution and development of the society through culture, local identity, and sustainability. The plants' evolution is perceptible and measurable to be examined and documented for future reference. Therefore, this study aims to examine the changes in plant selection through plant profile illustration. The illustration is based on data collection and secondary evidence between the years 2010 to 2020, in Perak Tengah. The objectives are to analyse plants profile associated with society's needs and impacts on the landscape setting. This paper ventures on the historical settings of plants in *Rumah Kutai*, evolution in contemporary and in the commercial the landscape through the plant height profile to evaluate the personal needs, economical influences, and self-resilience. This paper concludes the evolving role and profile of the home landscape, from logistic to holistic pursuing the physical, spiritual and economical needs of the local community and planning agenda in the 21st century.

**Keywords:** landscape, plants, Malay and profile

<sup>1</sup> Senior Lecturer at Universiti Teknologi MARA (UiTM). Email: nurhu154@uitm.edu.my

## **INTRODUCTION**

The development of the landscape from nomadic times has again proven the existence of interconnection and dependence between man and the environment. These barriers evolved in line with the development of civilization. Human reliance on the environment is modified according to needs, technology, aspirations, and accessibility of resources. This is observed from the change in the use of plants especially for the Malay people who are assimilated with culture. For example, the need for large tree crops that are used to serve as shading, boundary markers and food sources in the village yard are now decreasing and limited according to the case. Although the constraints of the surrounding space limit the selection of crops, the community still tries to continue to have some of the traditional spaces and plants that are synonymous with culture. Among them are the provision of kitchen or cooking plants, ornamental plants for aesthetic value, as well as the use of landscape furniture such as jars, couch and hanging plants depicting the continuity of the culture tradition. Therefore, this study takes the initiative to approach and examine the chronology of changes that involve similarities and differences from the cultural landscapes that are modified to the co-landscape.

This study documented the selection of crops as well as landscape patterns from several sample studies from traditional villages around Perak Tengah that are inhabited by the Malays and which have an immediate landscape surrounding the house or dwelling. This documentation is carried out by observation, brief interviews, photo elicitation and illustrations analysis of the sites. There are three kampongs involved in analysis for contemporary landscape in year 2010, and commercial landscape in year 2020. The results of the study are summarized and tabulated for comparison purposes in order to see changes of plants profile and the development of landscape in Perak rural areas. The plants profile were tabulated using grid system through photo elicitation. Meanwhile, the classification and changes in crop selection are reflected through the height profile of the crop. In general, this study highlights the needs of the landscape and the importance of its sustainability for next generation. This study is supported by a fundamental theory between the relationship and dependence between landscape and man. Thus, this theory is also felt to be able to bind the current way of life with the future subsistence living.

### **Conceptual and Theoretical Approach**

The framework of the basic theory that underpins this study is based on the introduction of Gutkind's theory (1952); Gutkind was a prominent philosopher who linked the concept of i-It and i-Thou, which are:

- 'I-Thou' means: the relationship of human adaptation with the surrounding nature

- 'I-It' means: human relationships captivate the surrounding nature

As early as the Neolithic period, (after going through the Paleolithic and Mesolithic phases of hunting and moving to live), humans began to build their own settlements.

It was here that humanity began to cultivate, build equipment and preserve livestock. Science and history have proven that the relationship and communication between man and the environment is real. Like Gutkind's theory, man modifies the environment to meet the needs of life. Thus, this environment or landscape is the closest component to any change due to the current influence that will often be adapted and re-adapted.

Among other things, the theory found in the summary of Zube's et.al project (1982), in which they continued the work of the study in environmental psychology introduced by Ittelson (1978) who touched on landscape perception theory (Hussain, 2017), is also considered appropriate for this study. This is because some of the elements that need to be taken into account for use in landscape studies generally revolve on the interconnection of interactions between humans and the environment. It also involves the inherent and practical needs and requirements between the two instruments. Thus, home landscaping is significant in measuring changes, adaptations and continuity of life, especially in examining aspects of heritage retention as a survival aspiration.

## **MALAY LANDSCAPE IN RURAL PERAK**

Upon relatively understanding the plants profile in cultural landscape, rural areas were destined to best represent the plants typology. For centuries, cultural landscape of Kutai has been Perak's most referred setting that became a replicable tradition. This landscape carries a variety of meanings, interests and benefits to humans, environment as well as cultural civilization. For example, the former Malay community recorded a change in the profile of the chosen plants especially for the rural community in traditional village areas. The cultural landscape of *rumah* Kutai consists of big trees (overstorey) that function as shelters and barriers, as well as providing resources and supplying food and wood. During the early nineteenth century, the tallest and most significant trees planted by the Malay was Coconut Palm (*Cocos nucifera*). Coconut palm trees, also known as thousands benefits trees, play a major role in providing food, resources and medicines, besides resembling the symbolic culture of 'newbirth' in a family. However, this cultural value is decreasing. Therefore, in line with the landscape development within centuries, it is the aim of this study to document plants through examining the plants heights and functions. These criteria could be the benchmark indicators for the analysis of plants and the landscape of Malay community specifically in rural Perak.

### The Cultural Landscape

According to Dewan Bahasa & Pustaka (1991), landscaping means the state of the garden or the area around a house (an area etc.) which was also defined by Mustapha Kamal (1989) as a site that includes topography, social, economic, and cultural activities of man. Meanwhile, the Cultural or Anthropogenic Landscape is translated by a German historian, Oto Schlüter (1906), as a landscape that displays unity between man and culture (Hussain, 2017, Singh, 2013). Thus, these definitions depict the relationship between man and surroundings which is reflected in the ground theory by Gutkind Theory.

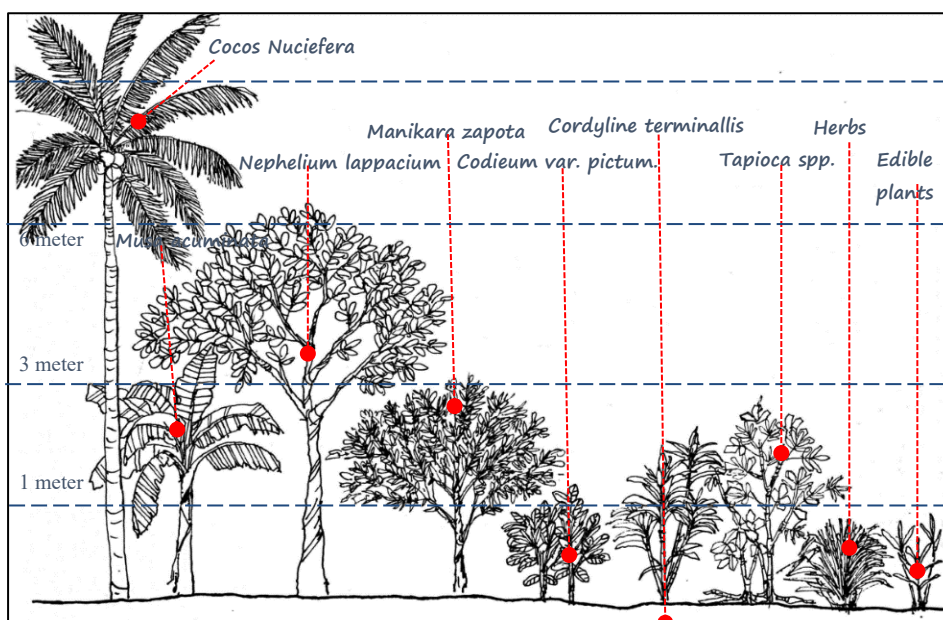


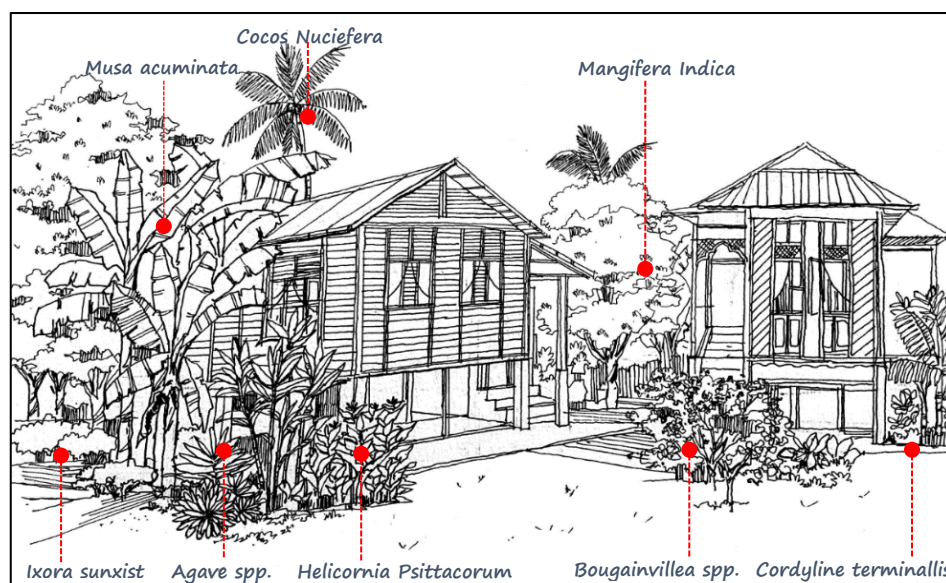
Figure 1: Plants Profile of the Cultural Landscape  
Source: Author illustration (IHS 2022)

Zakaria et.al. (2017, 2021) in their studies highlighted that the soft landscape is a plant element of the Kutai house in Perak. Among the common trees identified in the Kutai compound are *Musa acuminata* (banana tree), *Mangifera indica* (mango tree) and *Cocos nucifera* (coconut tree) which are known to have a variety of uses, functions and benefits. Besides, the regular species of shrubs include *Codieum var. pictum* (pudding tree) and *Cordyline terminallis* (*jenjuang*) which have variations in colour and present the aesthetical value of traditional landscapes. Moreover, plants in a Kutai house would also consist of groundcovers, herbs, medicinal and edible plants, which are also usually found in a kitchen garden. Figure 1 illustrates the common plants and landscape profile that surrounds Kutai houses in Perak. These plants are extracted

from previous research by Zakaria et.al. (2017, 2021), Hussain and Ahmad (2012, 2017) and Salleh et.al (2016).

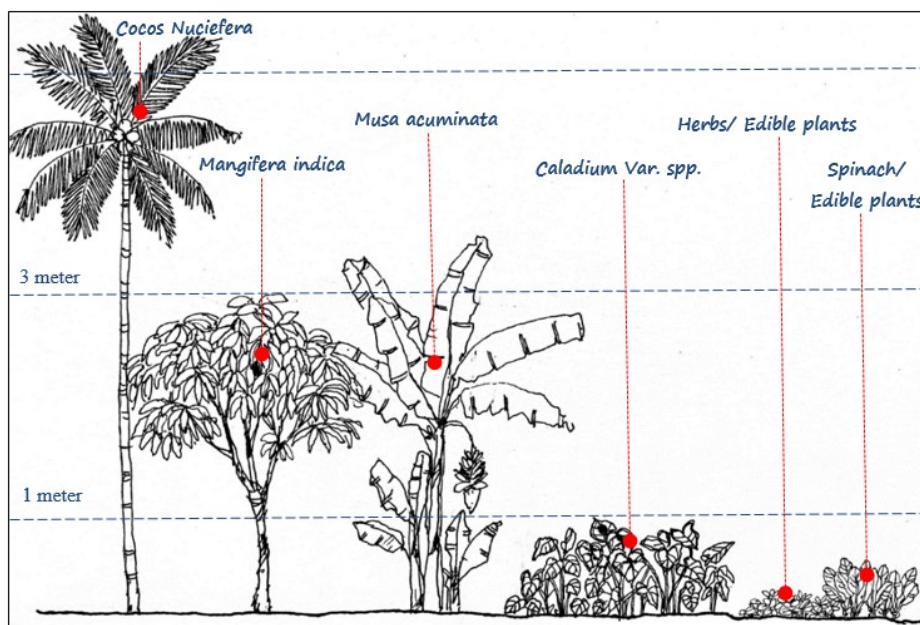
### The Contemporary Landscape

Contemporary landscapes, on the other hand, are transformations or continuations of cultural landscapes adapted by humans to the current environment. Studies conducted by Hussain and Ahmad (2012, 2017) found that several traditional villages within Perak Tengah provide a comprehensive picture of common elements that are typical and still used by the Malay community in their house compound or immediate land. This included the soft capes elements such as fruit trees, food trees, palm trees and shrubs for aesthetic values, and herbs for medicinal use.



**Figure 2:** Plants composition around *rumah* Kutai during Contemporary Landscape  
Source: Author illustration (IHS 2022)

Thus, this aligns with the cultural needs to provide the daily supply. However, ritual plants that carry oblique beliefs have been subsequently forgotten. In fact, the modern development and mentality of society is now more realistic and open in meeting the current needs. Moreover, this contemporary landscape courtyard still highlights the image of a neat, simple and manageable Malay landscape.



**Figure 3:** Plants Profile of the Contemporary Landscape  
*Source: Author illustration (IHS 2022)*

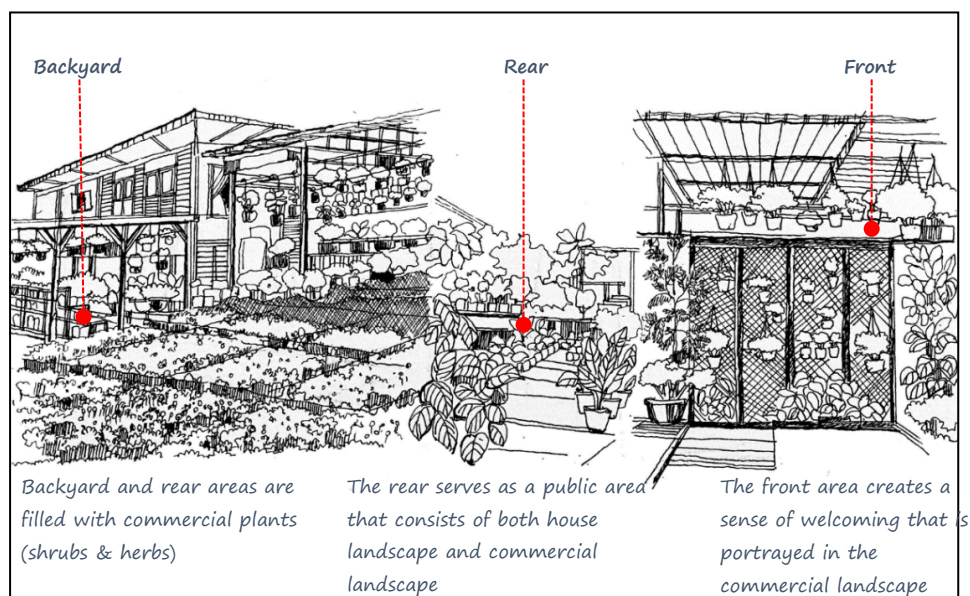
Figures 2 and 3 illustrate the house compound which is composed by 20% overstorey trees, 40% of understorey trees and 40% of shrubs, ground covers and others. The data were analysed through case studies conducted by Hussain, Ahmad (2012, 2017), Adnan, Othman (2012) and Zakaria et. al (2017, 2021).

### **The Commercial Landscape (Post-pandemic era)**

The requirements of the pandemic season, SOP regulations and the implementation of MCO during pandemic in year 2019 had limited the community's movement to only 10km radius of their residents. This restriction had both negative and positive impacts towards the economy, health, emotions, activities and communications of the community. Therefore, utilizing time, space and activity within the accessible house compound became mandatory. Various initiatives to be involved in landscaping, planting, or gardening activities turned out to be essential not only in fulfilling time, extending hobby, and improving health but also in venturing into new profitable businesses.

This situation reflects back on the Gutkind's theory and human civilisation on how man could manipulate the environment for survival. Therefore, the society began to utilize their surroundings, immediate land and in fact the house compound with exchangeable or marketable elements including

plant materials, fertilizers, and garden elements. This has limited and decreased the accessible plant size option within the compound.



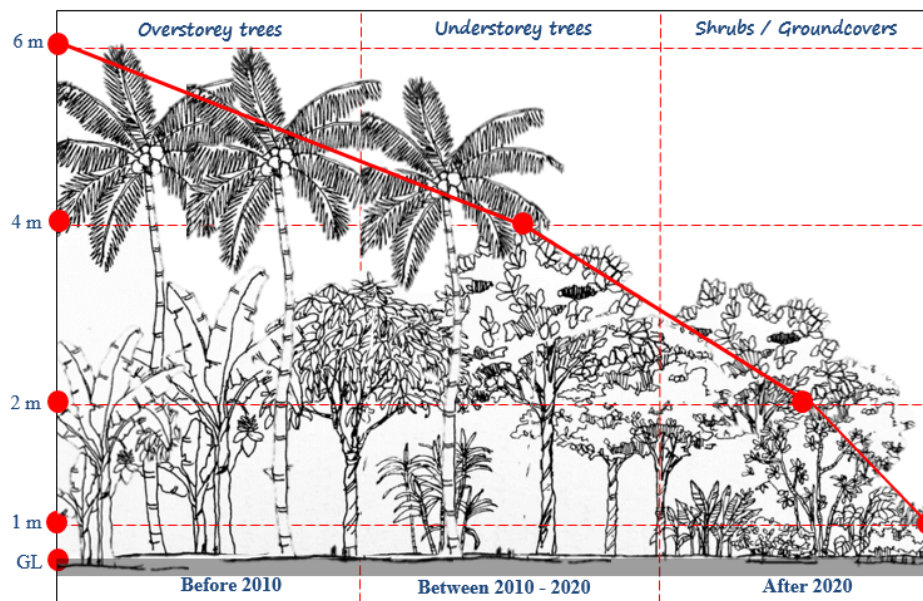
**Figure 4:** Plants composition of the Commercial Landscape during pandemic

Source: Author illustration (IHS 2022)

Figure 4 illustrates the sample of house compounds that have been filled with various plants for commercial use. Subsequently, this situation has turned the logistic landscape into holistic landscape in which the compound is no longer providing surveillance but has the potential to make business, supply materials, feed the community, provide new job opportunities, and improve activities and enhance life quality during the pandemic. Furthermore, figure 4 also illustrates that the commercial landscape has decreased the plants profile into only 10% of overstorey trees, 30% of understorey trees and the majority of 60% involve the shrubs and herbs that serve as aesthetical, food and medicinal plants. Among the preferred or 'viral' plants during the pandemic includes *Caladium (keladi)* from various species with a variety of distinctive shapes, colours, and peculiarities. Besides, green vegetables and herbs such as *pegaga*, mint, *kesum*, spinach, kale and cleric also gained the attention of many. These plants are favourable as they can easily 'survive', have a low risk, and are cheap and easy to breed for commercialisation and making profit.

## THE CHANGING PLANTS PROFILE: AN ANALYSIS

Current changes and needs lead to the initiation of continuity and sustainability of life. Economic pressures, security factors, especially the spread of the current pandemic virus, have changed various dimensions of life and survival.

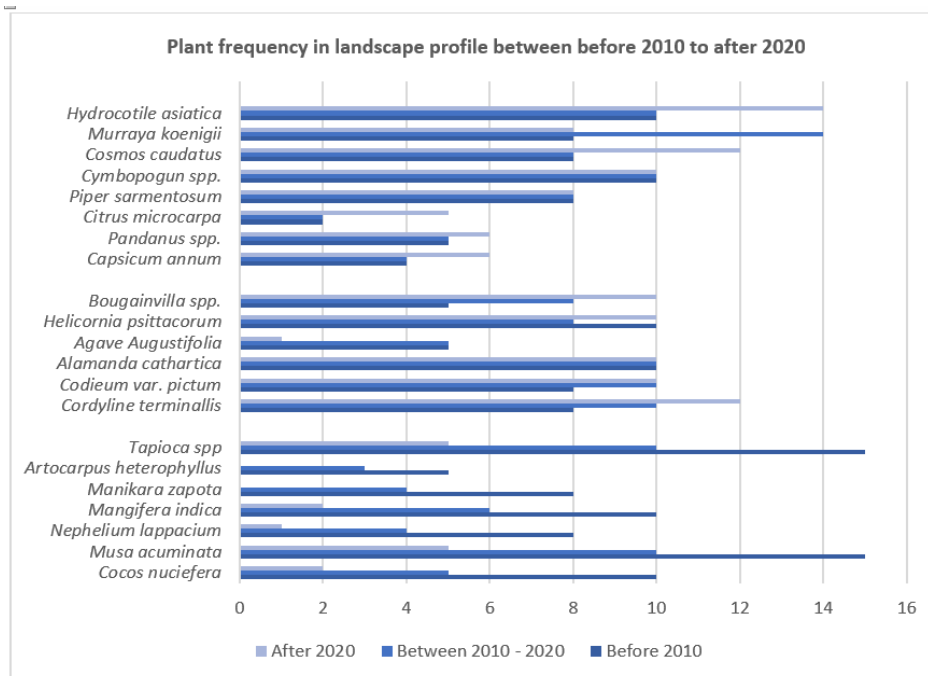


**Figure 5:** Plant profile showing height decrease in landscape  
*Source: Author illustration (IHS 2022)*

Specifically for the Malay society in Perak, they will tolerant again with nature. The society learn to adapt and readapt. Landscape needs are no longer about meeting individuals or logistical needs only, but also about quality of life and shifting to sustainability. Current situation has proven the various efforts and enhancements of plants that are not only regarded as a hobby and ancillary activities, but also as fulfilling activities that meet the demand and need of the community. The home environment is transformed from a standalone space into a commercial space.

The results of the observation on the evolution of the Malay landscape around the rural Perak showed that there was a change in priorities related to the use of space, elements and activities according to current needs. These changes mainly involve plant material selections that provide the accessibility, management, maintenance, and preferences. As illustrated in Figure 5 that shows the changes in in height of the plant profile, this study analyses the most cited and referable plant species through studies by Adnan et.al (2012), Zakaria et.al (2017, 2021), Hussain, Ahmad (2012,2017), and Harun et.al (2020).





**Figure 6:** Plant frequency in current landscape profile  
 Source: Author illustration

Figure 6 presents the frequency of common plant species cited by many researchers. The cluster of overstorey trees are shrinking in number and size which indicates the high profile of trees is getting smaller and lower. Meanwhile, the cluster of understorey trees which represents fruit trees and aesthetic remains moderate but vigorously less than shrubs, small plants, and ground covers. As the year 2019 marked the beginning of a global pandemic crisis, it witnessed an extensive landscape mostly catered within house compound. With the restricted space, edible plants, namely *Hydrocotile asiatica* (*pegaga*), *Murraya koenigii* (*pokok kari*), *Tapioca spp.* (*ubi kayu*) and *Musa acuminata* (*pisang*) are used for food and materials, are the most demandable, followed by aesthetical shrubs such as *Cordyline terminallis* (*jenjuang*), *Alamanda cathartica* (*bunga loceng*) and *Codieum var. pictum* (*pokok pudding*) for treat and passions.

### CHALLENGES AND POTENTIAL LANDSCAPE IN PLANNING

Landscape planning has always relied on plant materials, functions and spatial to pursue society demand. Changes in plant selection have subsequently changed the plants profile and criteria in house compounds. This study only focuses within the house compound as accessing more than 10km radius during the pandemic became the restriction and limitation to the study. Table 1 indicates the changing

criteria of plants between the eras before 2010 to after 2020. Today, the criteria continue to be sufficient and exhibit the landscape implications. In planning, sustaining landscape profiles are important in; (i) preserving the authenticity of tradition, (ii) establishing the expertise of the field, (iii) managing natural resources and (iv) conserving the heritage (Harun et. al (2017), Harun et. al (2021), Raja Abdul Kadir et. al (2020)).

**Table 1:** Changing criteria of the Plants Profile from before 2010 to after 2020

	<b>Cultural landscape</b>	<b>Contemporary landscape</b>	<b>Commercial landscape</b>
<b>Plants Height</b>	Over storey trees	Under storey trees	Shrubs & Small Plants
<b>Plants Width</b>	Wide	Moderate wide	Small
<b>Plants Function</b>	Shelter, Culture	Aesthetic, Resources	Lifestyle, Economic
<b>Planting Areas</b>	Immediate & Extended land	Immediate land	House compound

*Source: Author*

Despite the challenges faced, the nature of landscaping and plant profile has undeniably a unique and high-value potential. The future plants profile for home landscape is speculated to grow to accommodate the endemic living. The height or profile of plants is dictated by these changes influenced by society and economy. Research shows that the economical height for home landscape ranges between 0 to 1 meter tall which is subsequently sufficient within a house compound or immediate land in residential areas. Although the profile is decreasing, it does not disturb the plants potential and capabilities of the cultural-traditional landscape, which are:(i) having high commercialization value, (ii) providing extensive tourism opportunities, (iii) displaying heritage identity, and (iv) manipulating profit for the local economic sector. Perhaps, there are potential in investigating other influential factor of these evolution, such as the plant habitat, planting composition and landscape purposes. Therefore, the involvement of all sectors including government, public sector, NGOs and private sector is very important to strengthen the desire in maintaining and promoting the landscape potential especially in plants and materials to equip the resilient living for future generations.

## **CONCLUSION**

The role played by these landscapes and crops turns out to have a direct impact on the development and planning that are closely related to culture, traditions and

local heritage. The activities and aspirations undertaken by such local communities are seen to be effective in meeting the overall needs that are holistic, comprehensive and practical in maintaining the sustainability and survival. Among other things, the contemporary and commercial landscapes highlighted are also significant in nationalizing the development between different eras in both conventional and sustainable living. Besides, this comparative and evolutionary study is able to discuss the plants profile as the 'evergreen' element that meets the current needs and developments throughout the ages. Landscape and culture are the closest components of human civilization and remain important in educating and providing a more resilient and competent generation in the future. As humans and the environment will continuously connect, the research of the evolution in landscape remains importantly essential especially in accommodating the planning strategies, regulatory and society adaptation to life.

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