

Planners should be aware that a place has truth not just based on the facts of its existence, but also on the things believed to be true about it (Wortham-Galvin, [designobserver.com/media/pdf/mythologies\\_of\\_497.pdf](http://designobserver.com/media/pdf/mythologies_of_497.pdf)). As they seek to shape the built environment of a place, they must seek to legitimise their actions by infusing them with local qualities that can attract those who seek authentic, place-based experiences. Myths and legends can become a powerful design and planning tool if deployed judiciously. This is because myths and legends are always embedded within a place. Changing names or reducing a neighbourhood to rubble in order to make way for a more profitable project can mean having committed a sacrilege even if the planner is unaware of the implication. This is because the erasure of places or change of place names would mean established patterns of human relationship could be destroyed. Therefore, planners should directly engage those who reside in the vicinity before making changes, or build upon the existing cultural heritage (myths, legends, relationships etc) in shaping or remaking a space. Within this context, Langkawi is at present undergoing rapid change and development, after its seven-generation long hiatus as a result of the “Mahsuri’s curse”. In line with the objective to develop and transform new places are planned and created and given new names, while some existing ones are redeveloped or recreated and renamed. In the process the myths and legends that underlie the place names could be placed under threat or even be lost if planners are not sensitive to this invaluable cultural heritage. Should that happen the taglines such as “99 magical islands” or “isles of legends” that have been accorded to Langkawi islands could become meaningless.

## **LANGKAWI ISLAND: LEGENDS AND ORIGIN OF PLACE NAMES**

Langkawi – an archipelago of 99 islands – located just off the shores of the Northern Kedah State in Peninsular Malaysia is famous for its beaches and its tranquillity besides having been conferred the global geopark status by Global Geopark Network (GGN) and endorsed by UNESCO besides having been declared a duty-free island by the Central Government of Malaysia. Of the 99 islands only three are inhabited – Langkawi islands, Tuba islands and Dayang Bunting island (island of Pregnant Maiden). Most of the islands’ population is found on the largest and main island – Langkawi Island that measures 478.5 sq km. The Langkawi archipelago has a total population of approximately 103,075 (Langkawi Development Authority 2010).

The island landscape is painted with mountains, towns, villages, paddy fields, sandy beaches, caves and rainforests dating back millions of years. The sedimentary rocks on this island are reputed to be among the oldest in Malaysia dating back some 500 million years. The island encompasses historical sites, geological wonders, beautiful natural landscapes and a wealth of local culture and traditions.

The island possesses long geological history that dates back to the early Cambrian period (Mohd. Shafeea Leman et al. 2007), with unique geodiversity and geological landscapes, which form many geoheritage sites. Among the main attractions of Langkawi Geopark are its oldest rock formation of high geological value, pristine beaches and education based tourism. Within the Langkawi Geopark are located three geoforest parks: the Machincang Cambrian Geoforest Park, Kilim Karst Geoforest Park and Dayang Bunting (trans. Pregnant Maiden) Marble Geoforest Park.

**Picture 1 & 2** : Gunung Raya - highest mountain on Langkawi islands formed of granite rock



*Source: Courtesy of Tanot Unjah 2011*

Forming the backbone of the island are two prominent mountains called *Gunung Raya* (Raya Mountain) – the highest mountain on the island standing at approximately 881 meters (Picture 1) and Gunung Machincang (Machincang Mountain) – the oldest geological formation - standing at 708 meters (Picture 2). Gunung Machincang with its rugged topography was the first part of Southeast Asia to rise from the seabed in the Cambrian period more than 500 million years ago. In-between the two mountains and seemingly to separate them is a third and smaller mount called Bukit Sawar (Sawar Hill) (Picture 3). Local legend believed that the three were actually local giants named Mat Chincang, Mat Raya and Mat Sawar who had been turned into rocks in the form of mountains. The story of how these three giants became ‘mountains’ provides the backdrop of this article on the origin of some place names in Langkawi islands within the context of cultural heritage and planning for placemaking.

**Picture 3** : Locations of Mount Machincang, Mount Raya and Sawar Hill



*Source: Courtesy of Tanot Unjah 2011*

Langkawi is a bound with myths and legends. However, many of these tales exist in the form of oral traditions, although efforts have been made to document them (eg. Mohamed Zahir Haji Ismail. 2000). Many of the early attempts on documenting the myths are mainly in the form of anecdotes or brief descriptions of particular myths and legends, which focus on the magical or supernatural aspects (Norhanim Abdul Razak 2010). While some of the legends have some basis in truth and historical events, others have made the natural landscape come alive with fantastic beings. It is believed that centuries ago skilled storytellers spun wondrous tales of folklores, history, myths and legends regarding celestial beings, demons, giants, warriors, heroes and beautiful maidens. These stories were then handed down from generation to generation mainly through oral tradition. These myths, legends etc are still strongly woven into the lives of the local people who are quite convinced of their authenticity. Also there could be more than one version of the narration to explain the possible origin of a place name.

The name Langkawi for instance is believed to have originated from the combination of the presence of the many eagles on the island and the geological wonder of its landscape. The most dominated faunal species in the area is the Brahminy Kite, while marble or kawi (in Sanskrit) is found in excess on the islands. The combination of the two words 'helang' (eagles in Malay) and 'kawi' had produced the moniker 'helang-kawi', which was eventually shortened to 'Langkawi'. In his book *Legends of Langkawi* (2000), Mohamed Zahir Haji Ismail narrated that the name of the Langkawi islands originated from a combination of two words to mean many beautiful islands. 'Langka' is Sanskrit for beauty and 'kawi' means innumerable.

## TRACKING THE LEGEND OF GUNUNG MACHINCANG AND GUNUNG RAYA

As mentioned earlier Langkawi is rich with myths and legends. The fact that many are not scientifically or historically proven only enhances the mystery that surrounds the island. Of the many myths and legends, the fight between two giant warriors Mat Chincang and Mat Raya is the most dramatic. It is said that the damage caused by the fight gave rise to the names of many places in Langkawi including Gunung Machincang, Gunung Raya, Kuah, Ayer Hangat, Tanjung Chincin, and Belanga Pecah. However, this article only highlights the place names that are believed to have their origin in Gunung Machincang and Gunung Raya.

As the legend goes, centuries ago there lived two feuding giants called Mat Chincang and Mat Raya. A third giant, Mat *Sawar* (*sawar* is colloquial for *sabar* or patient), attempted to reconcile them. As fate would have it, Mat Raya's son and Mat Chincang's daughter fell in love with each other and wanted to marry. Although Mat Chincang was not in favour of the plan, he nevertheless consented. Mat Raya, on the other hand, welcomed the union as he thought that it would help heal the animosity that had long existed between the two families. However, during the marriage ceremony an argument broke out between the two giants, which then led to a fight. The ferocity of the fight resulted in the pots and pans and other utensils used to prepare the wedding feast being flung to



**PICTURE 4:** Sculpture located at Legend Park symbolises the fight between Mat Chincang and Mat Raya

The fracas and pandemonium disturbed the sleep of *Sang Gedembai* of Gua Cerita (Cave of Legends), a wicked giantess witch who would cast deadly spells on anyone who displeased her. Furious on being disturbed from her sleep she cursed the brawling giants and transformed them into the island's major stone mountains. Mat Chincang turned into Mount Machincang and Mat Raya became Mount Raya. It is believed to this day that they still remain locked in stone watching over the island (Picture 4). Mat *Sawar* who had tried to mediate between them and break up the fight was unfortunately caught in the process and was transformed into the hill called *Bukit* (hill) *Sawar* that now separates the two mountains.

various parts of the island. Where the pots and pans and their contents landed emerged villages, towns and island with names to commemorate the events.

The jagged bare look of Mount Machincang gave rise to the story that Mat Chincang was slashed and chopped to death by Mat Raya. By contrast, Mount Raya has a smooth formation that has been used to support the story that Mat Raya had welcomed the marriage between his daughter and Mat Chincang's son. Also, he did not start the ill-fated fight.

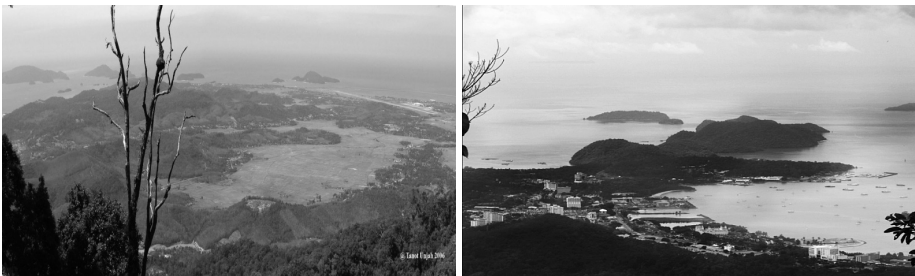
## **LEGENDS AND THE ORIGIN OF PLACE NAMES**

As mentioned earlier, so intense was the fight between the two giants that pots and pans flew and the earth shook. On being kicked a big pot containing gravy broke and its contents spilt to the ground. The spot where the contents spilt grew into a place known as *Kuah* (gravy) and where the broken pot landed emerged the village called *Belanga Pecah* (broken pot).

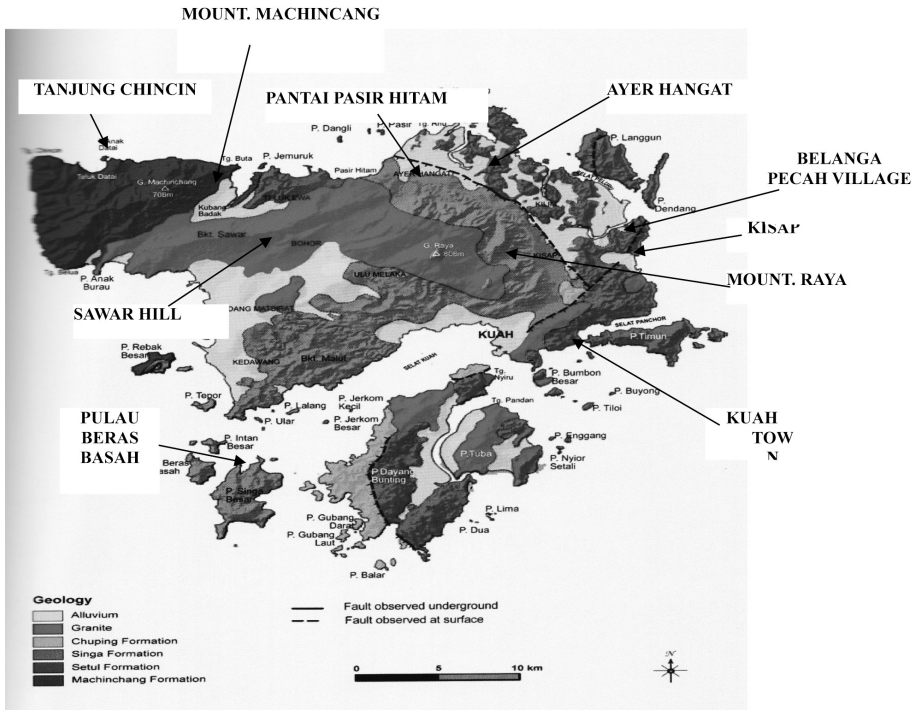
*Kuah*, situated on the south-western tip of the main island, is the largest town and port, where ferries from the mainland and the island of Penang anchor (Picture 5). Meanwhile during the tremor that resulted from the fight, a cauldron tipped over, spilling the hot water inside it. The spot where the water spilt has since been known as *Ayer Hangat* (hot water) where hot springs can be enjoyed.

As has been illustrated for the population of Langkawi Island, particularly the local residents, the towns described have stories, or narratives that bring these places to life. They are narratives of places that are shared among people about specific geographical locations (Bird 2002:521) and which had given them and the place their social identities.

**Picture 5 & 6** : Tanjung Chincin



**MAP 1** : Place Names that are Believed to Have its Origin in the Legend of Mount Machincang and Mount Raya

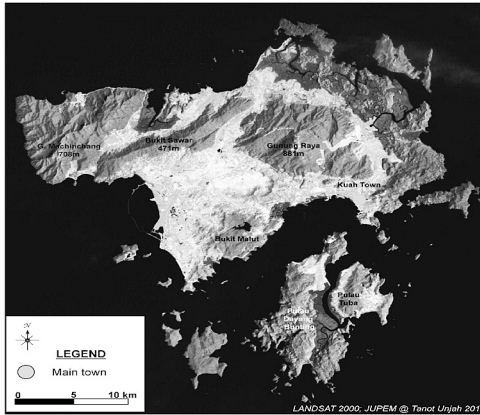


Source: Mohd Shafeea Leman et al. 2007: 47

**PLACE NAMES: LEGENDS AND GEOLOGICAL EXPLANATIONS**

For the sceptics, the origin of these curious place names may be pure fiction, a figment of the imagination. However, before scientific explanation was discovered Man had to make sense of their surroundings so as to have some form of identification and some sense of identity. Based on the people’s beliefs at the time and the lack of scientific explanation had probably led them to visualise what could possibly had happened and gave an explanation that stretched beyond human knowledge and into human imagination. The legend of Mat Chincang and Mat Raya, like most of Langkawi myths and legends not only persist but, actually grow stronger. These legends, myths and folklores have not only become part of the local intangible heritage, they have also become another tourists’ attractions of Langkawi islands.

**MAP 2** : Map Showing the Geological Formation of Langkawi Island



Source: Courtesy of Tanot Unjah 2011

If we are to base on scientific explanation of place names, observation of the geological landscape of Langkawi shows that some of the landscapes that are related to the legends can be classified based on the various types of rocks to be found on the island, particularly where the places are located. The rocks have different structures, the result of the different weathering processes involving the various natural elements. For example Mount Machincang probably got its name from its jagged peak – naturally eroded fractured sandstone layers that have often been related to the legend of Mat Chincang and the possible origin of the name Machincang (Mohd Shafeea Leman et al. 2007:50). Mount Raya, on the other hand, is of granite rock from the igneous stock represented by broad conical hill with gently concave flanks (Mohd Shafeea Leman et al. 2007:60).

The movement of the Kisap Thrust Fault can be related to the existence of the hot salt-water springs at Ayer Hangat (hot water). Based on the geological explanation, Tanjung Chincin forms part of the anticline fold in the Machincang rock formation (Tanot Unjah 2011). A ring-shaped formation found in this area is the result of a fault on the sandstone layer due to sea erosion. The ring is said to be visible only during low tide (Picture 6).

The geological explanation shows that there is a close relationship between the natural landscape and the local people’s desire to make sense of their environment. Based on observation and imagination stories to explain were then given, which were then handed down from generation to generation in the forms of folklores, myths or legends.

## **CONCLUSION**

A place and placemaking do not exist in a cultural vacuum. It is always undertaken in relations to the realm of cultural practices and human experience. The practices of placemaking and the experiences of a place must be understood as socio-culturally and politically organised. It is a dialectical engagement of socially, historically, and culturally constituted schemas of practical activity with worldly circumstances. In that regard place names are an important part of the geographical and cultural environment and care must be taken to protect the place name heritage. This is because place names identify geographical entities and represent irreplaceable cultural values of vital significance to the people's sense of wellbeing and sense of place. In a rapidly changing and developing society planners and the society in general must ensure that in place naming process by planners and administrators, cultural heritage is protected and taken into serious consideration. In fact planners should harness and capitalise on the existing myths and legends of Langkawi islands to enhance and sustain the sense of place, the sense of belonging and even the sense of history of the local population.

The history of Langkawi is intricately entwined with the many tales, myths and legends, many of which have been handed down by word of mouth from generation to generation. The legend that is associated with Mount Machincang, Mount Raya and other related places demonstrates the imaginaries and visualisation regarding mountains that have been handed down through generations. Each tale relates to the shapes of the respective landforms thus giving reality to the stories told. Such imaginaries of place names and their association with the natural landscapes contribute to the richness of the local cultural traditions. Although the narrations are regarded as mere myths, legends or folklores, the references still suffuse life to this day in the island of Langkawi despite the scientific explanations given. These stories besides making fascinating reading also tell us a great deal about how people in the past saw and understood the world around them. These stories also give an insight into the richness of traditional cultures in associating themselves with nature and environment.

## **ACKNOWLEDGEMENTS**

This article is part of a research on Governance of Heritage Conservation conducted by a team of researchers headed by Prof. Dr. Rahimah Abdul Aziz. Besides the authors the researchers include Prof. Dato' Dr. Ibrahim Komoo, Datin Paduka Dr. Halimatun Saadiah Hashim, Dr. Chan Kim Ling @ Geraldine, Dr. Sharina Abdul Halim and Puan Sarah Aziz Abdul Aziz. The team has benefited much from Universiti Kebangsaan Malaysia through research grants UKM-GUP-PLW-08-11-048 and UKM-AP-PLW-01-2009. A part of this paper was presented at the 4th SSEASR Conference, at Thimpu, Kingdom of Bhutan, on June 30-July 3, 2011. Our appreciation also goes to Dr. Tanot Unjah



of Institute of Environment and Development, Universiti Kebangsaan Malaysia, for graciously allowing us to use Pictures 1, 2, & 3 and Map 2.

## REFERENCES

- Agnew, J.A. and Duncan, J.S. 1989. Introduction. In *Power of Place: Bringing Together Geographical and Sociological Imaginations*. Agnew, J.A. and Duncan, J.S., eds. Boston: Unwin Hyman.
- Anderson, B. 1991. *Imagined Communities*. (Revised edition). Philippines: Anvil Publishing.
- Bender, B. & Winer, M. eds. 2001. *Contested Landscapes: Movements, Exile and Place*. Oxford: Berg.
- Bird, S.E. 2002. It Makes Sense to Us: Cultural Identity in Local Legends of Place. *Journal of Contemporary Ethnology*, 31, 519-547.
- Castoriadis, C. 1987. *The Imaginary Institution of Society* (trans. Kathleen Blamey). Cambridge: MIT Press.
- Dundes, A. 1984. Introduction. In *Sacred Narrative: Readings in the Theory of Myth*. Dundes, A., ed. Berkeley: University of California Press.
- Frake, C. 1996. Pleasant Places, Past Times and Sheltered Identity in Rural East Anglia. In *Senses of Place*. Feld, S. and Basso, K.H., eds. Santa Fe, NM: School of American Research Press.
- Harrington, J.T. 2004. 'Being Here': Heritage, Belonging and Place Making. A Study of Community and Identity Formation at Avebury (England), Magnetic Island (Australia) and Ayutthaya (Thailand). Thesis submitted for the degree of Doctor of Philosophy in the School of Anthropology, Archaeology and Sociology, James Cook University. Unpublished.
- Harvey, D. 1993. From Space to Place and Back Again: Reflections on the Conditions of Postmodernity. In *Mapping the Futures: Local Cultures, Global Change*. John Bird, et al., eds. London & New York: Routledge.
- Langlois, J.L. 2008. Legend. In *The Greenwood Encyclopaedia of Folktales and Fairy Tales*. Haase, D., ed. Westport: Greenwood Press. Pgs. 569-571.
- Lanham, K.F. 2007. Planning as Placemaking: Tensions of Scale, Culture and Identity. Paper submitted to Virginia Polytechnic Institute and State University School of Public and International Affairs college of Architecture and Urban Studies.
- Leach, E. 1984. Conclusion: Further Thoughts on the Realm of Folly. In *Text, Play and Story: The Construction and Reconstruction of Self and Society*. Bruner, E.M., ed. Washington D.C.: American Ethnological Society.
- Mohamed Zahir Haji Ismail. 2000. *The Legends of Langkawi*. Kuala Lumpur: Utusan Publications.

- Mohd Shafeea Leman, Kamarulzaman Abdul Ghani, Ibrahim Komoo and Norhayati Ahmad. eds. 2007. *Langkawi Geopark*. Bangi: LESTARI, UKM & LADA Publications.
- Myers, F.R. 2000. Ways of Placemaking. In *Culture, Landscapes and the Environment*. The Linacre Lectures 1997. Flint, K. & Morphy, H., eds. Oxford: Oxford University Press.
- Norhanim Abdul Razak 2010. From Fairy Princess to a Wronged Maiden: Assessing Self-representation of Langkawi as the 'Isle of Legends'. In *Proceedings of Regional Conference on Tourism Research: The State of the Art and its Sustainability*. Badaruddin Mohamed, ed. Universiti Sains Malaysia, Penang, Malaysia. 13-14 December. 338-348
- Rubertone, P.A. ed. 2008. *Archaeologies of Placemaking: Monuments, Memories and Engagement in Native North America*. Walnut Creek, Cal: Left Coast Press.
- Silko, L.M. 1994. Landscape, History and the Pueblo Imagination. In *Family of Earth and Sky: Indigenous Tales of Nature from Around the World*. Elder, J. & Wang, H.D., eds. Boston: Beacon.
- Tangerlini, T.R. 1990. It Happened Not Too Far from Here: A Survey of Legend Theory and Characterization. *Western Folklore*, 49(4), 371-390.
- Tanot Unjah, Sharina Abdul Halim and Che Aziz Ali. 2011. Warisan Geologi: Perkaitan Landskap dan Lagenda di Langkawi Geopark. (Trans. Geological Heritage: Relationship between Landscape and Legends in Langkawi Geopark). Paper presented at the National Symposium on Heritage and Conservation. 29 April – 1 May. Kuching, Sarawak.
- Taylor, C. 2002. Modern Social Imaginaries. *Public Culture* 14, 91-124.
- Tilley, C. 1994. *A Phenomenology of Landscapes: Paths, Places and Monuments*. Oxford: Berg.
- Tuan, Y.F. 1977. *Space and Place: The Perspectives of Experience*. Minneapolis, MN: University of Minnesota Press.
- Willis, R. 1993. Introduction. In *World Mythology*. Willis, R., ed. New York: Henry Holt.
- Wortham-Galvin, B.D. Mythologies of Placemaking. [designobserver.com/media/pdf/mythologies\\_of\\_497.pdf](http://designobserver.com/media/pdf/mythologies_of_497.pdf) (accessed 5th Dec. 2011).



## **INTRODUCING NETWORKS IN PLANNING: AN EXAMPLE FROM LANGKAWI**

**Chan K. L. Geraldine<sup>1</sup>**

*Faculty of Social Sciences and Humanities*  
UNIVERSITI KEBANGSAAN MALAYSIA

**Halimaton Saadiah Hashim<sup>2</sup> and Sarah Aziz<sup>3</sup>**

*Institute for Environment and Development (LESTARI)*  
UNIVERSITI KEBANGSAAN MALAYSIA

### **Abstract**

This article introduces networks as a potential technique in participatory planning and implementation activities, including community activities, social events, projects, and conference events. This recommendation is backed by findings of some networks-like characteristics indicated in past and present work relationships between relevant government and private stakeholders in a study of a few Langkawi Geopark activities. The findings were obtained from an analysis of some geopark activities and interview data given by various public and private stakeholders. The relationships had led to the successful completion of various geopark activities. This article argues that the relationships have the potential to be developed into effective networks of relationships in future geopark activities. Therefore, relevant authorities, policy makers, managers, administrators and planners could consider developing existing stakeholder relationships into actual networks in their future consultation programmes with all stakeholders. This could be achieved by using networks as a technique in planning and development.

**Keywords:** Langkawi Geopark, networks, networks technique, networks characteristics, planning

---

<sup>1</sup>Senior Lecturer, School of Social, Development and Environmental Studies, Faculty of Social Sciences and Humanities, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia. e-mail: kmchn21b@yahoo.com, geralckl@ukm.my

<sup>2</sup>Guest Editor, Principal Fellow, Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia. e-mail: halima@ukm.my. drhalimaton@gmail.com

<sup>3</sup>Fellow, Institute for Environment and Development (LESTARI), UKM, arahaziz2000@yahoo.com

## INTRODUCTION

Langkawi is an archipelago of 99 islands. It is situated in the northern part of Peninsular Malaysia in the state of Kedah. Most local economic, social, cultural and political activities take place on the main island i.e. Langkawi Island. Langkawi has the oldest rock formations in Malaysia with the age of the rocks and other geological resources being about 500 million years old dating back to the Early Cambrian period (Mohd Shafeea Leman et al. 2007). Langkawi is also rich in cultural, historical and ecological heritage. The whole archipelago was declared a geopark by the Global Geopark Networks (GGN) initiatives under UNESCO in June 2007. By end of September 2011 there is a total of 87 global geoparks in 27 countries that are currently members of the Global Geopark Network (GGN) with about 32 geoparks in Asia Pacific. Langkawi is the only geopark in Malaysia and it is the first geopark in Southeast Asia.

A geopark is "... a geographical area where geological heritage sites are part of a holistic concept of protection, education and sustainable development" (UNESCO 2010). Sustainable development requires local awareness of geo-bio-cultural heritage values and the need to preserve and conserve the related resources. It is imperative for Langkawi to maintain the geopark status for years to come. Langkawi has to consistently demonstrate its capability in improving sustainable conservation and development of its islands through good conservation and development activities, programmes, projects and others. The authors of this article, with other research team members, conducted a qualitative study from 2009 to 2011 to understand the current governance of heritage conservation and sustainable development in Langkawi Geopark. Semi-structured interviews were conducted with various key stakeholders. A baseline study was also carried out to measure the locals' understanding and awareness of geopark. Besides that, stakeholder consultation workshops, non-participation observations and analysis of some geopark activities were also carried out between 2009 and 2011 (Chan et al. 2010, Halimaton Saadiah Hashim et al. 2010, Ong et. al 2010a, Ong et al. 2010b, Rahimah Abdul Aziz 2011, Sharina Abdul Halim et al. 2010). The semi-structured interviews were conducted with Langkawi Development Authority (*Lembaga Pembangunan Langkawi* in Malay or LADA), Kedah state government agencies and Langkawi local authorities, NGOs, retailers and hoteliers, school authorities and students, and village communities. The workshop consultations, conducted from January 2011 to May 2011, involved interpersonal dialogues with LADA, some Kedah State government sectors, key Langkawi local authorities, some NGOs, some private sectors (i.e. hoteliers), many village community organisations and teachers and primary and secondary schoolchildren. LADA, an entity under the Ministry of Finance Malaysia, is the main coordinator of Langkawi Geopark and socio-economic development.

Various viewpoints given by the interviewees and stakeholders cover the following issues: 1) geopark management; 2) the role and nature of LADA; 3) the role and nature of other stakeholders' participation in geopark activities; 4) geopark development action plans of participants and other stakeholders; 5) problems and challenges faced by other stakeholders and the public in terms of participation in the activities and geopark management; and 6) suggestions for improvement of stakeholder participation in geopark development.

The study on geopark activities focused on stakeholder work relationships and cooperation in carrying out the activities. Data was obtained from face-to-face meetings with some key officers from LADA which was the main organiser. For practical reasons, this article only quotes two examples to support its arguments. The first example is the Langkawi Geopark Carnival (*Karnival Langkawi Geopark* in Malay language) that was recently held in Langkawi on 31 May-4 June 2011 and ended successfully. The second event is the 4th International Conference on Global Geoparks by the main organiser LADA and held in Langkawi in April 2010. Both activities generally revealed the presence of a series of work relationships between LADA and several local level agencies, Kedah state authorities, non-governmental organisations (NGOs), some village community organisations, hoteliers, schools and the local people of Langkawi. Some evidences of good cooperation between these stakeholders were revealed. Data from interviews and workshop consultations also confirmed the presence of work relationships between LADA and some stakeholders. The data confirmed that these stakeholders are always involved and cooperating in various similar activities organised by LADA. Because of that, they always meet, interact and are closely connected and interlinked. They also share some viewpoints, ideas, principles, sentiments, understanding and awareness concerning Langkawi Geopark, and their roles, functions and involvement in geopark development.

Although the existing relationships have not been explicitly recognised by the stakeholders (or anybody for that matter) as taking the form of "networks", in the view of this article, some relationship features resemble particular networks-like characteristics conceptually, theoretically and empirically. For a start, the work relationships demonstrated "connectedness" (ties) between people who were working together. Connectedness can lead to networks formation. This suggests that the existing work relationships have the potential to develop into proper networks relationships that would eventually bring about more effective geopark development in Langkawi. This article proposes that existing work relationships can be improved and would be more effective if they are in the form of networks. Planners, administrators, managers, policy makers or any relevant authorities can take cognizance of networks as a potential technique in the planning, managing, directing, implementing and monitoring of any geopark activity; that is in the governing of the activity. If this technique has yet to be applied in the planning of sustainable development and heritage conservation activities in Langkawi Geopark, then

it is probably a novel effort in the geopark context. Not many academic studies have been conducted about networks in relation to planning, sustainable development, heritage conservation and generally geopark contexts. Therefore this article is an early attempt to propose networks as a technique for effective planning, particularly of future geopark activities in Langkawi or of participatory planning and implementation in general.

## **PLANNING FOR NETWORKS, NETWORKS FOR PLANNING**

Networks are about connectedness. They are ties or relationships, or social ties if they are between people. But, why networks as a technique in planning? Why must planners, administrators, managers, policy makers, relevant authorities, researchers, or simply anybody pay attention to networks? What is so important about networks? In Christakis and Fowler's words (2009: xi), "... The key to understanding people is understanding the ties between them ..." and, "... To know who we are, we must understand how we are connected ..." (2009: xiii). They opined that "... connections affect every aspect of our daily lives ..." (Christakis and Fowler 2009: 7). Social networks are all around us, "... exerting both subtle and dramatic influence over our choices, actions, thoughts, feelings, even our desires ..." and our "... connections do not end with the people we know ..." because beyond "...our own social horizons, friends of friends or friends can start chains of reactions that eventually reach us ..." (Christakis and Fowler 2009: 7). For Field, (2003: 1) "... relationships matter ...". For Christakis and Fowler (2009: xiii), "... our connections to other people matter most, and that by linking the study of individuals to the study of groups, the science of social networks can explain a lot about human experiences ...".

In a basic networks theory, we shape our networks, and at the same time, our networks shape and affect us. Shaping our networks means we establish ties or networks with people who share our interests, histories, dreams, aspirations, views, ideas and others. This is the homophily theory of networks. We determine who we want to connect with, who and how to influence, who to learn from, how many ties and connections we want to create, how to achieve our goals, and we also control how central we are in the social networks. At the same time, the people whom we connect with (our networks) influence and affect how we think, what we do, how we feel, what we want, how to achieve our goals, what choices to choose, who to copy or learn from, and others. Networks allow people to do more things and different things than they can do as individuals; it is like saying the whole is greater than the sum of its parts (Christakis and Fowler 2009: 9). People who connect into groups (networks) are able to do things that a disconnected collection of individuals cannot. For Field (2003: 1), "... by making connections with one another, and keeping them going over time, people are able to work together to achieve things that they either could not achieve by themselves, or could only achieve with great difficulty ...". Hence, networks bring benefits to the connected people. However, networks can also be destructive if not well managed.

Two fundamental aspects of networks exist – ‘connection’ and ‘contagion’ (Christakis and Fowler 2009: 16). Connection is just ties between entities, e.g. people. Contagion pertains to what flows through the connections and the reasons for the flows to occur. To understand why and how networks (i.e. social) exist, why people connect and why networks is important in planning and implementation, we must first understand certain fundamental rules regarding the connections and contagion, i.e. the *structure* and *function* of networks. Structure is about how connections are assembled and configured. Function is about the connections, i.e. about what the connections are for, how do the connections spread, why people make connections, what they ‘use’ to make connections, and what benefit they can get from the connections.

Since the beginning of the twentieth century, many researchers, anthropologists, sociologists, political scientists, mathematicians, economists, managers, administrators, medical practitioners, psychologists, criminologists and others use networks to understand and explain various aspects of social and daily lives. The aspects include social interactions; social group unity; ethnic conflict; organisational behaviour and growth; work productivity, behaviour and motivation; managerial performance; spread of diseases; love and romance; deviance and criminal behaviour; friendship development; education issues; job seeking and recruitment; corporate elite power; work citation; community development; community participation; emotional contagion or spread of emotions; communication process; inter-organisational relations; immigration patterns; work cooperation; marriage and family lives; personality development; business-politics relations and gangsterism.

The famous Hawthorne studies by psychologist Elton Mayo conducted in the Western Electric Company in the 1920s utilised sociograms to study patterns of social interactions and group behaviour among a group of workers in the company (Mayo 1933). Sociogram, which is a visual networks representation of patterns of social interactions, is an outcome of the mapping and analysis of the interactions in a systematic manner. The workers who were found to be closely connected to one another and mutually influencing had a higher level of work productivity compared to those who were not. Anthropologist Bruce Kapferer analysed social interaction, change and conflict in African workplaces such as a garment factory using sociograms and networks theory (Kapferer 1972). Kapferer’s mapping of social interactions using networks analysis allowed him to predict worker strike activity, and uncover particular flows of organisational power and influence that had facilitated effective worker mobilisation. Chan’s (2004, 2005, 2007, 2008, 2009) utilisation of networks method led to her discovery of big business formation (patterning of the business group structure) in Malaysia based on formal organisational networks (i.e. interlocking directorships) established in conjunction with particular types of social networks such as friendship ties, ties to the state as ex-state bureaucrats and ties based on professional organisation memberships. The networks also indicated particular patterns

of business-politics relations primarily evident at the top corporate sector in Malaysia. For Chan, social networks are a potential form of social capital. Nicholas Christakis, a medical doctor, and James Fowler, a political scientist, collaborated to apply the networks method to study the spread of happiness, disease epidemic, weight gain, friendship ties, loneliness, the finding of partners and others through social networks (Christakis and Fowler 2009). They found that people's connections affect the way they think and do but at the same time, they shape their networks to determine how to and what they think and what to do. Granovetter's (1973) interesting networks study among a group of technical, managerial and professional workers in a Boston suburb on job recommendation based on personal contact discovered that people with relatively weak networks established with distant friends and strangers got recruited at a relatively faster rate than people with relatively strong ties formed with close friends. His famous 'strength of weak ties' theory still stands strong even today. Burt (2010) found that an actor's position in an organisational networks has an impact on its power, influence and reputation, and peer evaluation, be they a manager, chief executive officer, banker or analyst. Positions may be in terms of bridging between different networks or staying put in a single network.

Promoting planning for networks and networks for planning shall begin by firstly elaborating the structure and functions of networks. Elaboration on the application of networks technique into geopark activity planning follows. In this article, planning refers to general planning in various fields such as infrastructure and utility planning, neighbourhood planning, land use planning, community planning, tourism planning, public participation process in planning, project planning and others.

## **UNDERSTANDING NETWORKS**

Anyone who wishes to engage networks as a technique in planning should be aware of the following aspects of networks: key networks elements, networks formation and maintenance (networks stability), networks structural qualities, and networks merits. They explain the *structure* and *functions* of networks.

### ***Key Networks Elements***

Barney (2004: 2) stated, a network exists when many people interact and are interlinked, and also interact with and interlinked to many other people simultaneously, normally at one point in time and usually by many ties or a series of ties, which cross the ties connecting other people (see also Scott 1991). At the most basic organisational level in any social reality, two persons create a dyadic tie when they interact but a network emerges when those two persons and others are simultaneously interlinked and create a series of relationships or linkages (Scott 1991, Wasserman and Faust 1994).

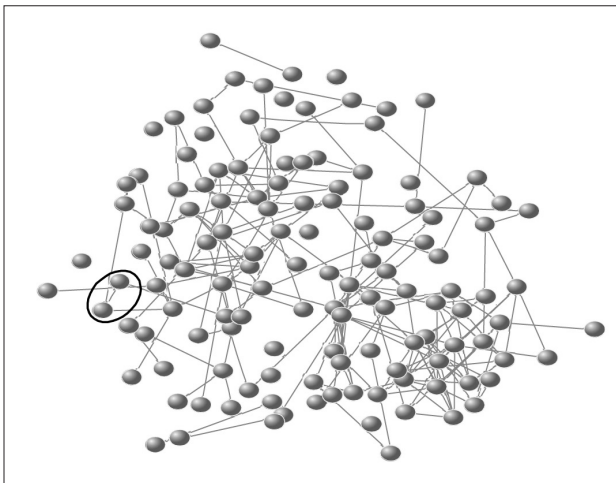


In networks terms the people who are interlinked are called ‘nodes’. Nodes could be firms, organisations, computers, events and others (Barney 2004, Scott 1991). The ties are ‘relationships’ or connections established between the nodes; called ‘social relationships’ if they are between people or organisational networks if they are between organisations (Barney 2004, Scott 1991). Figure 1 reveals a hypothetical visual representation of networks graph (networks of connections between nodes e.g. persons) (Christakis and Fowler 2009 <http://www.connectedthebook.com/pages/slides.html> 21 October 2011). Various patterns and types of relationships are visible in networks. For Wasserman and Faust (1994: 6), patterns of interactions revealing regularities lead to the emergence of a ‘structure’ of networks. ‘Ties’ also reveal the roles that nodes play in the networks. ‘Nodes’ and ‘ties’ are two of three key networks elements. Networks formation, maintenance and stability may be ensured through frequency of interactions and meetings, and regularity of actors’ participation. This means that the same actors meet one another in various different meetings or events.

**Figure 1:** A Hypothetical Example of a Network Graph based on Connections between Network Actors (Nodes)

Node = a network actor (e.g. person)

Lines = connections or ties between nodes



Dyad – a connection between two persons

NOTE: The network graph shows that most nodes are connected. However, some nodes are connected to several or many nodes establishing series of connections. Some nodes are isolates (not connected to any node). The graph demonstrates various pairs of nodes creating dyads and various dyads creating the connections.

Source: Christakis & Fowler 2009 <http://www.connectedthebook.com/pages/slides.html> 21 October 2011

The third networks element is 'flows' which show what pass between and through the nodes along ties (Barney 2004: 26). This is the contagion aspect of the network, which demonstrates the function of networks. Flows can be in the form of gossip, data, money, camaraderie, support, emotions like love or hate, aid and others (Barney 2004: 26); all tangible and intangible in nature. 'Flows' indicate the reasons behind networking or function of networks, e.g. why people establish networks. Therefore, to understand our own human and social action and behaviour, we must understand the connections and their characteristics, i.e. the 'flows' and their functions that define the connections. For instance, 'flows' may inform that people interact and establish networks because they want to get something from each other or exchange something with one another. Moreover, similar 'flows' may facilitate the networking, for instance, similarities in terms of knowledge; need for mutual support and respect; emotions; interests; backgrounds; economic status; viewpoints; mindsets; principles, beliefs and values; and others. As mentioned earlier, we tend to connect with people who have something in common with us. Similar 'flows' may then encourage actors to use their connections to achieve or obtain something together that may otherwise be difficult to achieve if they are on their own. If they do not establish networks, 'flows' that are similar may just stabilise, support or sustain the networks.

Another aspect to consider about networks is that levels of networking vary. Individuals can network with other individuals, individual can network with formal social systems (organisations) or informal social systems (groupings), or organisation can network with other organisations. In short, levels of networks are seen at the individual and systemic levels. Formation of networks can begin from the individual level, i.e. a single individual forming a series of network links with other individuals. The resulting networks are called ego-centred networks. Anyone using the networks technique or analyse a network would need to start tracing the network from that particular single individual, or encouraging that single individual to establish networks with others. In comparison with the ego-centred networks, their formation at the systemic level requires several or many individuals making effort to form networks with many other people at the same time. This is a networking technique at the systemic level. Network formation is encouraged by getting several people to form networks with each other at the same time or in one instance. Analysts who study networks or use the networks technique would also need to trace all those people who conduct the networking. Besides, network actors can build networks with other actors regardless of social and economic status, level of education, gender, age, social backgrounds, level of positions or roles, ethnicity, nationality, seniority, and others. Networks cross cut all these aspects, thus making them horizontal and vertical or top-down and bottom-up in nature, across space and time.

## NETWORKS STRUCTURAL QUALITIES

The following paragraphs further elaborate the structure and functions of networks. The nodes, ties and flows have distinctive structural qualities. For Barney (2004: 26-27), the qualities are "... centralized, decentralized (i.e., multicentred), or distributed (i.e. centreless); hierarchical or horizontal; bounded or boundless; finite (i.e., with fixed limits on the number of nodes and ties) or proliferating (i.e., with no limit on the number of nodes and ties); accessible or inaccessible; inclusive or exclusive; intensive (i.e., few nodes linked by a multiplicity of dense, strong ties) or expansive (i.e., many nodes linked by relatively sparse, weak ties); interactive (i.e., enabling reciprocal, multidirectional flows) or non-interactive (i.e., enabling only one-way, uni-directional flows) ...". Beside 'nodes', 'ties' and 'flows', sub-networks can exist within a network and many networks can be connected to many other networks. Moreover, some networks may overlap with one another. The meanings of these qualities are generally about networks actor centrality (seen through network positions and roles), networks density and centralisation, networks cohesion, networks groupings and sub groupings (cliques) and others. They indicate nature of social roles, liaison, prestige, social cohesion, reciprocity, mutuality, exchange, influence, dominance and conformity. Network structural qualities and their meanings explain a lot about network functions and benefits.

## NETWORKS FUNCTIONS AND BENEFITS

Apart from knowing the three main networks elements and their structural qualities, anyone who utilises networks as a technique also ought to be aware of the functions of those structural qualities. Generally, the awareness of networks significance in social living is highlighted by the fact that we, human beings, tend to organise many forms of social living, daily and working lives around relationships specifically in the form of networks, and are able to get things done through those networks. In other words, in order to live and survive in the social world, we create, shape, affect and influence networks, but at the same time, networks also affect, influence, shape and even control us as we are always surrounded, affected and influenced by other humans, including the ones we build networks with.

In most cases, characteristics of our human and social action (human and social behaviour) arise out of structural or relational processes in our networks of relationships and interactions and not independently of that. Our human ability to get things done arise out of our networks and interactions in a social context. This means that our human behaviour is not always reduced to our individual properties (not innate or in-born) but to the structural properties of our networks; in simple understanding, who or what we are, what we do and the way we get things done is determined by who we interact and have relationships with, and the sort of relationships that we have. It is like saying the whole

is greater than the sum of its parts. People connected into groups (networks) are just able to do things that a disconnected collection of individuals sometimes cannot. Therefore, to understand our own human and social behaviour and action, we must understand the characteristics of our connections or networks. The explanation of various network functions and merits directly relates to this basic networks theory.

Depending on the kind of structural qualities and the related meanings and levels of networking, networks in one way or another function to help people get involved in the networks to better achieve individual/personal, organisational, social (e.g. groupings, communal), economic, business and political goals. Networks (social context) may enable and/or constrain human and social actions and outcomes. Wasserman and Faust argue that the difference between a social network's explanation of a process or phenomenon and a non-network's explanation is the "... inclusion of concepts and information on relationships among units ..." (e.g. people) in a study (Wasserman and Faust 1994: 6). For them, the task of networks researchers is to identify "... properties of the social (economic or political) structural environment, and how these structural properties influence observed characteristics and associations among characteristics ..." (1994: 8).

If effectively utilised, networks have 'emancipatory potential' whereby they can "... inform actors of non-obvious constraints and opportunities inherent in patterns of social connections ..." (Kilduff and Tsai 2003) or networks. General functions/merits of networks are the following: (1) networks can assist in obtaining resource or resource exchange (e.g. information/data, knowledge, money); (2) increase resource-sharing; (3) ensuring cooperation, coordination and collaboration; (4) bringing about social or organisational unity; (5) preventing group fragmentation; (6) building and maintaining trust between people; (7) generating or constraining interpersonal, social and organisational influence, power and control; (8) moderating and mediating conflict; suppressing or advancing individual interests; (9) developing strong or weak bonds of moral support in communities and organisations; (10) improving social interaction; (11) producing effective social mobilisation and social movement; developing or constraining social and interpersonal communications; (12) improving communication flows; (13) increasing business profits; (14) enhancing organisational growth; (15) promoting social identification and friendship formation; (16) enhancing work performance and productivity; (17) providing the opportunity to adopt opinions and acquire skills; (18) to strive for outcomes; and (19) enhance social capital (see Kilduff and Tsai 2003 for details of the theories, concepts and theoretical ideas).

## **NETWORKS IN PLANNING, PLANNING FOR NETWORKS IN LANGKAWI GEOPARK**

Planners undertaking participatory planning of Langkawi Geopark development activities can incorporate networks technique into their mandatory and non-mandatory consultations: interpersonal dialogues, workshops and others with stakeholders. The planners' personal contacts with consultation participants can stimulate networks formation and maintenance through firstly influencing all participants on the benefits of sustainable development and heritage conservation. At the same time, they can influence those people about the need to work together in every single geopark development regardless of socio-economic backgrounds. The resulting networks possibly established between them and the participants as well as between the participants themselves will be used to effectively develop and implement geopark plans.

This article proposes several key network features for effective networks formation, stability, sustainability in future geopark activity planning and implementation. They are: series of relationships and interactions established simultaneously, inclusivity, intensity and density, accessibility, interactive, proliferating, intensive and expansive, hierarchical and vertical, top-down and bottom-up, and centralised and decentralised. These features represent the potential conscious effort of planners and stakeholders to shape and influence forms of networks suited to their needs in the Langkawi Geopark context. However, for Langkawi Geopark, the features are also influenced and bound by an institutionalised framework suited to Malaysian socio-political context, in which, adapting Sorensen and Torfing's idea, is constituted by regulative, normative, cognitive and imaginary dimensions (2001: 10). Therefore, the features are discussed in relation to these dimensions and their aspects (see Table 1). However, while some of those aspects have existed prior to geoparks context, some others can be developed by planners and stakeholders in their conscious networking efforts. Some similar aspects also have the potential to facilitate, shape and influence networks. These arguments are backed by examples of existing stakeholder work relationships in geopark activities that indicate the presence of particular networks features that have the potential to be developed into full blown networks of relationships. Planners can learn from those relationships and use the networks technique to further develop them for effective future Langkawi Geopark development. The examples came from the authors' findings obtained from semi-structured interviews; workshop consultations with several government, private business sector, NGOs and community stakeholders; and analysis of some geopark activities.

**Table 1 :** Essence of Networks for Effective Langkawi Geopark Development

<b>ESSENCE OF EFFECTIVE NETWORKS</b>				
<b>Key Networks Features (Structural)</b>	<b>Regulative dimension</b>	<b>Normative dimension</b>	<b>Cognitive dimension</b>	<b>Imaginary dimension</b>
Series of Relationships and Interactions (established simultaneously)	Formal rules, procedures, mandates, policies, constitution  (COMMONALITIES & VARIATIONS)	Informal rules, social norms, social values, Standards  (COMMONALITIES)	Codes, concepts, knowledge (Understanding Awareness)	Common sense of belonging  Common identity about being a “geoparkian”  Common hopes and aspirations  Common emotions/ sentiments  (COMMONALITIES)
Inclusivity				
Intensity + Density				
(Frequency & Regularity of Interactions)				
Accessibility				
Interactive (Reciprocity, Mutuality)				
Intensive + Expansive				
Proliferating (Many ties allowed)				
Hierarchical + Vertical				
Top-down + Bottom up				

Source: Adapted from Sorensen & Torfing 2007 and Barney 2004.

In reference to Table 1, the 'regulative' dimension includes rules, mandates, procedures and policies stipulated within the Federal and Kedah state constitutions. Rules, procedures, mandates and policies of LADA and those of other organisational stakeholders are also included (Sarah Aziz 2010). They may be varied but they can still be integrated and synchronised for effective geopark development. The 'normative' dimension comprises norms, values and standards that are formal, cultural and social in nature. The institutionalised framework also has a 'cognitive' aspect because it produces codes, concepts and specialised knowledge, for instance about activities and projects. Finally, negotiations for any geopark planning even have an 'imaginary' aspect whereby identities, ideologies and common hopes about the geopark may be generated (Sorensen and Torfing 2007). The imaginary level has emotive and sentiment components. The imaginary, cognitive and normative dimensions, namely the informal ones, also regulate networks behaviour in addition to rules, regulations and procedures. Moreover, some of the regulative, normative, cognitive and imaginary aspects can be conceptualised in this article as network 'flows'. Similar or common aspects ('flows') found in the regulative, normative, cognitive and imaginary dimensions facilitate the networks.

## **SERIES OF RELATIONSHIPS AND INTERACTIONS, EXCLUSIVITY AND PROLIFERATING**

The utility of the networks technique firstly requires planners to get everybody or stakeholder involved in the consultations, dialogues, workshops and other face-to-face interactions, not just people of certain high positions or social statuses. This would demonstrate the **inclusivity** and **proliferating** nature of the relationships. Inclusivity means everyone or every organisation can be involved in networks. Proliferating means there is no limit on the number of nodes (networks actors) and ties in the networks. In following Sorensen and Torfing's words (2007: 9), the technique will allow the articulation of a series of "...a number of private, semi-public and public actors ..." who are "... *dependent* on one another's resources and capacities ..." and who are "... operationally autonomous in the sense they are not commanded by superiors to think and act in a certain way ...". Everyone is important in development as each of them has, in Sorensen and Torfing's words, "... a stake in the policy issues at hand ... can contribute resources and capacities of a certain value to the other actors ..." (Sorensen and Torfing 2007: 9). Examples of stakeholders are the Federal Government, Kedah State government, local agencies, NGO's, village communities, local and foreign tourists, visitors, retailers, school children, university students, senior citizens, industrialists, researchers, academics and others (see Nor Zaini Azman et al. 2010 on school children, Ong et al. 2010a and Ong et al. 2010b on tourists, and Rahimah Abdul Aziz 2011 and Sharina Abdul Halim et al. 2010 on community members and villagers). All these people either represent organisations, institutions, communal or themselves as individuals. Their

involvement is due to formal organisational duties and responsibilities or public sector work obligations, corporate goals, socio-cultural norms and values of particular social collectivities, cultural or religious traditions or voluntary intentions.

To quote an example of stakeholder involvement based on formal duties and goals in a recent geopark activity, 'Langkawi Geopark Carnival 2011', stakeholders were LADA (main organiser), local agencies, NGOs, schools, colleges, hoteliers and businesses. Some of the government sectors were LADA, Majpeba, Pejda, Japam, Podiram, Kema, Marim, Beliasu, and Tubacom. Some NGOs were Latga, Lata, Kumperika, Fotoclu, Pasamal, Motoclas, Atiskeb, Wayaku, and Mahot, while Srigenda and Koleko were the education organisations. Hotbellvist and Azdaent were hotelier and business sectors involved in the activity, respectively. A local mosque was also involved. Except for LADA, the names of these organisations are not actual names. Their actual names are concealed for ethical reasons. These stakeholders were all involved in the activity in terms of decision-making and/or planning and/or implementation. The level of cooperation given by these stakeholders to LADA was generally good. In another example of activity during the 4th International UNESCO Conference on Geoparks (Geopark Conference in short) held in April 2010 and mainly organised by LADA, some of the government stakeholders who participated were Majpeba, Pejda, Minedip, Forsdip, Watdip, Landip, Edudip, Podiram, and Ukem. Some of the NGOs were Latga, Lata, Mahot, Natusoc and Mat. Several schools in Langkawi also participated.

A plurality of public and private actors was indeed visible in those activities. Besides cooperation, the findings revealed that most stakeholders in the two activities generally demonstrated motivation in their involvement from the beginning to the end of the activities. A common idea of work commitment and its importance to geopark development presumably existed among those stakeholders. The presence of mutual moral support among some of those stakeholders, presumably sharing common ideas, values, beliefs, knowledge and hopes concerning geopark development was also recorded. Moreover, some similarities in terms of understanding and awareness of the meaning of geopark, its importance to Langkawi and socio-economic benefits were uncovered. Findings from the authors' baseline study also revealed a large majority of the 540 village respondents from six Langkawi districts demonstrated similar understanding and awareness of geopark and geopark benefits, and similar acceptance of the geopark concept (see Rahimah Abdul Aziz 2011). Therefore, planners can learn from the sort of work relationships found in the carnival and conference activities and findings from the interviews and baseline community study, and incorporate all those people and many more stakeholders, while retaining the existing ones, in the planning and implementation of future geopark activities.

All stakeholders, including the ones who have never been involved in geopark development, could be encouraged to be involved in many different future geopark



activities. The findings from interviews and stakeholder consultations with Kedah state government authorities, various NGOs, hoteliers, retailers, primary and secondary schools, village communities and association, and the writers' and the research group's baseline study generally revealed that most stakeholders expressed their desire to be involved in geopark development activities in cooperation or collaboration with the public government sector, including LADA and local authorities (see Rahimah Abdul Aziz 2011, also Ong Puay Liu et al. 2010b).

## **INTENSITY, DENSITY AND ACCESSIBILITY**

The level of networking that planners can facilitate through geopark stakeholder consultations are individual to individual, individual to community and formal organisations, community to community, and organisation to organisation. Ego-centred and systemic levels of networking may emerge. A series of relationships either at the ego or systemic levels simply mean that the relationships should not be on a one-to-one basis but between several or many people or parties at one point in time. These should not be on 'one-off' contacts, but there should be constant contacts throughout the whole activity or project, bringing about closeness of relationships and establishing mutual moral support for the sake of effective networking. Apart from the networks being **inclusive** and **proliferating**, they may also be **intense** and **dense** in nature. **Intensity** and **density** are seen through frequency of meetings and regularity in patterns of interactions. Density also indicates the presence of strong ties while intensity is indicated by multiplicities of ties formed as a result of frequent meetings and interactions in one or many different geopark development projects. There is also **accessibility** as many people and stakeholders have the opportunity to get access and be involved in networks regardless of their organisational and socio-economic backgrounds, and sectors. In other words, there should not be networks boundary limitations.

For any geopark activity, planners can even encourage stakeholders participating in the consultations to personally establish a series of social networks with the planners and among themselves. Again, the networks' features of **accessibility** and **inclusivity** circumscribed by norms and values concerning mutual frequent contacts can be demonstrated. Equally important is for the planners to make the participants see, be aware and recognise that their work relationships can take the form of networks and particular norms and values concerning effective networking may be created by themselves. If networks are formed or recognised, then there will be a series of work relationships in the form of networks between the planners and the participants, and also between the participants themselves. As such, the participants, including the planners, can establish **accessible** and **inclusive** networks disregarding their organisational positions, social statuses and sectors.

## HORIZONTAL, VERTICAL, CENTRALISED AND DECENTRALISED

**Horizontal** relations may also be established and maintained in conjunction with **vertical** relations. The horizontal relations do not mean that people are equal in terms of authority and resources as there will still be parties who hold some high level of power and control, namely the government authorities in charge of Langkawi socio-economic and geopark development. Nonetheless, some level of power and control can be given to the participants bringing about **decentralisation** while maintaining **centralised** command and control by LADA and the local level agencies within the bounds of rules, regulations and procedures (see Kjaer 2004, and Ingraham and Lynn 2004 for ideas on decentralisation and devolution in governance networks). Planners can request for **bottom-up** interactions between the participants in addition to the usual dominant top-down ones. While **top-down** command and control is to be maintained, it can still be reduced to give room for the non-government stakeholders situated in the bottom ranks of social and political hierarchy to learn to take control and have some level of authority over the planning process, management, implementation and monitoring of the activity or project. People's empowerment will gradually emerge. Processes of personal and organisational development may follow suit.

To quote the Langkawi Geopark Carnival example again, horizontal relationships were evident between government authorities such as LADA, Majpeba, Pejda, Japam, Podiram, Kema and Maritm while the vertical relationships were formed between these authorities, and the NGOs, schools, colleges, businesses and hoteliers. Government authorities were involved in planning and implementation while LADA was the main decision maker. Other stakeholders were involved in the implementation process. Horizontal and vertical relationships were also evident in the Geopark Conference activity. LADA, being the main organiser, was the main decision maker while government stakeholders, NGOs and schools were involved in planning and implementing the event. In future planning for geopark activities, it is possible for all these types of relationships to exist again, in fact further developed, intensified and expanded. All if not some relevant stakeholders must also be involved in decision making with some level of power and control given to them. Hence, **horizontal and vertical, top-down and bottom-up, and centralised and decentralised** networks may exist, all of which are bound by rules, regulations, procedures, social norms and social values. After all, the villager respondents from the baseline study and also interviewees from NGOs, hoteliers, retailers, schools and village associations have generally shown their interests to be involved in geopark development in cooperation or collaboration with local agencies and LADA. It is only right to get them involved in the potentially networked relationships for any future geopark activities.

In stakeholder consultations for geopark activities, planners can encourage the potentially networked participants to interact through negotiations that are based on bargaining and