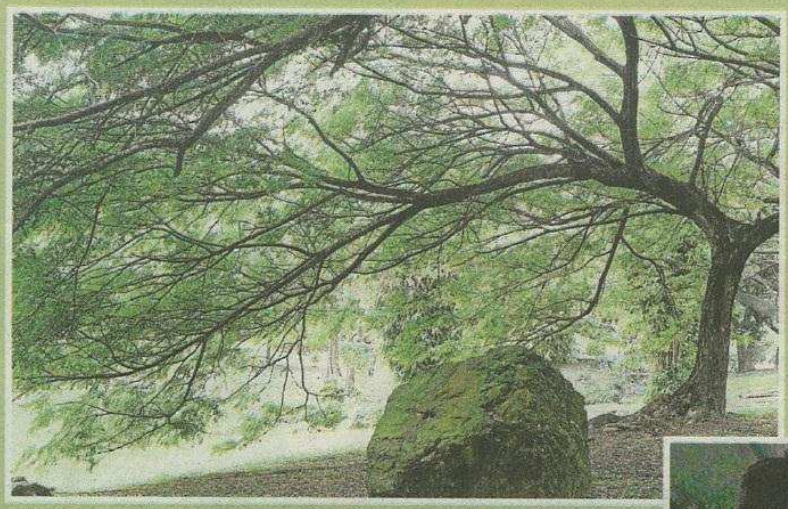
Ensuring a Well-planned and Sustainable Urban Landscape

Local Authorities should take stock of tree planting and maintenance, says FRIM Director General Dato' Dr Abd Latif Mohmod



SJ Echo posed several questions to FRIM Director General Dato' Dr Abd Latif Mohmod who obligingly answered our query on urban landscaping and how important it is for local authorities to initiate the development of a more well-planned and sustainable urban landscape management and conservation system. He says with us several pertinent points and how FRIM itself can assist.

1. FRIM plays a very important role in forestry and now in this modern age and times, also a very important role in urban landscaping. How can FRIM assist the private sector and government in planning and managing a better environment for cities and development projects?

FRIM can only assist the private sector and government agencies in planning and managing the cities and development projects if we are requested, invited or engaged to do so. We highlight our services through our official website and media; and we encourage the private sector and related local authorities to approach and involve our experts in the planning and management of cities and development projects involving tree planting, transplantation, care and maintenance. We offer training programmes including short courses on Forest Tree Identification, Tree Improvement, Nursery Establishment and Propagation Techniques. FRIM is expected to offer training programmes for employees of local authorities in 2013.

As one of the few institutions in the world that have approved expertise and facilities in line with the international standards; FRIM offers consultancy and testing services covering aspects of tropical forestry research and development in forestry and conservation, forest product, biotechnology, and operations and general management. Apart from consultancy services, FRIM also encourages targeted participants including policy makers, key players, implementers and stakeholders to become "Friends of FRIM" and/or jointly conduct environmental awareness (EE) programmes focusing on ensuring the sustainability and proper management of urban forest through capacity building and hands-on training.

2. How can you assist (and at times insist) on suitable trees for planting?

Once FRIM is officially appointed, consulted or engaged to provide our services, we will serve to the best of our ability and that would mean that sometimes, we will have to insist that our recommendations be followed. We will assist in a development project involving tree planting, care and management including restoration of a degraded land. Our experts will give their professional advice or technical inputs accordingly in preparing the plan for development and management of the landscape, depending on the scope of work defined by the client. If the client would like us to be involved in tree planting of an area, for example, we would advise and insist on the selection of suitable trees, the use of good quality planting materials including good fertilisers, and implementation of the regular post-planting maintenance activities. We have to take into account the location, the soil suitability, the expected function(s) of the trees in the area and the environmental conditions to ensure the successful implementation of the project and that the newly-planted trees and/or existing trees will grow well.

3. Is it time for local authorities to take stock of their existing trees - to identify risky trees for replacement and to reorganise the way they plant, manage and maintain their trees? How can FRIM assist in this?

It is definitely timely for local authorities to take stock of the newly planted trees and/or existing trees, and to initiate the development of a more well-planned and sustainable urban landscape management and conservation, which incorporates scheduled tree maintenance activities for the comfort, convenience and safety of the public.

Currently, private contractors are often engaged by local authorities to plant trees and/or undertake tree maintenance work and most of the workers employed by these contractors do not have any related knowledge or training to do the job. There is a need to set a condition for the engagement of such contractors that they must employ workers with basic knowledge on arboriculture or provide such training for their workers. In this aspect, FRIM arborists can assist in providing such capacity building training.

In fact, FRIM offers various training courses related to the management of natural resources and environment for urban landscape managers and practitioners including on the use of Geographical Information System (GIS) for this purpose and for monitoring the environmental condition of an area.

Most of the time, the services of our arborists are sought on ad hoc basis or when there is a problem or for crisis management situation. What we would like to assist and see in place is something in place that is more sustainable, more long-termed. If arborists are involved from beginning, from landscape design, planning to after completion of a development project, and their recommendations on tree selection, planting, care maintenance and management are implemented accordingly, a local authority will not have much of problems related to trees to deal with in the long run.

Therefore, it would be good for local authorities to work with FRIM to come up with studies that would form the basis for understanding the tree management status, potential and challenges, including understanding the weather conditions and changes that would affect the health of trees in their respective areas.

4. Last but not least, how can FRIM assist local authorities in improving their management of trees?

I think I have addressed this question in the above answers. I would like to invite local authorities to participate in the Urban Forestry Conference 2012 which will be jointly organised by FRIM and Sabah Forestry Corporation, from 2 to 6 October in Kuching Sarawak.

The conference will be attended by decision-makers, urban managers, urban planners, landscape architects, urban foresters, park managers, arborists, and tree care contractors, among others.

It will provide opportunities for collaborations and sharing of the latest information on urban forest, park development and management towards sustainability.

The conference will highlight, among others, the planning and design for sustainable green space; ecological functions and sustainable resource management of urban forests and parks; socio-economic aspects of urban forests and parks; and the use of urban forests and parks for environmental education and recreation. For information on this conference, check www.frim.gov.my on seminars and courses.

For the Urban Forestry Conference in 2013, we plan to have a special discussion on possible strategic alliance between FRIM and interested local authorities.

Managing Our Urban Landscape

LAST month, we highlighted plans to relocate the Ketapang tree in SS14, the first of its kind to be carried out in Subang Jaya which will be funded by Syarikat Prasarana Negara Berhad, the concessionaire for the Kelana Jaya LRT Line. The transplanting of the tree is expected to be carried out by experts from the Forest Research Institute of Malaysia (FRIM).

SJ Echo caught up with FRIM senior scientific officer Adnan Mohammad, the arborist who has been tasked to plan the transplanting exercise. He shares with us the role of an arborist, a little known profession which sees to the "nuts and bolts" of our urban landscape behind the scenes.

1. What services do arborists in FRIM provide for the urban landscape around the country for the private sector and also local authorities?

In general, FRIM arborists provide consultancy services on the planning, management and maintenance of urban landscape and amenity trees through their expertise including tree selection, tree planting, transplanting, conducting tree inventory and risk assessments, tree preservation as well as pruning activities and tree removal.

A professional arborist can identify tree problems, and treat/rectify the problem by providing plant health-care management. It is important for an arborist to be consulted from the start of a development project involving green areas. An arborist should be involved from the planning stages right down to construction and after the completion of the project. Through proper tree selection, planting or transplanting, conducting impact and risk assessments as well as tree care management, arborists help to protect trees before, during and after a project, as well as ensure public safety.

2. How does the role of an arborist go hand-in-hand with the ever changing landscapes of our cities and towns?

Planting of trees in towns and cities should be a continuous effort. In undertaking this activity, proper selection of trees could contribute to achieving the goal of greening a place. By selecting suitable trees, using good planting materials and ensuring proper care of these trees (post-planting maintenance), we can greatly reduce any problem caused by the trees in the long run.

With the ever-changing landscapes in response to the increasing population in the cities and towns including more demand for housing, wider roads and highways, better public infrastructure and amenities etc., and growing concern regarding pollution and other issues such as climate change, planting, caring of trees and conserving existing trees have become very challenging. There is a need for change in the way we conduct the landscape maintenance and management. The services of arborists will be needed. This has been the case for most developed countries, and the nearest example we can see is Singapore.

In the Klang Valley, trees planted 30-40 years ago have grown big and matured, some have become frail and they need to be managed professionally to ensure they remain healthy, safe and able to continue to serve as an important element of the city landscape (green city, sustainable city or smart city). Arborists can play a significant role in ensuring a more systematic and sustainable management of these trees, and not just to be engaged on an ad hoc basis such as for crisis management purposes, which is often the case.

Tree maintenance work should not only be carried out in response to incidences of fallen trees or branches or when there are complaints. Being responsive instead of pro-active would make it difficult to ensure the safety and sustainability of the urban forest.

The arboriculture approach to managing urban trees is based on the needs of the trees, the function of the trees and the environmental condition. Through the continuous management of urban trees involving arborists, there will be less problems in relation to urban trees and the public will also be more confident in terms of their safety.

In housing areas, for example, the residents can sleep better knowing that the surrounding trees are well-maintained and regularly subject to safety inspection by a certified arborist. Motorists stuck in traffic jam will also have no fear of falling trees or branches during heavy rain or strong wind. In short, when trees are maintained and properly cared for by arborists, they will become an asset to a local authority, and not a liability. As a result, there will also be less complaints from the public and less trees being pruned and felled unnecessarily.

In a fast-growing urban setting, areas with existing trees are often sacrificed for development. Trees are cut down without a thought given to the number of years they took to grow. Arborists will be instrumental in helping the local authorities or developers to preserve and maintain valuable trees in a development project. In managing urban trees, besides technical knowledge and experience, arborists use various sophisticated tools particularly for checking internal decay when a tree cavity is detected and also to assess the anchoring strength of the tree roots against strong winds.

3. How different is an arborist from a landscape architect?

An arborist is a person who is trained and actively engaged in the profession of arboriculture, specialising in caring for individual trees. Their work includes selecting suitable trees, planting and pruning, and diagnosing and treating tree diseases. A landscape architect is involved in the planning and designing of outdoor spaces which may include trees, gardens or parks; and is more concerned with the functionality or the aesthetic value of an area while an arborist is more concerned over the management, protection and maintenance of urban landscape trees for the benefit and well-being of the public and the environment.

A landscape architect can become an arborist as the profession also deals with trees, and it will be of great help if he has adequate in-depth knowledge and understanding of trees from the biological aspect, species selection, planting methods as well as the tree maintenance works. Knowledge in arboriculture or input from an arborist is important because a landscape design scheme may look good on paper but it does not guarantee success on the ground because if it involves softscapes such as trees, knowledge on the right selection, proper care and management of the trees is required to ensure the plants grow well to serve their intended purposes especially for beautification or other functions including providing shade.

4. What considerations do arborists take when approached to plan an urban landscape or when approached to relocate trees?

In planning an urban landscape, an arborist can assist by providing expert advice or technical inputs, working closely with other professionals involved including the landscape architect in preparing the plan for development and management of a landscape and working with engineers and others at the construction site to ensure the newly planted trees and/or existing trees will grow well in the area.

When approached to relocate trees, an arborist will consider the client's objectives and advise accordingly. He/she will consider whether the trees are worth saving, taking into account the public safety which is of paramount importance, because relocating a tree is not only costly but involves a lot of work over a period of time that may also affect or cause disruption to the lives of the people in the area. It requires careful planning. The arborist will also need to consider the type of trees involved, the time frame required to ensure survival of the trees, the suitability of the new location, the costs involved, the logistic requirements, and the possible obstructions along the way from the original location to the new site, among others. In all this, public safety is of utmost importance.

5. On plans to transplant the ketapang tree in SS14 Subang Jaya, what are the basic considerations and step-by-step measures to be taken to successfully relocate the tree?

As I have mentioned, the first consideration is whether it is advisable to relocate the tree to another site. We also have to consider the transplantability of the tree, which depends on the tree type and its health status. The other considerations and measures to be taken to ensure the successful relocation are the funding and logistics requirements, public safety, time and the suitability of the proposed new site for the tree.

Relocating a tree is a costly process that could take up to several months to prepare depending on various factors (size of trees, type, health status, growth performance, ; and we have to consider whether it is worth using public funds for the purpose, unless it is sponsored for by a corporate body. And as I have stressed earlier, public safety is top priority. In the process of relocating a tree, we have to take all safety precautionary measures to prevent any occurrence of any harm or damage. There will be a lot of tree preparation works involved including pruning and trenching which should be handled with care.

The location of the new site is also crucial. If it is far away or we have to go through some busy roads to get there, we have to consider all the obstructions along the way including road signs, overhead bridges and wires, tunnels etc. If we have to reduce the size of the tree greatly, it will affect its ability to survive and grow well in the new place and failing to consider all these factors may defeat the whole purpose of trying to save the tree.

Once we are officially appointed to undertake the task, the following are the relocation procedures:

Initial preparation:

1. The decision to relocate or transplant a tree is made by a client, and the arborist will assess the situation and present the facts including the chances of success and failure in carrying out the task;
2. Regarding the ketapang tree, we have to identify in advance who are our clients there who will sponsor the process and who is responsible for the decision to relocate the tree, as well as to care and maintain tree after the relocation;
3. We must obtain the consent and support from owners of nearby premises who will be affected by closure of the road(s) for a period of time to do the preparatory work until the completion of the transfer;
4. We must take every precautionary measures to ensure public safety; and
5. We must also obtain the assistance and approval from all the relevant authorities concerned.

The arborist will then undertake the following preparation, treatment and removal of the tree(s):

1. Perform detailed inspection of the tree;
2. Prune the branches to an appropriate size/form;
3. Conduct dredging and cutting the roots (root pruning)
4. Prepare the root ball
5. Allow a period of at least three (3) months for hardening off. The longer the period for this, the better for the tree (6-8 months) as it will be able to adjust and grow new leaves and roots before the relocation;
6. Transfer to the new location, requiring the use of a high-powered crane and appropriate (low loader) truck.
7. Provide proper care to ensure the tree grows strong and healthy.

6. How many arborists does FRIM have and in a nutshell, how can they share their expertise with the private or public sector?

FRIM has seven certified arborists. FRIM arborists provide their consultancy services based on the requests made by the private or public sectors. Those interested may check out our website or contact us directly. We also share our knowledge and technical know-how on good arboricultural practices through our training workshops and seminars.

FRIM arborists have been involved/consulted/worked with Dewan Bandaraya Kuala Lumpur, Shah Alam City Council, Penang Municipal Council, Dewan Bandaraya Kuching Utara, among others.

On relocation of trees, we have worked with the Penang Municipal Council in 2006 in transplanting two huge Rain trees from one location to another within a development project site. In 1996-1998, we were involved in transplanting forest trees at KLIA, and in 2009, we helped to transplant tree huge trees from Jalan Stonor to Taman Pudu Ulu.

7. Is every tree a priority to save for an arborist or does he/she also take into account public safety and costs when recommending a relocation?

Not every tree is a priority for an arborist to save... As I have explained earlier, an arborist does not compromise on public safety. In any tree-related work including in presenting our recommendations on a decision to relocate trees, public safety is of paramount concern. It is also a priority in the preparation for transplanting including tree pruning, felling, tree climbing or even grass cutting activities to prevent unwanted harm, damage or injury. After all, safe work practices are part of the focus of an arboricultural course.