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TEMPERATURE MAX 28 | MIN 19 | HUMIDITY 56% FORECAST GENERALLY CLOUDY SKY. LIGHT RAIN WOULD OCCUR IN SOME AREAS | SUNRISE 06:16 HRS | SUNSET 17:51 HRS

Cut trees, conserve better: THAT'S THE NEW APPROACH

IWST identifies 40 species of commercially viable alternative trees in urban areas

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Scientists say some trees like Gulmohar (top left) are not good for urban environs as its roots damage roads from underneath. Alternative timbers can be used for building wood cabins (top right). Alternative timbers (other pictures)

As the chorus of green crusaders worldwide to save trees reaches a crescendo, a group of scientists, wood experts, and entrepreneurs in Bangalore have taken upon themselves the daunting task of changing the rule of the game by promoting growing and cutting of trees for large scale commercial uses. "Grow, harvest and utilize trees," is their new mantra.

The scientists, at the Institute of Wood Science and Technology (IWST) in Malleswaram, a centre of excellence in wood science research and sandal wood tree research under Indian Council of Forestry Research and Education, have identified about 40 species of commercially viable alternative trees, a large number of them of native variety.

The tree species are grown and compared with teak wood. Based on those properties the end-users are found. The findings are sent out to the BIS (Bureau of Indian Standards, 399, 1969).

"The stress is on using plantation-grown, lesser-known timber species. Growing trees identified by our institute on the basis of their respective strength and other utility based properties will shift the pressure from the primary timber trees like teak, rosewood, etc. These lesser known trees grow faster and are as good as teak for large scale commercial use by industry, construction, railways, handicraft sectors, etc," says Dr V. Ramakantha , director, IWST, and a senior Indian Forest Service (IFS) officer.

Whenever there is demand for large scale usages of timber, people go for timbers recommended in BIS list. These trees can be grown and harvested with scientific and technical support from the institute.

There are around 3,000 species of timber trees found in India. Of this, 1,600 have commercial value and can be cut and used for different purposes.

In comparative analysis and scientific tests, these trees are found to have closest resemblance to properties found in teak wood, the bench-mark wood to ascertain strength properties of other tree species.

The institute has recommended growing and harvesting of lesser known but equally good timber trees as that of primary timber species : *Gironniera reticulata* (churchi), *Gyrocarpas jacquinii* (tanaku), *Mastixia arborea*, *Protium serratam* (murrtenga), *Sterculia urens* (karar), *Tamarindus indica* (imli). The list comes with different end-uses suggested for specific trees.

As *Wrightia tinctoria* — popularly known as Dudhi or Hale tree — gets scarce, scientists recommend alternative timbers to meet the growing demand of toy-makers and wood artisans from Karnataka and neighbouring states: *Adina cordifolia* (Haldu), *Grevillia robusta* (silver oak), *Acacia auriculaemormis*, *Eucalyptus tereticornis* etc.

ery work, is now available.

Scientists, however, rue that the idea of growing and harvesting alternative timber trees for commercial purposes is yet to catch the imagination of common people.

This is attributed to lack of adequate information on alternative timers in the public domain.

Scientists have also conducted studies on the strength properties of exotic species of trees for commercial use. *Maesopsis eminii* (musizi), *Swietenia mahagoni* (marag), *Enterolobium contortisiliquum*, *Ochroma lagopus* (balsa wood) are some of the exotic tree species.

Besides, there are also timber tree species with suitable strength properties for different structural and non structural uses.

These are: *Eucalyptus tereticornis* (noncoppice and coppice), *Eucalyptus camaldulensis* (eucalypts), *Acacia auriculaeformis* (Bengal jali), *Morus alba* (Mulberry), *Hevea brasiliensis* (rubber *lia*, etc.

Asked what type of trees people of Bangalore should go for, Dr Ramakantha says people should be encouraged to grow and use locally available trees like sandal (*Santalum album*), jackfruit (*Artocarpus heterophyllus*), kadamba (*Anthocephalus indicus*), parijata (*Nyctanthes arbor-tristeis*), jamun (*Syzygium cumini*), Asoka (*Saraga Asoka*), Champak (*Michelia champaca*) , Neem (*Azadirachta indica*) etc. These trees can be grown in 'human altered environment' outside the 'natural eco system' and harvested according to their respective rotation period.

With the rapid shrinking of urban space, Dr Ramakantha says it has become imperative to grow trees that serve some purpose to mankind. He points out most of the trees in and around Bangalore and in major Indian cities are neither good for ecology system nor do they have any economic value.

points out.

The efforts in identifying commercially viable trees is aimed at ensuring that tree conservation becomes an optimal mechanism.

In the absence of such identification, common people who are ignorant about trees that can indeed be cut for commercial use, end up cutting trees that are actually beneficial for the environment.

The institute, besides being a centre of excellence for research in wood science and sandal wood trees, has become a sought-after place for training forest department officials, entrepreneurs keen on learning about production of unique wood products, furniture using rubber and other new varieties of timber trees.

The wood museum at the campus showcases various types of woods along with their unique properties and their uses. For rural youths, training facilities for making various wood products are also being provided.