

Geeta Wahi Dua

HOME COMING

India, a country with diverse geographical features houses a wide variety of natural vegetation and forests located in different climatic zones – tropical, subtropical, temperate and alpine. The planting palette changes with natural variations in the ecological regime (geographical location, soil, hydrology and climate) spreading over an area of greater than 32 lakh square kilometers. There are unique native plant palettes for each biogeographic zone. Examples include moist tropical, dry tropical, montane subtropical, montane temperate, sub alpine and alpine types of forests. These provide a strong regional character and a sense of identity to the overall natural landscape across the country.

The natural vegetation of a region consists of species that are native to the region that have, over a considerable period of time, adapted themselves to the climate and other natural conditions for survival and growth. Native vegetation is therefore an accurate indicator of the natural soil, water and climatic regime. It is also a key part of biodiversity, providing natural habitats to a rich diversity of bird and animal life.

In landscape design, native vegetation forms the basis itself of defining a climatic zone unlike in architecture, where the response to climatic parameters is manifested in the form of built form, its orientation and design.

Urban context

In the urban realm today, vegetation is under tremendous pressure – environmental pollution, lack of healthy soil, depleted ground water tables, constraints of space and sunlight, vandalism to name a few. So, it is often assumed that native vegetation species will not do well in such areas. The selection of the plant material then often ignores the main ecological criteria of choosing plants of an indigenous nature. The resulting plant palette is restrained and limited for landscape designs in urban areas across India and is not necessarily native to the regions in which the sites are located.

This is in sharp contrast with the natural landscapes and forest types across India in which even smaller sub-regions are uniquely different from each other.

Is native vegetation unable to fulfill the functions of urban landscape projects? Or is it ignorance on the part of professionals, who are unable to think beyond the obvious or easily accessible?

Although there may be sensitive species of native vegetation which perform adversely in harsh urban situations, generally speaking, a native planting palette is broad enough so as to offer enough variety in terms of types, sizes, shapes and physical characteristics for landscape design. It is a matter of exploring the unexplored and hidden.

In urban areas, native vegetation while maintaining the ecological balance will generally require lower maintenance in long run. It will require fewer water and fertilizer resources and less labor, hence creating landscapes that are sustainable in both ecological and economic terms for the life of the planting. The use of native plant species in urban areas will enhance the biodiversity habitat on sites and beyond, and in doing so, landscape designs will reflect the regional character and at the same time respond to the design needs of projects.

Apart from the environmental aspects of vegetation in an urban project, one of the key objectives of the designer should be to bring a certain degree of natural imagery to the design. Native planting is one of the key elements of creating such imagery.

Still, the selection of plants and trees in a landscape design should be mainly dictated by the ecological compatibility of the species with the region rather than

anything else. If the planting survives in long run only then will the landscape design and the place itself be able to sustain itself and survive.

Way forward

The availability of limited study material and books on the subject of regional native vegetation are a few of the limiting factors in this direction. But the effort started a long time ago with research done by Forest Research Institute, FRI (Dehradun), Central Arid Zone Research Institute, CAZRI (Jodhpur), French Institute of Pondicherry (Pondicherry), Bombay Natural History Society BNHS (Mumbai), Centre for Science and Environment, CSE (New Delhi) and many other such organizations engaged in the study and compilation of data on the natural vegetation of various Indian biogeographic regions.

In the present scenario, there are no ready made or easy solutions. On the part of landscape designers, thorough research about vegetation indigenous to each site context may become an integral part of the scope of work. Various professional organizations, institutes and universities can initiate and support such research projects in collaboration with academicians, plant scientists, botanists, horticulturists and nature lovers for each region. These scientific documents and manuals can serve as a ready reference to many who want to study and design landscapes in different regions of the country. The planting palette for landscape designers practicing in Northern region – Delhi and NCR, has benefitted immensely from Pradip Krishen's thor-

oughly researched and beautifully illustrated *Trees of Delhi. A Survey of the Forest Types of India* by Harry, Champion and Seth of FRI Dehradun and *Tropical Garden Plants* by Bose, Chowdhury and Sharma have, of course, been serving as ready references for learning about native and adapted flora and the influencing factors for decades.

Government nurseries, agricultural universities, local growers can play a major role in creating a native plant bank – trees, shrubs and types of grasses for each region. Establishing urban nurseries which can propagate these native plant materials on a larger scale, so as to be able to fulfill the requirements in urban projects, collaborating with local farmers, gardeners, horticulturists to identify local species, guided tours of local city forests for professionals, are some of the ways to take this initiative further.

Landscape designers are amongst the few professionals who directly engage with nature in their day to day work. This engagement entails working in close association with land, water, air, and vegetation and their associated and interlinked processes. There is always an inherent tension between land and landscape design recurring constantly in their work, especially in urban areas. In this scenario, it becomes their responsibility to restore, reinstate and bring back the natural and ecological conditions, systems and processes of the site to the maximum possible extent as an integral part of the intended design intervention. Native vegetation forms the first and foremost part of it.



Naturalized species are introduced species of a region, which spread and multiply by natural regeneration, adapting itself to the region over several years and finally becomes an integral part of a region's flora. Bombax malabaricum, a naturalized species of Western Ghats. Location: Kolhapur regional forest. Photo courtesy: Jitendra Pawgi

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