



GOAL 15

# Life on Land



**9**

Research Projects

**328**

Publications

**13**

Patents



# NUST Plantation Drives to Preserve Environment and Natural Habitat

**2 Plantation drives per annum,  
97k+ Saplings Planted,  
338 Acres of Green Land,  
80 Acres in forest,  
Dedicated Horticulture office**

NUST is trying its best to increase awareness on preserving ecosystems by organizing programmes as well as taking initiatives to defer the rate at which ecosystems for wildlife are being destroyed. A dedicated horticulture office has been established at NUST which looks after landscaping, plantation and horticulture if NUST H12 Campus.



2 massive plantation drives, one in spring and one during monsoon, are organized every year, in which hundreds of saplings have been planted all over NUST since 2008. Apart from that, the plantation is organized at different occasions like orientations, semester ends, summer, international visits, chief guests and all other important events. These drives, aiming to restore the habitat of wildlife within NUST, are also aligned with the Prime Minister's Clean and Green Pakistan Initiative.

NUST Main Campus offers 338 acres of green land, out of which 80 acres is covered in forest, which provides habitat to several wild animals such as fox, porcupines, cats, dogs, mongoose, pigs and many more. Apart from forests, lakes situated inside the campus attract several bird species such as sparrows, francolins, kingfishers, and drakes, etc.



## NUST Environmental Club (NEC)

NUST Environment Club (NEC) was proudly launched at NUST H-12 Campus back in 2011 to celebrate nature and create awareness on environmental issues that are challenging the fate of planet Earth. The purpose of NEC has been to instill a sense of collective and individual responsibilities in the community towards protecting the environment and to inspire people into innovating and reforming their lives to eco-friendlier alternatives. NEC hosts exclusive events, sessions, blogs and much more to interact with its audience and is one of the most active societies thriving at NUST. Some of the events NEC successfully held are NEC Earth Day Carnival, Cycling Competition, Waste Reduction Week, etc.



## Forest Monitoring and change detection using remote sensing data

The researchers at NUST are developing a system that is able to quantitatively monitor forests of Pakistan. Specifically, the goal of the research is to deploy a small low-cost UAV to acquire temporal images and fuse it with available satellite imagery to enable thorough assessments of local forest conditions e.g., degradation and deforestation caused by theft, urbanization or natural factors such as arid climate, heavy dependence on irrigation water etc. by employing state-of-the-art machine learning techniques.

The developed system would not only fill in the gaps on data for the policymakers but also provide them with the vital information that is essential in ensuring sustainable management of forests.

NUST firmly believes that the work proposed in this project will lead to new opportunities for forest monitoring in Pakistan, and hence would help to raise awareness of the benefits of forests management and reduce the adverse effects of deforestation.