

## Naeem Short CV – One Pager (May 2026)

**Shahid Naeem** is Professor of Ecology in the Dept. of Ecology, Evolution, and Environmental Biology at Columbia University, whose research demonstrates the fundamental criticality of biodiversity to the structural integrity, energetic efficiency, and magnitude of material cycling in systems.

Naeem obtained his PhD from the University of California at Berkeley, was a postdoctoral fellow at Imperial College of London, the University of Copenhagen, and the University of Michigan. He has served on the faculty of the University of Minnesota, the University of Washington, and currently serves on the Faculty of Arts and Sciences at Columbia.

Naeem's research collectively shifts the paradigm of biodiversity as an enigmatic, passive factor governed by environment to an active, highly structured complex factor that governs environment. Beginning with the first direct experimental demonstration that biodiversity is a complex independent factor, Naeem's lab-group has expanded its work to cover an enormous array of taxa (plants, animals, and microorganisms) across a wide array ecosystems (terrestrial and aquatic, tropical and temperate, from tundra to forest to grassland to urban and agricultural systems). His work, consisting of over 200 publications totaling over 100,000 citations, has collectively revealed the myriad complex ways taxonomic, phylogenetic, and functional biodiversity simultaneously influence system functions through niche complementarity and selection effects. Some highlights include demonstrating that biodiverse communities resist invasion; biogeographic history modulates biodiversity effects; diverse tropical forests stably store carbon; that a diet of diverse, wild-caught fish is healthier than a diet of industrial agriculture products, and that biodiversity effects occur within and across trophic groups.

Recipient of the Ecological Society of America's Buell and Mercer Awards and the Lenfest Distinguished Faculty Award at Columbia University, Fellow of the American Association for the Advancement of Science, Michigan Society of Fellows, and an Environmental Leadership fellow (formerly Aldo Leopold), he is widely recognized as world leader in biodiversity science.

Naeem's leadership extends beyond his scholarly achievements to advancing the scientific enterprise. Naeem spearheaded consensus and infrastructure building, including contributing to the establishment and growth of two high impact journals (*Ecology Letters* and *Science Advances*), served as chair of his new (2001) department for 12 years, contributed to international consensus reports, directed research coordinating networks, served as President of the Ecological Society of America, and promoted human diversity throughout the sciences.

In essence, Naeem's research has shown biodiversity to be a complex, multidimensional, multifunctional factor that governs the magnitude, efficiency, and stability of system function. Realistically, there is no short-term scenario in which biodiversity loss can be

halted. However, Naeem's lab group exemplifies how contemporary biodiversity science can bend the curve. Using technologies including remote sensing, thermography, photogrammetry, UAVs, LiDAR, bioacoustics, e-DNA, metabolomics, phylogenomics, and other 'omics, such research offers tremendous promise for science-based policies towards nature-positive outcomes.