With nearly 99% of the world’s food—both the crops cultivated and even livestock—dependent on soil, it’s hard not to overstate its significance to human existence. Moreover, soil is also home to a quarter of the Earth’s biodiversity.

The Global Soil Biodiversity Atlas, released by the European Union in May, aims at increasing public awareness on the importance of soil organisms, that are crucial to food production. Fertile soil is vital for human survival. The atlas will act as a guide for policymakers, said DJ Bagyaraj, India’s only contributor to the soil atlas. Bagyaraj retired as the head of the department of agricultural microbiology at Gandhi Krishi Vigyan Kendra, Bengaluru, before assuming his current position as chairman of Centre of Natural Biological Resources and Community Development (CNBRCD) in the city, which is funded by the departments of biotechnology, and science and technology. He is also the only Indian member of the Food and Agriculture Organization (FAO) working committee, part of the United Nations (UN) initiative for a global partnership programme for sustainable soil management using microorganisms.

The UN declared 2015 as the International Year of Soils and designated December 5 as World Soil Day. Speaking about the visible spurt in the activity around soil across the world, Bagyaraj said, “Health of the soil is directly related to the world’s food security. The UN and other international agencies have taken a lead in the direction.”

The atlas is the outcome of several discussions, including those held at the international workshop on Managing living soils, conducted by FAO at Rome in 2012. From the beginning of 2013 till May 2016, over 100 scientists were invited to contribute on different groups of flora and fauna they specialised in.

B’lurean is India’s sole contributor to global soil biodiversity atlas

Comprising eight chapters and running into 176 pages, the atlas presents the latest research on soil biodiversity, while focusing on the role played by soil organisms in sustaining life on the planet. Bagyaraj’s contribution is on mycorrhizal fungi, which are naturally available in the soil. The fungi aid plants take in phosphorus. “Like any other tropical region, direct availability of the fungi is low in India as well. My research focuses on making it available to farmers,” said Bagyaraj.

Bagyaraj’s contribution to atlas

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