The annual celebration of Pollinator Week, happening from the 22nd to 28th of June, brings attention to the essential role that pollinators play in the world's ecosystem. This event, launched by the non-profit Pollinator Partnership and the USA' Senate in 2007, highlights key issues surrounding the existence and survival of these critical species.

The Importance of Pollinators

The Food and Agriculture Organization (FAO) states that dominant pollinators like bees have approximately 25,000 to 30,000 species. More than 180,000 plant species globally, which includes about 1,200 crop varieties, rely on pollinators for reproduction purposes.

Declining Pollinator Populations

Around the globe, the numbers are dropping for around 40% of invertebrate pollinator species, bees and butterflies amongst them. For the past three decades, the wild honeybees (genus Apis) in India, like the Asian bee and the little bee, have been consistently declining. Nearly 16.5% of vertebrate pollinators also face extinction, with 45 species of bats, 36 species of non-flying mammals, 26 species of hummingbirds, seven sunbird species and 70 passerine bird species at risk.

Reasons Behind the Decline

A multitude of human activities contribute to this decline. These include changes in land use and fragmentation, shifts in agricultural practices such as the use of chemical pesticides and the cultivation of Genetically Modified Organisms (GMOs), environmental pollution from nitrogen and heavy metals, growth of invasive alien species and higher temperatures brought about by climate change.

About Pollination

Pollination is the process that initiates the generation of seeds, fruits, and new plant life. It occurs when a pollen grain moves from the anther (male part) of a flower to the stigma (female part). This vital process can be achieved through self-pollination, wind and water pollination or via animal pollinators.

Animal Pollinators

Pollinators are vectors that transport pollen within the flower and from one flower to another. They are drawn to flowers for nectar or pollen, and in turn transport pollen grains. There are two main categories of animal pollinators: invertebrate pollinators, including bees, moths and butterflies; and vertebrate pollinators such as monkeys, rodents and birds.

Effect on Agriculture and Proposed Solutions

Pollinators contribute to one-third of the world's agricultural crop production. They can increase crop yield by up to 24% in small diverse farms, which underlines their crucial role in food production and nutrition. To counteract the decline of pollinators, it is recommended that natural habitats be preserved, alongside the promotion of plant diversity with hedgerows, floral trees and shrubs. Additionally, reducing the dependency on toxic chemicals and pesticides can mitigate harm to

these animal species. Government action is also necessary for conservation efforts, specifically for bees. Apiculture, or bee-keeping, should be recognized as a subject for advanced research, and farming communities should be encouraged to adopt this practice for additional income. This approach benefits both humans and bee populations.

