Pollinators—primarily bees, but also flies, butterflies, moths, beetles, birds, and bats—underpin biodiversity by sustaining plant reproduction and genetic diversity across agro-ecosystems and natural forests. In Bangladesh, field studies from the Sundarbans to university campuses reveal rich but shifting pollinator communities, emphasizing both diversity and sensitivity to disturbance. Research in the Sundarbans shows plant–pollinator interactions changing along disturbance gradients, highlighting how habitat quality directly shapes pollinator assemblages and ecosystem services. Campus surveys reveal varied pollinator richness and evenness, underscoring the role of urban and peri-urban greens as important refuges. In agriculture, honeybee pollination of mustard, sesame, and other crops significantly increases seed set and yields, translating ecosystem services into measurable productivity gains. Globally, bee pollination is tied to nutritionally important foods and dietary diversity. These lessons apply locally, where fruits and vegetables supply micronutrients that support health and nutrition security.

Forestry and landscape management also benefit. Flowering trees in social forestry, roadside plantings, and homestead agroforestry provide forage and nesting substrates, stabilizing pollinator communities that, in turn, assist natural regeneration and strengthen forest resilience. Bangladesh's National Biodiversity Strategy and Action Plan (NBSAP) recognizes the need to conserve pollinators within wider ecosystem management and calls for actions that enhance soil and biological diversity in production landscapes—an enabling policy framework for mainstreaming pollinator-friendly practices.

Over the past 25 years, Bangladesh has made notable progress in conserving pollinators, spurred by rising awareness of their ecological and economic importance as well as concerns about habitat loss, pesticide use, and climate change. The country has a long history with Apis cerana and wild Apis dorsata. Furthermore, initiatives from government agencies, NGOs, and research institutions have emphasized the development of community-based beekeeping programs, which not only enhance crop yields but also provide supplementary income for farmers. Bangladesh has taken many steps to promote apiculture, including:

1. Documenting yield benefits and management insights from Bangladesh-based trials (e.g., mustard, sesame), which guide the timing of pesticide applications to reduce harm to foraging bees;

2. Conducting research on pollinator communities in mangrove and urban habitats to inform habitat restoration priorities; and
3. Establishing institutional training programs and manuals that scale beekeeping and pollination services for farms.

Policy momentum via the NBSAP and development partner analyses further strengthens the integration of pollinator conservation into agricultural and forestry planning.

Key challenges remain: habitat loss, floral resource scarcity during dry seasons, and pesticide exposure that reduces bee activity and colony health. However, solutions are available. Bangladesh can expand pollinator-friendly field margins, encourage staggered flowering in homesteads, promote pesticide risk reduction, and strengthen community-based monitoring tied to protected areas and co-managed forests. Emerging global best practices—such as creating urban and roadside pollinator corridors—are highly relevant for Bangladesh's mosaic landscapes. Together, evidence, policy, and extension platforms position Bangladesh to accelerate pollinator-positive actions that safeguard biodiversity, agriculture, forestry, health, nutrition, and living knowledge systems.

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