

Global Pollinators Project

Conservation and Management of Pollinators for Sustainable Agriculture

through an Ecosystem Approach



Brazil



UCC

Ghana



India



Kenya



Nepal



Pakistan



South Africa



Pollination is a key interaction with implications for both wild ecosystems and human livelihoods. It enables both plant reproduction, and food production for humans and animals of fruits and seeds, including for many crops essential to food security and sound nutrition.

Pollination may be as critical to plant production as water and light, yet it has largely been taken for granted, and its value unrecognized. In the

continents of Latin America, Africa and Asia, an average of 40% of the land area of crops is planted to crops with some dependence on animal pollinators, 25% of primary crop production is dependent upon pollinators, and about 60% of all primary crops grown require pollination services for optimal production. These are low estimates, as they do not include secondary crops, seed crops, medicinal plants or wild-harvested crops, but they do provide an indication of the extent to which pollinators are essential for many “diversities”: diversity in diet, biological diversity including its agricultural dimension and the maintenance of natural resources.



With concerted efforts to conserve and manage pollination services, biodiversity conservation and sustainable use of biodiversity enters a new and innovative phase. Ecosystem services, including climate regulation, soil production, water purification, pest control and crop pollination, are critical to human survival. Nonetheless, few natural areas are managed or valued for the services they



provide, although many are managed to produce ecosystem goods (e.g. wood, wildlife, fish). Pollination services, providing direct production inputs into agriculture from wild biodiversity, provides one of the strongest cases for valuating and managing natural habitats and resources for the services they provide to livelihoods. *No other natural phenomenon illustrates more vividly the principle that conservation measures must be directed at ecological processes, and not just individual species.*

project prospectus



Pollination is a process that is sustained through diversity: some pollinators are “generalists” and others are species-specific. Likewise, many different pollinators visit some plants, while other plants have species-specific pollinator requirements. This creates a robust system of often many pollinators visiting flowers, with varying levels of effectiveness. The greater the diversity of the pollinator community, the more assurance there is that pollination will be effected. Bees are the most important of pollinators, but flies, bats, wasps, beetles, birds, butterflies and moths all have a role to play. Only a dozen bee species are managed for pollination worldwide, while thousands of the world’s 25,000 known bee species, and hundreds of other pollinator species may contribute to crop pollination as unmanaged populations.



In several regions of the world, alarms have sounded over declining populations of pollinators. The major drivers of pollinator declines in different instances have been shown to be habitat loss and fragmentation, land management practices, agricultural and industrial chemicals, parasites and diseases, and the introduction of alien species, making pollinator management and conservation a global concern. The United Nations Convention on Biological Diversity (CBD) established a Programme of Work on Agricultural Biodiversity in 1996 and called for priority attention to components of biological diversity responsible for the maintenance of ecosystem services important for the sustainability of agriculture, including pollinators. As the outcome of a global focus on the need to conserve and sustainably use pollinators in agriculture, the Conference of the Parties to the CBD went a step further and established an International Initiative for the Conservation and Sustainable Use of Pollinators (also known as the International Pollinators Initiative - IPI) in 2000 (COP decision V/5) and requested the Food and Agriculture Organization of the United Nations (FAO) to facilitate and coordinate the initiative, including the development of a plan of action. The Plan of Action of the IPI, as adopted at COP 6 in 2002 (decision VI/5), provides the contextual background for this project proposal, and the proposed activities form a contribution on the part of the participating countries and the FAO to realize the aims of the IPI, which are to:

- Monitor pollinator decline, its causes and its impact on pollination services;
- Address the lack of taxonomic information on pollinators;
- Assess the economic value of pollination and the economic impact of the decline of pollination services; and
- Promote the conservation and the restoration and sustainable use of pollinator diversity in agricultural and related ecosystems.

The Global Environment Facility, (GEF) is supporting a global project on the “Conservation and Management of Pollinators for Sustainable Agriculture through an Ecosystem Approach”. Seven countries (Brazil, Ghana, Kenya, South Africa, Pakistan, India and Nepal) are working together to further the understanding of the issues related to the decline of pollinators. This project is executed by United Nations Food and Agriculture Organisation (FAO) with implementation support from United Nations Environment Programme (UNEP). This project aims to provide the added global benefit of information exchange, the dissemination of good practices, capacity building and enhancing knowledge at the farm, country, regional and global levels.

- Extension of a Knowledge Base;
- Promotion of Pollinator-friendly Good Agricultural Practices;
- Capacity Building;
- Public Awareness, Mainstreaming and Information-sharing.

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Component One: Extension of a Knowledge Base. The objective of this component is to improve the understanding of pollinator decline from scientific, ecological and socio-economic perspectives. Activities will include improving access to the relevant literature; documenting existing traditional knowledge and practice; assessing the socio-economic value of pollination; refining and deploying methods for surveying pollinator effectiveness, status and trends and plant pollination deficits; filling gaps in the understanding of pollinator biology and ecology; assessing the threats/benefits of different agroecosystems and impacts of land management practices on quality of pollination services; developing manuals and tools for pollinator identification and landscape management, and analyzing the effectiveness of the enabling policy environment.

2



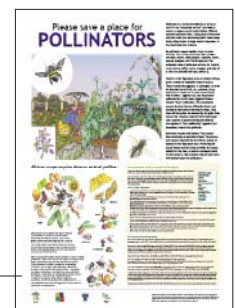
Component Two: Promotion of Pollinator-friendly Good Agricultural Practices. The objective of this component is to identify, document and disseminate innovations, technologies and best practices of farmers, including indigenous and local communities, for sustaining pollinator diversity, agro-ecosystem services and appropriate natural resources management. Activities will include identifying and assessing best management practices; further developing and refining and evaluating management practices through participatory demonstration sites; producing management plans and manuals; and conducting field days on demonstration sites.

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Component Three: Capacity Building. The objective of this component is to build capacity at the local/field, national and international levels to sustainably manage and conserve pollinators. Activities will include: carrying out needs assessments; reviewing, adapting and developing training material for target clients; providing training e.g. Farmer Field Schools (FFS) for target groups of farmers, extensionists, policy makers, formal training schools and universities, NGOs, and journalists; and evaluating the training outcomes.

4



Component Four: Public Awareness, Mainstreaming and Information-sharing. The objective of this component is to increase awareness about the value of pollinator diversity and the multiple goods and services pollination provides with a view to promoting and supporting sustainable and “pollinator-friendly” best management practices, to mainstream conservation and sustainable use of pollination services into policy, and to share experiences and disseminate results of the project related to the conservation and sustainable use of pollinators.



The Full Project will contribute to the overall objectives of the International Pollinators Initiative, and result in a number of substantial outcomes that will contribute globally as well as locally to conservation and management of pollination services, amongst them:

- Enhanced and standardised “current status and monitoring” tools and techniques.
- Enhanced understanding and awareness on the ecological and economic value of pollinators, the causes of pollinator decline and its impact economically and on pollination services.
- Improved understanding of management practices that contribute to the conservation/restoration of pollinator diversity.
- Establishment and/or updating of databases on pollinators, their host plants, biogeography, nesting requirements, etc.
- Adoption of pollinator-friendly management practices.
- Improved local taxonomic information and capacities.
- Improved farmer capacity to manage pollinators sustainably.
- Increased capacity to conserve and sustainably use and manage pollinators by a wide range of stakeholders (other than farmers).
- Enhanced integration of pollination issues into sectoral policies, including agriculture and environment.
- Increased awareness at local, national and global levels.

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