

# Pollinators Discussion Group

## **Background**

From the San Paulo *Declaration on Pollinators*: A major problem is emerging for the world's agricultural production reflecting the risk involved in relying on single pollinator species. Honeybees in many parts of the world have contracted diseases, and the numbers of honeybee colonies have decreased dramatically.

Documentation suggests that losses are mostly due to the use of agrochemicals, monoculture practices, deforestation, and possibly to the introduction of exotic pollinators. Native pollinators need protection and management to sustain the pollination service that they provide. Agricultural practices must be designed to incorporate the protection and sustainable management of bee populations.

## **Key Issues for Biodiversity Information Networks**

### **Taxonomic Impediment**

The taxonomy of pollinator species, especially invertebrates, is still evolving as scientists continue to discover new organisms and document the ecological relationships between pollinators and their environment. However, the capacity of existing taxonomic experts is being strained by the need to support this worldwide conservation crisis. Issues include the need to train additional pollinator taxonomists and parataxonomists, maintain the continuity of reference and taxonomic collections, repatriate data on pollinators to affected countries, implementation of systems for automated bee identification, and establishment of Centers of Excellence in pollinator taxonomy.

### **Economic Impact**

It is estimated that 25,000 species of bees pollinate 1/3 of the world's crops. The annual value of this service worldwide is calculated at \$70 billion USD. Research is needed to determine the pollination requirements of crop species, the best pollinators to perform this function, and the impact of pollinator presence/absence on fruit and seed yield. Pollination models are needed to help predict future impacts to selected crops. And additional studies are needed to illuminate the societal costs associated with changing from one crop-pollination system to another.

### **Monitoring and Documenting Changes**

The *Declaration on Pollinators* recommends the creation of a committee to coordinate a global monitoring plan and network. Participants will assess methods, prepare manuals on monitoring protocols, and train technicians. A key focus of the monitoring should be to assess the potential impact of exotic pollinators on native species. Information—including data sets, reports and methodologies—should be shared via a network of websites. Results should be periodically summarized in a Global Biodiversity Outlook Report on the status and trends of pollinators.

### **Conservation and Restoration**

The *Declaration on Pollinators* recommends establishing an international network on pollinator conservation and a global directory of pollinator experts. Efforts should be made to integrate both scientific and indigenous knowledge on pollinator conservation. Key focus areas would include developing models to predict the impacts of the introduction of non-native pollinators and the use of agrochemicals, and development of guidelines for policy makers and farmers. To harness market forces, create “bee smart” certification for pollination friendly products. And

finally, countries should implement mechanisms to protect natural habitats within agricultural landscapes as sources of wild pollinators.

### **Sample of Existing Initiatives**

#### **International Initiative for the Conservation and Sustainable Use of Pollinators**

([www.biodiv.org/programmes/areas/agro/pollinators.asp](http://www.biodiv.org/programmes/areas/agro/pollinators.asp))

This initiative was created by the Conference of the Parties within the agricultural biodiversity programme, based on the recommendations within the *Declaration on Pollinators*. It aims 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
- Promote the conservation, restoration and sustainable use of pollinator diversity in agriculture and related ecosystems.

The Food and Agriculture Organization (FAO) of the United Nations will facilitate and coordinate the Initiative, and has prepared a plan of action. To date, participating countries have reported only limited progress on this issue. As of September 2002, less than 20% of countries had conducted case studies or pilot projects on pollinators.

### **Guidance for the Discussion Group**

#### **Opportunities for IABIN / CHM Joint Work Plan**

What would be the most urgent and highest impact activities that could be undertaken by the countries and non-governmental organizations of the Americas to address:

#### **Scientific Cooperation**

- Repatriation of data on pollinators to affected countries
- Development and sharing of pollination data and models to help predict future impacts
- Assessment of monitoring protocols and production of training manuals
- Data development in support of a Global Biodiversity Outlook Report on the status and trends of pollinators – integrating both scientific and indigenous knowledge

#### **Technical Cooperation**

- Implementation of systems for automated bee identification
- Implementation of Internet-based systems for sharing information including data sets, reports and methodologies
- Assessments to identify and map the natural habitats within agricultural landscapes that can serve as sources of wild pollinators
- Development of data standards in support of “bee smart” certification of products

#### **Institutional Cooperation**

- Improved participation in the International Initiative for the Conservation and Sustainable Use of Pollinators