



for a living planet®



International Day for Biological Diversity

The variety of life on earth, the different plants, animals, micro-organisms, genes and their ecosystem are all part of Biodiversity”

International Day for Biological Diversity is the UN-sanctioned significant day globally celebrated each year on 22nd May. The day marks the anniversary of the adoption of the Convention on Biological Diversity (CBD), in Bonn, Germany in 1992. According to the convention, it is not only about saving plants, animals, microorganisms and their ecosystems but also about humans and their needs such as food security, clean air and water as well as healthy environment.

“We consider species to be like a brick in the foundation of a building. You can probably lose one or two or a dozen bricks and still have a standing house. But by the time you've lost 20 per cent of species, you're going to destabilize the entire structure. That's the way ecosystems work.” - Donald Falk

Conservation of biodiversity is crucial to sustain the diverse sectors such as energy, agriculture, forestry, fisheries, wildlife, industry, health, tourism, commerce, irrigation and power. Pakistan's future development will depend on the services provided by living resources as well as conserving the nation's biodiversity.

World Biodiversity Day is not just a Celebration: It is a Call for Action

Since its signing, the CBD has attracted more than 150 signatories, including Pakistan. The signatories commit themselves to the conservation and sustainable use of biological diversity and work towards ensuring a fair distribution of resources in their ecosystems.

Scientists think we're on the brink of the greatest global loss of biodiversity then ever before with human activities being the cause. We're at risk of losing thousands of species in the future in many cases, simply because we don't recognize how our irresponsible actions affect other living things.

“Our planet is literally crawling, not to mention swimming and flying with life. You might not be familiar with the word Biodiversity, but biodiversity is all around you and even on and in you” (Biodiversity 911)





International Biodiversity Day-2008: A Pledge to Promote Sustainable Agriculture

This year's theme of World Biodiversity Day is "Biodiversity and Agriculture". It seeks to highlight the importance of sustainable agriculture not only to preserve Biodiversity, but also improve the world's feeding pool while maintaining agriculture-based livelihood and enhancing human well-being. The importance of biodiversity and agriculture runs parallel to each other, because:

- Biodiversity is the basis of agriculture as it is the origin of all crops and domesticated livestock
- Agriculture contributes to the conservation and sustainable use of biodiversity loss. Hence, sustainable agriculture both promotes and is enhanced by biodiversity.

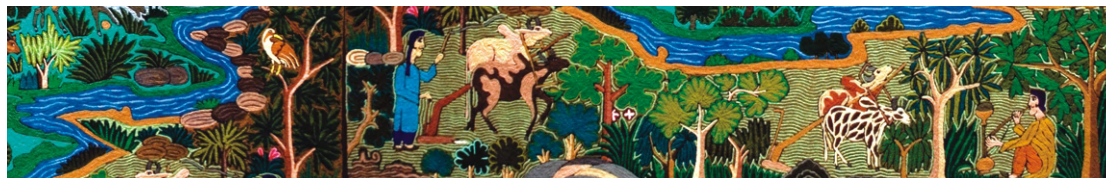
Pakistan is mainly an agro-based country with agriculture being the largest contributor in the country's economy. It contributes about 24 percent of Gross Domestic Product (GDP) in addition to being the largest source of foreign exchange earnings. The country is rich in agro-biodiversity. The main agricultural products are cotton, wheat, rice, sugarcane, fruits, vegetables. In recent years, however, due to persistent hikes in the prices of essential commodities like pulses, onions, potatoes, chillies and tomatoes these crops have gained in economic importance. According to the Biodiversity Action Plan, 2000, Pakistan possesses rich crop diversity with an estimated 3,000 taxa of cultivated plants and 500 wild relatives of indigenous crops.

The Indus River system is the backbone of Pakistan's agriculture. The Indus is one of the world's greatest rivers and provides nutrients and water for irrigation. Indus Delta, located in the lower Indus basin, historically used to be a fertile land for the ever-growing variety of crops and fruit trees. With reduction in the flow of fresh water into the delta and associated problems like sea-intrusion, water-logging and salinity, caused a decline in the agri-biodiversity of the area. It is said that in the late 18th century, Keti Bunder, a small coastal town in Thatta district which is now badly affected due to the phenomenon, used to export Red Rice and timber and even provide loan to Pakistan's biggest city Karachi.

Issues and Concerns related to Agriculture and Biodiversity in Pakistan

Today, as a result of the growth of population and the ensuing agricultural expansion together with the ever-increasing misuse of agricultural technologies, new direct and indirect drivers of change have increased pressures on biodiversity and natural resources including water, land and nutrients. In view of this, Pakistan's vulnerability factor is more obvious due to its agro-based economy.

- **Agriculture-intensification:** Due to increase in food demands, modern agricultural practices have replaced the indigenous method which has led to a decrease in crop rotation, loss of traditional cultivars, reduction in soil fertility and productivity in addition to damaging the naturally occurring pest control systems;
- **Genetically Modified Crops (GM):** The introduction and use of GM crops over the years is a new trend. Although economically sound in short term, but ecologically its effects are far greater that pose a serious threat to gene pool and minimize the chances of enhanced biodiversity.
- **Soil Degradation:** Soil is the most important factor in the healthy production of crops. In Sindh, which is an arid-zone, soil fertility is the crucial factor, and soil degradation puts the crop productivity at risk. Issues such as sea water intrusion in the historic delta area is one of the various reasons of soil degradation due to which water - logging and increased salinity levels have altered the soil quality completely.
- **Climate Change:** Pakistan, for being an agro-based country, the various is more vulnerable to climate change factor as agriculture is the lifeline of our economy. According to projections, with just a 1° rise in temperature, wheat yield in Pakistan is estimated to decline by 6-9% and an even lesser rise in temperature is needed to severely impact cash crops like mango and cotton.



What we can do?

Policymakers

- Ensure policy changes that reduce the subsidies leading to unsustainable agriculture and promote sustainable practices;
- Promote incentives that pay farmers for their environment-friendly practices;
- Introduce educational programmes and/or provide adequate training, consultation and financial aid to farmers for managing and conserving biodiversity and agriculture;
- Support local level management by empowering people with knowledge to develop sustainable agricultural methods.

Farmers and agricultural producers

- End over-exploitation of natural resources, such as water, land, wild resources and try to ensure the sustainable use and consumption of what is harvested;
- Reduce chemical fertilizer, pesticide, herbicide, and fungicide applications to minimum levels by increased efficiency;
- Conserve, protect and establish tree, bush or grass "buffer strips" where suitable to decrease soil erosion and reduce excess nutrients entering waterways;
- Share traditional knowledge associated with sustainable agricultural practices and management.

Consumers

- Sustainable consumption: Adopt good nutritional habits for yourself and your family and limit consumption in general, but particularly of meat;
- Grow native plants that support pollination;
- Recycle food wastes by composting;
- If possible, according to your available resources, grow some of your own food using environment-friendly methods.
- Promote less use of water, fertilizer, pesticide, herbicide, and fungicide in your garden or lawn.

- Don't hurt the fellow living creatures unnecessarily; they have the right to live like us (humans)
- Discourage the practice of keeping birds in captivity
- Use a camera, not a gun to shoot an animal or a bird
- Make a bird hive and place it in your lawn or neighbourhood
- Harming animals for pleasure is not only against animal rights but is also a wrong-doing in every religion

"The ultimate test of a moral society is the kind of world that it leaves to its children."
- Dietrich Bonhoeffer

Indus For All Programme, WWF - Pakistan

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