Medicinal and aromatic plants of Pakistan
Well-documented, effectively conserved and sustainably used
Background

A strong traditional medicine sector, based primarily on the Unani system of medicine, exists in Pakistan. This tradition dates to the Indus Valley civilization and continues today as an important source of employment and healthcare, particularly in rural and tribal areas of the country.

Despite the lack of a clearly defined and regulated medicinal plants sector in Pakistan, research on medicinal plants in the country is long-standing and well-established. There may be in excess of 3,000 medicinal plants in Pakistan, which accounts for around 50 per cent of the total number of flowering plants found in the country. This diversity is based on the wide range of ecological zones that span Pakistan, from the sub-tropical Indus Delta to semi-arid and arid desert regions, to high mountains, including K2 at 8,611 metres.

A medicinal plant can be thought of as a plant whose roots, leaves, seeds, bark or other parts are used for therapeutic, tonic, purgative or other health-promoting purposes.

The collection of medicinal plants, particularly in rural areas, provides an additional source of income for the collectors, who are primarily women. As such, the sustainable harvest or cultivation of such plants in Pakistan could serve to alleviate poverty. The introduction of sustainable practices, including cultivation, would also translate into environmental and biodiversity conservation, and allow Pakistan a greater share of the international trade in medicinal plants.
About the project

This three-year collaborative project between Kew and the Pakistan Bio-Resources Conservation Institute focuses on the collection of 120 of the most important and threatened medicinal plant species, including medicinal trees and shrubs, that provide human health-related services.

Due to the threats to wild populations of medicinal plants in Pakistan from unsustainable levels of harvesting, grazing by livestock, and climatic events such as flooding and earthquakes, this project includes the long-term conservation of seeds in Pakistan with a safety duplicate collection held at Kew’s Millennium Seed Bank.

Pakistan is home to many rare and threatened medicinal plants, including the Critically Endangered *Himalayan lily* (*Lilium polyphyllum*), which can be found in the far north of the country in the border regions with India and Afghanistan. The plant is under threat due to habitat loss, encroachment by agriculture and over-exploitation, with its root bulb being sought after for a number of medicinal uses.

Another Himalayan species, classified as Vulnerable to extinction due to pressures from nomadic grazing and over-collecting, is the *violet monkshood* (*Aconitum violaceum*), which has many suggested medicinal uses including being used to treat snake and scorpion bites.

Indian *belladonna*, *Atropa acuminata*, possesses similar medicinal properties to its relative *Atropa belladonna*, better known as *deadly nightshade*. Although extremely poisonous, when used in small quantities it is often the plant of choice in Pakistan to treat pain and rheumatism. Indian belladonna is classified as Vulnerable owing to deforestation and the over harvesting of its leaves and roots for use by the pharmaceutical industry and in traditional medicine.

For more information about the project please visit: https://www.kew.org/science/our-science/projects/medicinal-plants-pakistan
Bio-Resources Conservation Institute

Kew

2001 threatened

Lilium polyphyllum

Lilium polyphyllum

critically endangered

Himalayan yew:

Taxus wallichiana

Atropa belladonna

Atropa acuminata
deadly nightshade

Vulnerable

seed collection

collection

Kew

Bio-Resources Conservation Institute

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