

Enforcing Nepal's law to protect orchids

Introduction

Orchids are one of the largest groups of flowering plants on Earth with more than 30,000 species. They are also one of the most traded groups of wildlife globally. This includes Nepal, which hosts over 500 orchid species¹, and has a large commercial trade in wild orchids—mostly for the domestic and international medicinal plant markets² (Photo 1).

This Policy Brief highlights the importance of orchids to wildlife conservation efforts in Nepal. It summarizes key information that government agencies across Nepal need to recognise in order to protect Nepal's orchids.

Medicinal orchids are important

Orchids are found in forests and fields across Nepal, and include many beautiful and unique species. However, these plants are not only appreciated for their natural beauty, but are also harvested for their medicinal properties for use in Ayurvedic and Traditional Chinese Medicine³. This includes a large, commercial harvest and trade of wild orchids within Nepal, and for export to China, Southeast Asian countries, India, North America, and Europe⁴.

The harvest, processing and trade of wild orchids is important to Nepal, to medicine, food, culture, economy and rural livelihoods. Although there is limited research on the economic importance of orchids, field observations at sites across Nepal highlight that there are many rural communities where large numbers of local households, and often specifically women, rely heavily on the income generated from wild orchid sales⁵.



Photo 1: *Pleione praecox*, one of the most traded medicinal orchids of Nepal.

Box: Key government agencies

The harvest and trade of wild orchids is regulated by many different agencies. Their active involvement is key to protecting these unique plants

- **CITES Management and Scientific Authorities:** Facilitate national implementation of CITES Convention. This includes undertaking Non-Detriment Findings, studies that need to be undertaken to ensure that international trade in wild orchids does not threaten the survival of the species. They also establish species management plans.
- **Division Forest Offices:** Prepare strategic 5-year management plans to regulate the harvest and trade of forest products from the forest areas under their jurisdiction, including setting harvest quotas. Local offices develop the plans in cooperation with local resource users, get it to be approved, and implement it. These offices are also often involved in enforcement, including against illegal harvesting of wild orchids.
- **Protected Area Officials:** Ensure the orchids are protected inside protected areas. Implement orchid conservation and management plan inside the park, if any.
- **Community Forest User's Group:** Prepare 5-10-year operational plans for the forests they manage that includes species inventories, harvestable amounts and conservation actions. They are also responsible for the community patrolling.
- **Custom officials:** Inspect shipments at the borders and help prohibit the cross-boundary transport of wild orchids from Nepal.
- **Nepal Police/Armed Police Force:** Seize illegal harvest and trade of orchids and take them to custody. Also, help division forest officials and park officials in the investigation and in preparing the court case.



Photo 2: *Dactylorhiza hatagirea* is one of the protected species in Nepal and all trade is illegal. It is used as a cure for dysentery, chronic fever, wounds, burns and sexual dysfunction.



Indeed, many plants are collected as Non-Timber Forest Products (NTFPs) and Medicinal and Aromatic Plants (MAPs) across Nepal, and their sustainable management and trade are often highlighted by government offices (e.g., NBSAP 2014-2020).⁶

Orchid harvest needs to be done cautiously

Orchids are different from other plants in many ways. Many orchid species have unique life histories and distribution that makes them more vulnerable to overharvest than many other plant groups.⁷ Overharvesting, unsustainable harvest methods, and illegal trade can lead to population collapse and even extinction. This means that any efforts to harvest wild orchids, set quotas, or manage orchid populations requires especially careful consideration, or there is a serious risk that stocks will run out and species will be lost. This is the case with *Dactylorhiza hatagirea*; overharvest has made this a threatened species in Nepal, and it is now a protected orchid that cannot be legally harvested in Nepal, though a large illegal trade continues (Photo 2). Managing wild orchid populations requires a very precautionary approach and engagement with orchid experts.

Orchids are also unique because they have many special legal protections in many countries. For example, the Convention on International Trade of Endangered Species (CITES) is an international agreement that regulates the international trade of threatened species and all orchids are listed on the CITES. This means that all orchid imports and exports from Nepal require CITES permits. Orchids also have many special legal protections within Nepal, designed to conserve orchid species and help ensure legal and sustainable trade.

However, in Nepal there is often significant confusion about the rules of what and how wild orchids can be harvested, traded and exported. Recent changes to national law, and a complex series of regulations at

national, provincial and regional levels have confused both enforcement bodies, site managers and harvesters, which limits effective management and conservation.

Illegal trade threatens Nepal's orchids

Illegal and unregulated orchid trade is a rampant, under-recognised conservation challenge in Nepal. Studies have noted widespread sale of wild-collected orchids at markets across the country.⁸ More than 28,315kg of wild, illegally-collected orchids have been seized in Nepal since 2010—representing hundreds of thousands of individual plants. This included a recent seizure of 75kg of dried *Dactylorhiza hatagirea* from Gorkha, with an estimated market value of approx. US\$166,280.

There is also evidence that wild orchids are often traded under other names, disguised as plants that are not legally protected, in order to evade regulations. For example, the orchid *Pleione praecox* is harvested and traded under the name of “pani amala”, the common fern species *Nephrolepis cordifolia* known as Himalayan Gooseberry that is neither protected nor CITES listed (Photo 3).

Historically, Nepal has also had a legal trade in wild orchids. From 2008-2016, Nepal reported legal exports of 49,789kgs orchids, 96% of which were harvested from the wild.⁹ However, even the legal trade has faced many challenges: The trade volumes associated with these legal exports were often unreported, and there often mis-matches in the amounts reported by Nepal and the importing countries. For example, China reported orchid imports of more than 36,000kg from Nepal since 2010—making it Nepal's largest orchid trading partner—but most of these exports were never recorded by the Government of Nepal. In addition, the CITES Act 2019 introduced significant new restrictions on orchid harvest and trade in Nepal, which has led to considerable confusion.



Photo 3: Left: *Pleione praecox* is a commercially-traded orchid, collected for its medicinal use. Its tubers are harvested, dried, and transported to regional hubs for further processing before international export. Right: The fern *Nephrolepis cordifolia*, “pani amala” is often used as misidentification for *Pleione* orchids.

Time to strengthen governance of Nepal’s orchids

Improving governance of Nepal’s orchids—including enforcement of Nepal’s environmental laws—is important to protecting precious species and ensuring more sustainable livelihoods for the people who harvest and trade them. This requires greater understanding by Nepal’s government officials about Nepal’s laws and their responsibilities for managing wild orchids.

Here are 6 key things officials can do:

1. Become more familiar with Nepal’s laws on orchid harvest and trade:

Many orchid species are highly threatened and protected by Nepal’s laws, but there is widespread confusion about the laws that protect orchids and regulate their harvest from the wild. This is because some forms of orchid harvest and trade are long-standing, but the laws have changed several times and there are a number of national and sub-national laws and policy documents related to orchids. This has confused both enforcement bodies, site managers and both legal and illegal traders.

Box: The key Legislations

- **CITES Act 2017** internalizes Nepal’s national commitments to the CITES Convention. In order for a CITES-listed species to be legally harvested, traded or exported from Nepal—including any orchid species—a management plan must first be in place for that species. These plans, prepared by the CITES Authority, have not yet been established for any orchid species as of Aug. 2022, so no wild orchid harvest or trade is currently legal in Nepal.

Violation of the CITES Act can face heavy sanctions. For plant species on CITES Appendix I The fine is NPR 100,000 to 500,000, or 1-5 years imprisonment, or both. For species on CITES Appendix II- listed species which includes almost all orchids in Nepal; the fine is NPR 50,000-100,000, or 6 months -1 year imprisonment, or both.
- **The Forest Act 2019** governs orchid harvest outside of protected areas, including on national forest, private lands, and community forest areas. In forests around the country, orchid harvest is often legal—but only if it complies with the CITES Act 2019, and follows any sub-national legislation and forest-specific plans. Notably, local Division Forest Offices and Community Forest User Groups are charged with developing management plans, including setting harvest quotas for orchids. The Act also sets out rates at which harvested wild orchids must be taxed. Its regulation bans the production and trade of the orchid *Dactylorhiza hatagirea*.
- **National Parks and Wildlife Conservation Act 1973** governs orchid conservation inside protected areas. It bans wildlife harvest, including orchids, inside national parks, and harvest inside of conservation areas and reserves is only possible with written permission from the authorized official (Article 5), and each site has its own regulations. In the case of violations, the prevailing rules apply (i.e., CITES Act). If the specific offense is not described, then violators are subject to a fine up to NPR 20000 or imprisonment up to six months.

2. **Recognise that many plants are protected wildlife:** Nepal has made great progress in reducing the illegal trade of protected species, but plants are often overlooked even though many are legally protected. However, just like with animals, traders in Nepal are often organised and use many different smuggling approaches, hiding orchids along with other legal herbs, hiding orchids under the car engine, transporting plants along with

tourists. Addressing the illegal aspects of this trade requires government bodies to take the illegal trade of protected plants seriously, and to treat it like other forms of wildlife trade.

- 3. Identify priority species:** Nepal has more than 500 orchid species, but only about 10 species appear to be commercially traded as medicinal plants (Photo 1). Even so, identifying them can be very challenging. This is especially true because orchids are often identified based on their flowers, but they are often traded without flowers, and even be sold as dried pseudobulbs or stems. It is important that officials familiarise themselves with these species, and how they look when they are dried (Photo 1).
- 4. Watch for misidentifications:** Many orchids are misidentified as other species, so government agencies should inspect products such as “pani amala” (*Nephrolepis cordifolia*) to ensure that they are not actually orchids. They should also carefully inspect documents that group all orchids together and fail to distinguish them at species name. For example, “gamdol” often refers to the tubers and pseudobulbs of many different species of orchids, and orchids are also often harvested and traded under the single name of “sungava”. Where there is doubt, officials should take several close-up photographs and ask for support from local universities or the authors of this report.
- 5. Document and report orchid seizures:** When seizures of illegal orchids are made, it is important that these are accurately identified and reported. Importantly, these should be done at the genus and species-level. If officials cannot identify the species, they should take several close-up photographs and ask for support from local universities or the authors of this report.
- 6. Engage orchid scientists to help with management plans:** In the future, if management plans or quotas are developed at the national and site-levels, it is important that managers engage with orchid experts. Orchids’ unique biology means that sustainable, responsible harvest can only be done for some species, using specific techniques, and requires additional research. This expertise is unlikely to exist within traditional government

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- 10 All orchids are covered by the CITES convention. Almost all orchid species in Nepal are listed on Appendix II, except the Lady Slipper orchids in the genus *Paphiopedilum* (*P. insigne*, *P. venustum*).

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