

## FACTSHEET

# Medicinal Resources

### In a nutshell

Biodiverse ecosystems provide a variety of plants and mushrooms used in popular or traditional medicine. They offer effective cures for many kinds of health problems and provide raw materials for developing or producing pharmaceuticals.

### 1. Role for human well-being

Virtually all ecosystems provide medicinal resources. The majority of medicinal and aromatic plants that are used and traded are collected from the wild. According to the [World Health Organisation](#), 80% of the world's population is still dependent on traditional herbal medicines. Medicinal plants are used as tonics, compresses and infusions. They provide healing and relief for billions of people – for many they are the only source of remedy. The multi-faceted [relationship between forests and human health](#) has been partially studied and documented. Natural medicinal resources also entail potential income generation for local communities and the pharmaceuticals industry.

### 2. Typical threats

A vast number of wild plant species worldwide is estimated to be threatened with extinction. Overharvesting or uncoordinated management puts the provision of medicinal resources (and their lucrative trade) at risk. Poverty and the breakdown of traditional control systems within e.g. local communities are an issue. The [major challenges for sustainable wild collection](#) include: lack of knowledge about sustainable harvest rates and practices, poorly defined land use rights and lack of legislative or policy guidance. The loss of traditional medicinal knowledge also directly impacts this ecosystem service. With respect to the commercial use of traditional medicinal knowledge, there have been a number of prominent cases where powerful corporate actors have applied for patents granting them exclusive rights, thereby disrespecting traditional knowledge holders and disadvantaging them economically ("bio-piracy"). See, for example, [Third World Network Briefing Paper 5](#).

### 3. Example indicators

- The indicator '[biodiversity for food and medicine](#)' is a combination of the Red List Index and Accessibility Index. It shows the use of wildlife for food and medicine and the impacts on ecosystem integrity and ecosystem goods and services.
- The value of this service can be indicated in economic terms by the trade volume of medicinal resources extracted from an area (\$/ha).
- Different public health indicators can be useful in many cases.
- An inventory of medicinal plants used in a region for self-medication (or by doctors and traditional healers) can be compiled.
- For evidence relating to the long-term availability of this service, the indicators 'maximum sustainable harvest' (kg/ha/year) and the 'stock of species used' (population density/ha/year) are useful.





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Global sources available for national data:

- The [GBIF database](#) offers an open data infrastructure where information on species used for medicinal purposes can be found.

#### 4. Example methods

For **assessing the value** of this ecosystem service:

- A qualitative characterisation of uses, properties and relevance for public health, based on consultations/interviews
- Socio-cultural valuation exercises e.g. [Methodological guide for social valuation of ess](#)
- [Market price](#) for nature-based pharmaceutical products

For **assessing the condition** of this ecosystem service:

- Bio-physical assessments, e.g. of the population density of a species used for medicinal purposes over time per hectare
- [Questionnaires and surveys](#) focusing on changes in the availability of resources used for medicinal purposes
- (Changes in) the amount of time required to collect and transport medicinal resources can be measured (time/household).

#### 5. Managing this service

Typical instruments for managing this service include:

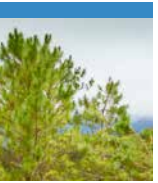
##### Use restrictions

- [Extractive reserves](#) can allow for a maximum sustainable amount of harvesting of medicinal or aromatic plants for local people.
- Sustainable forest management and no-take areas to increase the overall availability of species used are further examples.

##### Establish certification and labelling and access and benefit sharing (ABS)

- See, for example, the international [standard for the sustainable collection of wild medicinal and aromatic plants](#) (2007).
- For ways of sharing the benefits arising from the utilisation of genetic resources in a fair and equitable way, including appropriate access to genetic resources, taking into account all rights over those resources, see the [Explanatory guide to the Nagoya Protocol on Access and Benefit-sharing](#).





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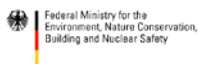
### Increased sustainable cultivation and upgrading of medicinal plants

- [A study in Kenya](#) shows that the majority of traditional medicines are sold as wild plant parts. However, in urban areas, demand for traditional medicines is rising. This is leading to increased formalisation of the market, with traditional medicines now found in powders, liquids and creams.

For further guidance on topics related to this ecosystem service, see for example:

- [CBD Good Practice Guide: Healthy Planet, Healthy People – A Guide to Human Health and Biodiversity](#)
- [Traditional Medicine Strategy 2002 – 2005](#)

On behalf of:



of the Federal Republic of Germany



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