



## **TOWARDS VALID NON-DETRIMENTAL FINDINGS FOR *NARDOSTACHYS GRANDIFLORA***

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*Nardostachys grandiflora* DC belongs to the Valerianaceae. It is the only species within its genus, and it only occurs in the Himalayan region. *N. grandiflora* is a perennial herb growing in forests and alpine meadows from 3300m up to about 5000m, with known slow recovery after harvest of the traded product, the rhizomes. *N. grandiflora* was listed on CITES appendix II in 1997. The non-processed rhizomes are exported in large quantities from Nepal to India (annually between 100 and 500 tonnes) without issuance of non-detrimental finding statements. The status of the plant population is not known but it is suspected to be declining due to increasing commercial demand and indiscriminate wild harvest of mature and juvenile individuals alike.

The largest threat to the *N. grandiflora* population in Nepal is without doubt the commercial trade, i.e. harvesting. A high proportion of the rural collectors living at high altitudes rely on medicinal plant collection for cash income and given the relatively poor growth performance of the Nepalese economy, combined with distributional aspects, the reliance on medicinal plants is not expected to decline much in the short to medium term. The threat is therefore likely to persist.

At present no purposeful official management of the species is taking place, and cultivation has only been undertaken on a small scale by non-governmental organisations. Harvest of *N. grandiflora* for commercial purposes requires a permit from the Nepalese forest authorities specifying amount and location of collection, and export needs to be recorded by customs authorities. Unfortunately, the quality of the recorded information is poor and it can therefore not be used to assess the size of the national harvest or export. Local management systems reported include agreed starting dates for harvest after seed fall, allowed tools, and exclusion of outsiders. The commonness and strength of such local management systems is not known.

A three-step approach to generating meso and macro level data that allow valid NDF statements for perennial plant resources is proposed: 1. Species distribution is determined at the relevant spatial scale (e.g. regional or national) and the stock level is estimated. 2. Sustainable harvest levels are estimated as are population

trends. 3. Current harvest levels should be estimated and compared to the already estimated limits for sustainable harvest.

For *N. grandiflora*, where little information is available on distribution and population trends, production of data for a valid NDF statement would imply production of a distribution map, current stock estimates, population trends, sustainable harvest levels and current harvest levels. Methods for collecting the necessary data would include: 1. Collection data on occurrence and distribution from experts and herbarium voucher specimens, use of GIS database for producing distribution map and area estimates, and data on current stock based on resource inventories, 2. Demographic studies of the effect of harvest (conducted in collaboration with local harvesters) on representative plant populations in permanent sample plots, and 3. Surveys of current regional trade based on information from collectors and traders at various levels of the market chain.