THE DEVELOPMENT OF NON-DETRIMENT FINDINGS FOR *GALANTHUS ELWESII* HOOK. F., IN TURKEY

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Galanthus elwesii, a popular horticultural species, has been widely cultivated and collected from the wild for commercial trade for more than 100 years. Large populations of *G. elwesii* occur in Turkey, centred within the Taurus Mountains in southern Turkey. The trade has steadily increased since the 1960's when annual bulb exports amounted to millions, reaching 40 million by the mid 1980's, prior to the introduction of harvest mangement.

Legislation introduced in 1989 aimed to establish a system to allow sustainable management of geophyte exports. As part of this process a series of committees were appointed to advise and determine annual export quotas for geophyte species following field inspections (of wild habitat and cultivation fields) by scientific teams. This process of Committees, quota setting based on scientific advice, evaluation of wild and harvesting levels (in processing warehouses prior to export) now forms a practical management plan for the sustainable export of *G. elwesii* from Turkey.

Sustainable harvesting of *Galanthus elwesii* by local people has also been encouraged through the implementation of a rotational extraction system. This requires collectors to leave sites to regenerate for 3 years before re-collection at the same site can occur. In addition, whilst some small bulbs are inevitably dug up during the collecting process, these are now sieved *in-situ* and immediately replanted by the collectors. Artificial propagation of *G. elwesii* is also regulated. Additional quotas are not issued to companies for propagation activities, since scientists do not accept that there is successful artificial propagation for most geophytes, only transplantation from the wild to cultivation fields. Thus any "cultivated" material is included in the wild quota.

The NDF process is closely linked to the overall management system. Turkisk scientists inspect the wild habiat on a regular basis to assess possible damage due to collection. Such field inspection are carried out by experts with some 20 years expericence of bulb harvest. Information collected is qualitative and is reviewd by the scientists of the Scientific Authority. Based on a review of such data a precautionary quota is set on an annual basis. Additional indicators used

to detect possible damage to wild colection is the monitoring and data collection on all bulbs as they pass through the warehouse system prior to export. The aim here is to detect flucuations in harvest effort or bulb quantity or quality that might indicate problems in local bulb populations.

The current adaptive management regime of revising export quotas in relation to long term monitoring and field inspections suggest that current harvesting and export levels are sustainable. There is a common agreement among Turkish government, scientists, and NGOs that there must be continued efforts to conserve wild populations of commercially important geophytes which are not only important for the species themselves, but for the local communities that collect them, providing a highly important livelihood and source of cash income for rural areas.