Harvesting of Green snowdrops in Georgia

Introduction: Species, Use and Trade

Galanthus woronowii, the Green or Woronow's snowdrop, is native to Georgia, Turkey and the Russian Federation. It has been listed in CITES Appendix II since 1990 (after CoP 7), and has not been assessed for the IUCN Red List.

In Georgia, the major wild populations are in the Black Sea region in the western part of the country, with small populations in the east.

Fig 1. Distribution of wild and cultivated populations of *Galanthus woronowii.*

Bulbs are traded for use in horticulture. Some snowdrop bulbs are harvested from wild populations, which requires licensing from the government. Snowdrops are also cultivated by rural people on agricultural lands, usually in conjunction with maize, hazelnut or different citrus varieties, and these lands may (since 2012) be registered as sites of artificial propagation.

Georgia has set a quota of 15 million wild bulbs for export each year, based on the level of trade over 2000-2010. While recent surveys (McGough 2018) suggest that this quota could be higher, a precautionary approach is taken to harvest. Annual exports of cultivated bulbs are around 3-7 million.

The majority of both cultivated and wild bulbs are exported to Turkey and then re-exported to the Netherlands, with ca. 30% exported directly to the Netherlands.

Members of local rural communities harvest bulbs from the wild, as well as drying, storing, packing and transporting bulbs. Local land owners may also register their sites and cultivate bulbs as well as drying, storing and packaging. In general, rural community members do not have the skills or contacts to directly negotiate with foreign buyers, but sell the product to middlemen who already have established contacts with foreign buyers, mostly in Turkey and in some cases in The Netherlands.

It should be noted that "wild" harvested bulbs are often growing in, and collected from, agricultural lands similar to those that are registered for cultivation: these are generally sites of mixed *G. woronowii* and other agricultural varieties e.g. maize or hazelnut and citrus plantations. These bulbs are exported under wild quota.

Based on lists of employees presented by licence holders, around 50% of the people involved in operations related to *G. woronowii* are women. Women were seen conducting on-site heavy work during the 2018 field surveys.

Livelihood impacts

The main livelihood benefit for rural communities arising from trade in snowdrop bulbs is cash income. Snowdrops are harvested or cultivated by local small-scale farmers in poor rural areas, which are often remote and with very few sources of employment and cash income. People in these areas are engaged in small-scale agriculture for subsistence and the market, though sometimes they are not able to sell the produce and earn cash, or they have to sell their produce more cheaply than expected. In some cases, a number of family members need to travel to neighboring Turkey for seasonal work. For these families, even small amounts of additional cash income are critical for their survival.

The total value of the trade in wild-collected snowdrop bulbs to the harvesters/farmers, based on a trade of approximately 15 million bulbs would be equivalent to USD 24,000 annually (adjusting for purchasing power parity[1], equating to Int$ 22,800). This is around 7 times the average annual salary in Georgian cities, but in rural areas the average salary is much lower. Exact numbers of individuals or households involved in the trade are not known, but certainly run into the hundreds of households. For example, the list of suppliers submitted by just one exporter of wild snowdrops in successive reports was 100-160 families, and another submitted 85.

Income from trade from cultivated sources is additional to this, and is clearly important to subsistence farmers, who often interplant snowdrop bulbs with agricultural crops to boost their income. For example, a recent study (Rutherford and Wilkinson 2018) surveyed trade from an area in Adjara which is remote, relatively inaccessible and prone to difficult weather conditions with poor communications and sometimes no access roads. Road collapse in some areas resulted in the bulb harvest being transported on horses on rocky and dangerous terrain. However, the extra income provided by this harvest is vital to the farmers, who work very hard to ensure that they are abiding by the Georgian regulations concerning this trade.

The producers capture only a very small percentage of the final value of the snowdrops. While there is no official information on the price the middlemen or license holder companies pay to rural communities, interviews carried out during field surveys of cultivation sites indicate villagers are paid around GEL 1-1.2 (approximately USD 0.40) for 250 bulbs (USD 1.60 per 1000). Exporters from Georgia sell bulbs for approx. USD 30 per 1000, while the final retail price of bulbs in supermarkets in The

[1] Using PPP conversion factor for Georgia for 2017 of 0.95 https://data.worldbank.org/indicator/PA.NUS.PPP?view=map

Netherlands is around EUR 5 for 5 (or approximately USD 1140/1000). On these figures, producers capture only around 0.14% of the final value of the bulbs. It must be emphasized, however, that for villagers with few alternative options to generate cash this remains very important source of income.

The involvement of middlemen in the trade process has both positive and negative aspects. While they capture a high proportion of the value of the product compared to producers, given that people in rural areas have very limited possibilities for finding buyers due to language, communications, or other constraints, middlemen ensure that they at least find a market for their product. Participation of middlemen provides some kind of security for local villagers, and discussions with villagers during the field visits in 2018 indicated that middlemen had helped some villagers in financial difficulties.

Removal of the opportunity to trade in snowdrops would remove an important source of income for these generally poor rural people. With the right support, this trade could become a much greater source of income for them in future. The best way to improve livelihood benefits and increase income for local communities would be to assist them to sell bulbs to final consumers without the involvement of middlemen. This would require developing capacity for producing, preparing (drying, packing, transporting) and selling.

Using a certification system such as FairWild (www.fairwild.org) may also improve opportunities. The reason for re-exporting bulbs via Turkey is the poor capacity and resources of Georgian villagers in drying, calibrating, storing and transporting the bulbs.

Development of such capacities in rural areas is challenging. However, building on initiatives currently underway, there are opportunities to support farmers to achieve greater benefits. Some of the farmers have been involved in a United Nations Development Programme (UNDP) project that supports the production of local honey, and it may be appropriate to consider a project to support the cultivation of snowdrops in smaller quantities that could be traded as packaged bulbs and with a certification system, without the need for a trader or middleman. Georgia is also party to an EU/UNDP project on sustainable rural development that could incorporate initiatives to support harvester livelihoods through snowdrop trade, offering an exciting crossover with CITES.

Conservation impacts

Based on surveys carried out in 2009, 2014 and 2018, the population of *G. woronowii* in Georgia is thought to be approximately stable.

Generally, trade in this species (as carried out with government management and regulation) can be considered as beneficial for conservation of this species. Legal, regulated trade in wild harvested and cultivated bulbs has ended chaotic, unmanaged harvest, and ensured stabilization of the population. Exporters, especially long-term traders, have a sense of ownership of the resource and are therefore willing to combat illegal harvest. Given that the region concerned is very small in both area and population, individuals involved in snowdrop trade know each other, and they make active efforts to ensure illegal harvest or harvest over sustainable levels does not take place.

If villagers could gain greater livelihood benefits, through e.g. directly selling bulbs to importers in The Netherlands or selling a packaged product, their incomes would increase, and it is likely that the amount of harvest and trade of *G. woronowii* could sharply decrease. This is because snowdrops are harvested mainly by those with few other options, such as women or the elderly, who are not able to travel for work to Turkey and work in nut plantations. The pay is viewed as very low and they would prefer to harvest less if they could gain more per bulb.

This could present a win-win situation for both conservation and village livelihoods. The number of harvested bulbs would reduce dramatically, while the villagers would get much higher income.

Lessons for CITES implementation: Challenges, Successes and Failures

A key challenge faced by rural communities is the existing regulatory system with its establishment of state ownership of natural resources, meaning harvest requires licensing from the government. This, in practice, limits the direct access of small local communities or individual villagers to these resources, as villagers cannot afford to buy licences themselves – these are instead bought by trading companies. This limits involvement of villagers in trade to producing or harvesting raw bulbs for middlemen or license holder companies, preventing the possibility of receiving higher income. While the licensing approach has helped ensure the sustainability of harvesting and trade, it has also isolated smallholders from adequate returns for their labor and stifled the enhancement of livelihoods of some of the poorest of Georgian citizens. According to McGough (2018) report, this urgently needs to be corrected, and there are exciting opportunities for the development of programmes to enhance livelihoods in this area. This could become a major source of income for these small communities.

The registration system for cultivation sites is seeking to address this issue, since the land-owners are registering their own sites. However, local people would benefit from stronger support from government in improving production quality and increasing involvement at all stages of trade. Future projects should concentrate on boosting returns to local people.

Support from the international community to the CITES authorities in Georgia has been critical in terms of establishing a system for ensuring sustainability of the harvest, including making non-detriment findings and establishing the registration system for cultivation sites.

A key lesson for CITES is that for Parties implementing CITES, livelihoods can be boosted from CITES trade through encouraging the establishment of more direct trade linkages between harvesters and consumers. This could be through capacity-building, development of producer associations, reform of regulatory and legal frameworks to better empower and enable harvesters, or establishment of incentive schemes.

Key References

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