CONVENCIÓN SOBRE EL COMERCIO INTERNACIONAL DE ESPECIES AMENAZADAS DE FAUNA Y FLORA SILVESTRES

Duodécima reunión de la Conferencia de las Partes
Santiago (Chile), 3-15 de noviembre de 2002

Interpretación y aplicación de la Convención

Cuestiones relativas al comercio y la conservación de especies

SITUACIÓN BIOLÓGICA Y COMERCIAL DE *HARPAGOPHYTUM*

1. Este documento ha sido preparado por el Comité de Flora.

2. En este informe se resume la información remitida por los Estados del área de distribución de conformidad con la Decisión 11.63 y se revisan todos los datos disponibles sobre la situación biológica y comercial de las especies *Harpagophytum* (garra del diablo), objeto de comercio internacional, tal como se solicita en la Decisión 11.111. Se recibieron informes de los principales Estados del área de distribución [Botswana, Namibia y Sudáfrica (véase el documento PC12 Doc. 8.1.2), y Zimbabwe], así como de Alemania (documento PC12 Doc. 8.1.2). En el Anexo 1 se resume la información contenida en esos informes.

3. De los datos sobre el comercio se desprende que el comercio total para todos los países de África meridional aumentó hasta alcanzar 700 toneladas anuales en 2001, con el 92 por ciento del comercio procedente de Namibia, el 5 por ciento de Botswana y el 3 por ciento de Sudáfrica. Alemania es el principal país importador. En los datos comerciales se han observado discrepancias, lo que significa que pueden reforzarse los actuales sistemas de supervisión.

4. Se desconoce la situación de la población total de *Harpagophytum* spp., pero se han iniciado investigaciones en Namibia o se han previsto en Botswana y Sudáfrica para compilar información más fidedigna sobre el recurso. De la información disponible se deduce que el recurso se utiliza intensamente en ciertas zonas, pero que no se ve afectado por el comercio en toda su área de distribución en África meridional. La vasta área de distribución de *Harpagophytum* spp. en África meridional hace que sea muy difícil ordenar el recurso y aplicar las políticas, pese a que los Estados del área de distribución disponen de políticas y programas de gestión o están en proceso de prepararlos.

5. El Comité de Flora concluye que *Harpagophytum* es un excelente ejemplo de un recurso vegetal que puede recolectarse sosteniblemente con fines comerciales, si se aplican las prácticas de gestión adecuadas. La utilización de *Harpagophytum* spp. también plantea importantes cuestiones relacionadas con los derechos de propiedad, el comercio equitativo y la dependencia de las comunidades pobres en los Estados del área de distribución de un recurso vegetal, así como la posible función de los acuerdos internacionales en la conservación y el comercio. La utilización sostenible exige políticas armonizadas que aborden la conservación y la utilización sostenible de la especie en todos los Estados del área de distribución, la efectiva aplicación de las reglamentaciones de recolección y comercio, la supervisión normalizada del comercio y la recolección y la investigación para desarrollar métodos de recolección sostenible. Los informes remitidos en respuesta a la Decisión 11.63 muestran los excelentes progresos realizados por los Estados del área de distribución en este sentido. Aún quedan lagunas en la información disponible sobre la situación biológica y comercial y muchas de las políticas concebidas están en su primera fase de aplicación.

6. A la luz de la información recibida y de las deliberaciones celebradas en la 12a. reunión del Comité de Flora (Leiden, mayo de 2002), el Comité acordó las siguientes recomendaciones.

   a) Se solicita a los Estados del área de distribución que proporcionen información actualizada sobre la aplicación de las políticas y los programas de gestión mencionados en los informes sometidos en cumplimiento de la Decisión 11.63 (documento PC12 Doc. 8.1) para presentarla a la 14a. reunión del Comité de Flora.

   b) Los problemas experimentados para supervisar el comercio e impedir el comercio ilegal, así como la posible necesidad de determinar la cantidad de material cultivado que es objeto de comercio, podrían abordarse incluyendo la especie en el Apéndice III. La utilidad de esa inclusión no es unánimemente apreciada por los interesados en el comercio de la garra del diablo. La Secretaría debería proporcionar información a los Estados del área de distribución para ayudarles a decidir si es apropiado o no incluir la especie en el Apéndice III.

   c) Se alienta a los Estados del área de distribución y a los países importadores a que entablen negociaciones con la industria de la garra del diablo a fin de obtener apoyo para los programas de gestión que promuevan la utilización sostenible y el desarrollo de las comunidades que se ocupan de la gestión del recurso. En este sentido, y si se estima conveniente, puede solicitarse la asistencia del Comité de Flora y la Secretaría.

   d) Los Estados del área de distribución deberían examinar la forma de utilizar los procesos y los mecanismos en otros tratados internacionales con miras a obtener apoyo para la utilización sostenible del recurso y su comercio equitativo, y deberían solicitar la asistencia de la Secretaría, según proceda.

Comentarios de la Secretaría

7. En relación con el subpárrafo 6b) precedente y los párrafo 34 a 38 del Anexo 1, la Secretaría toma nota de las preocupaciones expresadas de que la posible inclusión de *Harpagophytum* spp. en los Apéndices de la CITES puede resultar en una disminución de la demanda del mercado de esas especies. La Secretaría estima, sin embargo, que esas preocupaciones pueden ser exageradas y podrían haberse resuelto mediante un mejor contacto con la industria farmacéutica, posiblemente mediante la asistencia de las Autoridades Administrativas de los países donde se encuentran ubicadas esas industrias, así como por conducto de la Secretaría. A juicio de la Secretaría, la reglamentación del comercio de esta especie mediante la CITES mejorará la capacidad de las Partes para determinar si los especímenes objeto de comercio se han adquirido legalmente (ya que todos los envíos tendrían que ir acompañados de un permiso de exportación o un certificado de origen) y la supervisión del comercio de esta especie (ya que todas las Partes tendrían que comunicar todas las exportaciones, reexportaciones e importaciones en sus informes anuales). Además, la inclusión de esta especie en el Apéndice II exigiría que los países de exportación determinasen que las exportaciones no son perjudiciales para la supervivencia de la especie en el medio silvestre, un requisito que apoya y ofrece un medio para aplicar los objetivos de conservación de la diversidad biológica nacional de los países concernidos.

8. En el Anexo 2 se presentan las recomendaciones del Comité de Flora que figuran en los subpárrafos 6a), c) y d) como proyectos de decisión de la Conferencia de las Partes. La otra recomendación se refiere al asesoramiento que puede obtenerse de la Secretaría o de cualquier Parte y a la inclusión de cualquier especie en los Apéndices y, por ende, no es necesario que se incluya en un proyecto de decisión.

The trade, management and biological status of *Harpagophytum* spp. in southern African range States and importing States

Introduction

1. Species of *Harpagophytum* (devil's claw) grow in the savannah areas of southern Africa. The indigenous San and Khoi peoples of southern Africa have used devil's claw tubers medicinally for centuries. Europeans discovered the medicinal properties of the devil's claw from local people in 1907 and since 1962 dried tubers of *Harpagophytum* spp. have been exported to Europe and used in the production of herbal medicines to treat mainly arthritis and rheumatism.

2. An increase in trade has led to concerns about the sustainability of harvesting plants from the wild. In an attempt to promote sustainable utilization of *Harpagophytum* spp. Germany submitted a proposal to include *Harpagophytum* spp. in Appendix II at the 11th meeting of the Conference of the Parties (Gigiri, April 2000). Objections to the proposed listing of *Harpagophytum* spp. by the range States, Botswana, Namibia and South Africa, led to the adoption of Decisions 11.63 and 11.111.

   Decision 11.63

   In the light of increasing international trade in the roots of Harpagophytum spp. (Devil's Claw), the range and importing States should submit to the Secretariat all available information concerning the trade, management and biological status of Harpagophytum species and regulatory measures applying to them.

   Decision 11.111

   The Plants Committee shall:

   a) review information submitted to the Secretariat in accordance with Decision 11.63;

   b) summarize the biological and trade status of Harpagophytum species subject to international trade; and

   c) prepare a report on the biological and trade status of Harpagophytum species, at least six months before the 12th meeting of the Conference of the Parties, for consideration at that meeting.

3. This report summarizes the information provided in terms of decision 11.63 and reviews all available data on the biological, management and trade status of *Harpagophytum* species subject to international trade, as required in Decision 11.111. Information used in this report was obtained from the range States Namibia, Botswana, South Africa (cf. document PC12 Doc. 8.1) and Zimbabwe, and one importing state, Germany (cf. document PC12 Doc. 8.1.2). This report is the compilation of official reports submitted to the Plants Committee, stakeholder interviews, observations on harvested populations, and a literature search. Most of the report deals with *H. procumbens,* which is the species currently used in the medicinal trade, and which is restricted to Botswana, Namibia and South Africa.

Biological status

Description

4. The genus *Harpagophytum* DC. ex MEISSN. (Pedaliaceae) comprises perennial herbs with creeping stems that sprout every year from a tuberous primary tuber (Hachfeld 1999). Secondary root tubers, which can reach a length of 5–25 cm, form from the main root (parent tuber) and it is these tubers that are harvested for medicinal purposes and contain active ingredients that have analgesic and anti-inflammatory properties. The plants produce characteristic fruits that give the plant its common name, the devil's claw. They comprise a flattened woody capsule with spiny appendages on each carpel.

Distribution

5. The genus *Harpagophytum* occurs in Angola, Botswana, Mozambique, Namibia, South Africa, Zambia and Zimbabwe (Ihlenfeldt & Hartmann, 1970). There are two species, *H. procumbens* (BURCH.) DC. ex MEISSN. and *H. zeyheri* DECNE., with two and three subspecies respectively. *Harpagophytum procumbens* occurs in southern Namibia, southern Botswana, the northern part of South Africa (Northern Cape Province, North West Province and the Limpopo Province) and southern Zimbabwe. *Harpagophytum zeyheri* grows in the more humid areas of southern Africa in the Limpopo Province of South Africa, northern Namibia, southern Angola, south-western Zambia, south-western Zimbabwe and north-western Botswana.

6. Currently, only *H. procumbens* is registered for medicinal use in Europe and it is the only species that is actively harvested for international trade. Specimens of *H. zeyheri* may sometimes be mixed in with harvests of *H. procumbens* in areas where the two species occur together, such as Namibia. For this reason, many aspects of the report refer to *Harpagophytum* spp. and not only to *H. procumbens*.

Population status

7. Scattered populations of *Harpagophytum* spp. occur throughout the arid savannah areas of Botswana, Namibia and South Africa (Ihlenfeldt and Hartmann, 1970). The patchy distribution pattern makes it extremely difficult to quantify total population size and none of the range States has been able to estimate the overall population status of *Harpagophytum* spp. Trends in growth of populations utilized for trade could provide information on whether or not harvesting is currently sustainable. There have been few population surveys in the past, resulting in a situation where it is impossible to determine whether population numbers have decreased as a result of harvesting. Furthermore, population numbers fluctuate in relation with rainfall so decreases in population numbers are not necessarily the result of overexploitation.

Botswana

a) A comprehensive survey covering the entire range of *Harpagophytum procumbens* has never been conducted in Botswana. Two localized studies have been conducted by Taylor and Moss (1982) and Sekhwela (1994). The results of the Sekhwela study suggest that harvesting is having a negative impact on devil's claw populations in Botswana. No follow-up surveys have been conducted so there is no evidence to indicate that this trend is being reversed. Despite this, government officials, the two NGOs that buy the devil's claw, and many harvesters, all consulted during 2002, state that the resource is not being depleted. During a brief visit in April 2002 healthy populations of plants were encountered around many of the villages where harvesting takes place. Only a small number of villages harvest the devil's claw as the small amount of income generated by this activity is only of value to the most marginalized, poor rural communities. Given this situation, it is unlikely that the devil's claw is threatened in Botswana.

b) A countrywide resource survey is needed in Botswana to determine what percentage of the available resource is currently utilized and what the overall biological status of the species is. A

comprehensive survey is also needed for use as a benchmark in future resource monitoring. The government body responsible for veld product management, the Agricultural Resources Board (ARB) is in the process of developing a proposal to carry out a country-wide inventory for all utilized veld products. Should Government approve this proposal, these inventories will be used to determine utilization and jurisdiction areas for communities. *Harpagophytum* spp. will be included in this inventory and resulting data will be used to determine the biological status of these species in Botswana (ARB, 2002a). The University of Botswana, in collaboration with an NGO (Tusano Lefatsheng), has prepared a research proposal to assess the biological status of *Harpagophytum* spp. and to determine the impacts of harvesting on populations. The study's objectives are to survey and quantify a large number of populations throughout the country and to closely monitor a subset of harvested populations over five years. No funding has yet been found for this proposal (Setshogo et al., 2002).

Namibia

c) Namibia has a National Devil's Claw Working Group (NDCWG) composed of a wide range of stakeholders. This group is currently coordinating a resource survey as part of a greater devil's claw situation analysis which also includes a socio-economic survey and a marketing survey. The main objective of the resource survey is to provide detailed data on the status of the devil's claw resource in selected areas throughout Namibia where the devil's claw occurs. The survey is concentrating on areas where harvesting is known to take place (Strohbach, 2001). This survey will span a large enough area to provide information on where the devil's claw is concentrated, the habitat types in which the plants occur, and the proportion of the population currently being harvested. The survey is being conducted by officials of the Ministry of Environment and Tourism (MET) and will be completed by July 2002 (CRIAA, 2001). Survey results will contribute significantly to determining the biological status of *Harpagophytum* spp. Despite the present lack of data on the biological status of *Harpagophytum* spp., Namibian officials report that it is unlikely that the resource is being over-utilized as harvesting takes place in less than 50 per cent of the species' range (Hamunyela, pers. comm.).

d) M. Strohbach working with the Sustainably Harvested Devil's Claw Project, run by an NGO (Centre for Research and Information and Action in Africa, CRIAA), has been monitoring populations that are harvested by project participants. In the year 2000, 36 harvested sites were surveyed, and plant population numbers estimated for a total of 423 hectares. The sum of the 36 populations was 592,234 plants. Strohbach (2000) also reported that 25 per cent of the populations surveyed showed signs of unsustainable harvesting practices. Of the 19 areas surveyed in 1999, four showed a decrease in plant density per 100 m^2 transect.

South Africa

e) Little is known about the biological status of *Harpagophytum* spp. in South Africa. No surveys were conducted in the past so no trends in population growth can currently be determined. B. Hachfeld has recently conducted a survey for seven sites in the North West Province and 15 sites in Northern Cape. A number of biological parameters were investigated including the number of plants, the number of old and young plants, the reproductive status of the plants and the degree of harvesting taking place. Results of this study will be available by September 2002. The National Botanical Institute is in the process of seeking funding to conduct a resource and socio-economic survey in South Africa. The proposed resource survey will use Hachfeld's study as a starting point and gaps in the devil's claw distribution will be surveyed. Together the two surveys will provide information on how large the total population of *Harpagophytum* spp. is in South Africa and what percentage of the population is at present being harvested (Donaldson 2002). If this research initiative receives funding, the biological status of *Harpagophytum* spp. in South Africa should be known by March 2003.

Conclusion

8. Even though none of the three range States has carried out comprehensive surveys to assess the biological status of *Harpagophytum* spp., the available information suggests that *Harpagophytum procumbens* would not be classified as threatened using IUCN criteria for overall population size, extent of occurrence (range) and area of occupancy (version 3.1, 2000). Populations of *Harpagophytum* spp. are widespread and one survey of *H. procumbens* from a small part of Namibia provided population estimates of over 500,000 plants. The only meaningful criterion for assessing the threat to *Harpagophytum* spp. is an estimation of decline in populations as a result of harvesting. There are insufficient data to make this assessment, but many stakeholders argue that decline is unlikely to have had a substantial effect on total population size of *Harpagophytum* spp. because populations occur in protected areas and on commercial farms where harvesting does not occur. Furthermore, the species thrives in disturbed systems and is considered a pioneer or even 'weedy' species (Taylor and Moss, 1982; Sekhwela, 1994). The main threat to plant populations in all three countries is restricted to poverty-stricken communal areas where a combination of unsustainable harvesting and heavy grazing pressure threatens local populations (Cole and du Plessis, 2001). Should such populations disappear it would be an economic blow to these communities but is unlikely to be a threat to the species except potentially as a form of genetic erosion.

Trade information

Botswana

9. A total of 41,550 kg of devil's claw were reportedly exported from Botswana between 1997 and 2001 (Table 1). Trade within Botswana also occurs, but it is relatively small and has not been monitored. However, the data from Botswana highlight some potential problems with existing records. Annual harvesting data provided by the Agricultural Resource Board (ARB) of Botswana (Table 2) differs year by year from export data and also suggests that the quantity of plants harvested between 1997 and 2001 (21,710 kg) is slightly more than half the quantity that was exported from Botswana during that period. In addition, the export figures mentioned in the CITES proposal (ca. 50,000 kg in 1997 and 1998, Dipholo pers. comm. in Hachfeld 1999) differ substantially from those provided by the ARB.

Table 1: Amount of devil's claw (dry weight kg) exported from Botswana between 1997 and 2001. Data supplied by the Agricultural Resource Board of Botswana.

Importing Country	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2001**
Germany	0	0	0	0	-	0	0	0	15000
South Africa	10719	3278	24437	45633	-	2451	501	1550	500
Republic of Korea	0	0	0	0	-	3002	0	500	0
Namibia	0	0	0	0	-	0	0	0	1800
Others	0	0	0	0	-	40	0	0	6
Total	**10719**	**3278**	**24437**	**45633**	**-**	**5493**	**501**	**2050**	**33506**

Table 2: Data on harvesting of devil's claw in Botswana from 1978 to 2001.
No harvesting was permitted in 1993 in order to allow the plants to regenerate.
Data supplied by the Agricultural Resources Board of Botswana.

Year	Dry weight (kg)	Year	Dry weight (kg)	Year	Dry weight (kg)
1978	13459	**1986**	6846	**1994**	22533.7
1979	5175	**1987**	9786.4	**1995**	40062
1980	550	**1988**	16745	**1996**	26344.8
1981	7564.8	**1989**	9115.5	**1997**	5549
1982	16974	**1990**	56	**1998**	3016
1983	7712.5	**1991**	3832.5	**1999**	4257
1984	13140.55	**1992**	6896.4	**2000**	4317
1985	2807.5	**1993**		**2001**	4571.5

10. The reasons for these discrepancies are not known but figures could be influenced by unrecorded harvests as well as unrecorded exports. An exporter at the Regional devil's claw Conference held in Windhoek in 2002 reported importing 4 tonnes of material from Botswana, which is not represented in the records (Davis, pers. comm.). This too indicates that not all exports are being recorded. There were no recorded exports of the devil's claw in 2000 because there was a lack of demand. Exporters attribute this to buyers stockpiling from the previous year, but the NGO sector argues that the proposal to list *Harpagophytum* in CITES Appendix II in 2000 affected consumer demand.

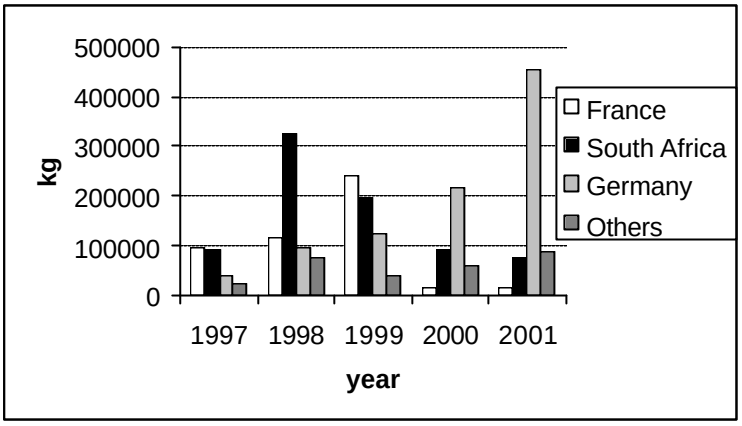
Namibia

11. The first large-scale exports took place from Namibia to Germany in 1962. By 1975 exports had risen to 180 tonnes per annum, exports continued to increase resulting in exports of ca. 300 tonnes in 1997 and 600 tonnes in 1998. There was a drop in exports from ca. 600 tonnes in 2000 to ca. 400 tonnes (Table 3) (also seen in Botswana), attributed to the proposal to list *Harpagophytum* spp. in CITES Appendix II, but trade returned to previous levels in 2001 with exports of 600 tonnes.

Table 3: Total quantities (kg) of devil's claw exported from Namibia between 1991 and 2001.
Data derived from export permits issued by Ministry of Environment and Tourism, Windhoek.

Year	Dry weight (kg)	Year	Dry weight (kg)
1991	20880	1997	251091
1992	96174	1998	613336
1993	65767	1999	604355
1994	157938	2000	379740
1995	284409	2001	637032
1996	313652		

Figure 1: Quantities of *Harpagophytum* (dry weight) imported from Namibia



between 1997 and 2001 by the main importing countries. Data source as table 3

12. The current management system for the devil's claw in Namibia requires exporters to obtain a phytosanitary certificate from the Ministry of Agriculture, Water and Rural Development (MAWRD) in addition to the export permit required by the Ministry of Environment and Tourism (MET). The figures from these sources often do not tally (Cole, 2002). In addition, there are claims of a substantial illicit trade, for which figures are obviously not available (Cole, 2002).

South Africa

13. Export permits are not required to export *Harpagophytum* specimens from South Africa. This situation makes it extremely difficult to monitor trade but the consensus is that harvesting of *Harpagophytum* spp. in significant quantities has only recently taken place. Provincial nature conservation organizations are monitoring trade. Permits issued by nature conservation departments to collect and transport plants (Table 4) indicate that quantities of harvested material have increased substantially from 1999 to 2001 and that trade requires closer monitoring. A number of pharmaceutical companies based in South Africa are involved in the processing of the raw *Harpagophytum* material so that not all harvested material is exported. Given this situation, monitoring of actual harvesting in each province should continue even in the event of a national export permit being enforced.

14. South African exporters and pharmaceutical companies buy large amounts of devil's claw from Namibia and Botswana. These trade deals are not monitored in South Africa and South Africa's role in the trade is currently not quantified.

Table 4: Quantities of *Harpagophytum* tubers harvested in Northern Cape (N. Cape) and the North West Province (N.W. Province) in South Africa.

Year	N. Cape Wet material (kg)	N. Cape Dry material (kg)	N.W. Province Wet material (kg)	N.W. Province Dry material (kg)	Total Wet material (kg)	Total Dry material (kg)
1999	0	6900	-	-	0	6900
2000	402	1258	-	-	402	1258
2001	500	6248	10904	14780	11404	21029

Germany

15. Germany is a major importer of *Harpagophytum* specimens (raw material) but has no trade monitoring system in place for the species. Therefore, no official trade data are available. To implement Decision 11.63, an interview survey among German importers was carried out. Currently eight to 10 German companies are importing *Harpagophytum* specimens. Trade is predominantly reported as being direct from Namibia to Germany (cf. document PC12 Doc. 8.1.2). Apart from Germany no other importing country has provided information to the CITES Secretariat.

16. Table 5 compares the imports as stated by German importers with the Namibian export provided by MET. Imports reported are significantly higher than the Namibian export figures for the same year, except in 2001.

Table 5. *Harpagophytum* trade from Namibia to Germany 1999-2001 (dry weight in kg)

	German imports (trader interviews)	Namibian exports (MET data)
1999	265 000	125 000
2000	492 000	216 000
2001	459 000	453 000

17. As seen in Table 5 trade figures from different sources, i.e. range States and importing countries, do not tally. In all exporting and importing States, trade is not being monitored closely enough to allow a determination of the actual quantities of plants being traded internationally.

Resource management

Botswana

18. The devil's claw is protected by the Agricultural Conservation Act (1974) and accompanying regulations of 1977. Permits issued by the ARB are used to control extraction and trade in *Harpagophytum*. There are three types of permits, an extraction permit, a transfer permit and an export permit. The extraction permit states conditions that the extractor has to follow to ensure that harvesting is sustainable. Each permit is issued to one individual for three months, for a specific locality, and stipulates a specific quota. Quotas are decided upon by ARB extension officials, in collaboration with community members, after visual assessments of *Harpagophytum* populations (Ben, pers. comm.). Transfer permits are required to transfer ownership of the devil's claw or its parts from one owner to the next. An export permit is required to export *Harpagophytum* spp. plants or their parts. The Botswanan legislation includes penalties for committing illegal or unlawful activities regarding the devil's claw (ARB, 2002b).

19. In a further effort to promote resource conservation for *Harpagophytum,* Botswana only issues extraction permits during the dry season when the above ground shoots have died back and the seeds have dispersed. Harvesting in the dry season means that harvesters only find ca. 30 per cent of plants and therefore cannot deplete any single population (De Wdf, pers. comm.).

20. Government officials report that communities appear to be capable of managing their own resource in Botswana. Self-policing among community members takes place, and any harvesting without permits or out of season is reported to ARB officials. Some villages voluntarily implement rotational harvesting by harvesting in different directions away from the village each year. There have been cases where communities have turned down permits for a particular year reporting that the resource needed time to recover (Ben pers. comm.). This is in contrast to the findings of Sekhwela (1994) that harvesters at four of the eight study villages expressed negative attitudes towards resource conservation and were pursuing non-sustainable harvesting techniques. A brief field visit in April 2002 found no signs of unsustainable harvesting in three villages including Mahotshwane, where Sekhwela (1994) reported

unsustainable harvesting practises. This could indicate that resource conservation practices have improved since 1994 but further investigation of harvesting practises in Botswana is recommended.

21. The department of Agriculture is in the process of developing a new policy for Community Based Natural Resource Management (CBNRM). The CBNRM policy will empower communities to manage their own resource through demarcation of utilization areas and the development of management plans. This policy will be implemented in phases, with specific areas being used as pilot studies. Inventories of all natural resources used by communities, including the devil's claw, are needed for this policy to be implemented. The inventory of devil's claw will contribute to establishing the biological status of this species. The CBNRM policy will not replace the existing Agricultural Conservation Act of 1974 but will provide additional legislation that promotes sustainable use of natural resources including *Harpagophytum* spp. (Ben, pers. comm.).

Namibia

22. Concerns about over-utilization of *Harpagophytum* spp. led to the plants being listed as a protected species under the Nature Conservation Ordinance 4 of 1975 (CRIAA SA-DC, 1999). This resulted in a permit system started in 1977 that required permits for harvesting, transport and export (MET, 2000). The permit system was found to be ineffective owing to difficulties in implementation and was suspended from 1987, except for export permits required for commercial trade. Recent increases in exports, and concerns from the international community, led to the reinstatement of this permitting system in 1999. Since then the Ministry of Environment and Tourism (MET) has been developing a new policy for the protection of the devil's claw involving modification of the old permit system. This policy has not yet been approved but is provisionally implemented by MET Nature Conservation Officials managing the *Harpagophytum* trade. The new policy is based on the old permitting system of 1977, but includes additional detailed stipulations on each permit to ensure sustainable use of *Harpagophytum.*

23. Conditions of the new policy include a harvesting season from March to October. Harvesting in winter, while plants are dormant, is being implemented for the same reasons as in Botswana, i.e. to increase the chance of plants being missed during harvesting. Data for Namibia indicate that ca. 60 per cent of plants in a population are found when harvesting takes place in winter (Hamunyela, pers. comm.).

24. Harvesting of *Harpagophytum* spp. takes place throughout vast areas of eastern Namibia and management of the resource requires additional extension officers and training in resource management. The MET is currently responsible for monitoring harvesting and population recovery, but the current lack of capacity means that no short-term or long-term monitoring is taking place (Hamunyela, pers. comm.).

25. In November 1999, Namibia held its first National Devil's Claw Stakeholders' Workshop to address the many national concerns regarding the status of the devil's claw resource (Cole, 2002). Workshop participants recommended the establishment of a Namibian Devil's Claw Working Group (NDCWG). This group consists of a wide range of stakeholders from Government, the NGO/CBO sector, harvesters, and exporters, under the chairmanship of an official of the Division of Specialist Support Services (DSSS) in the Ministry of Environment and Tourism. The mandate of this group is to continue the consultative process that was started at the first workshop and to address pressing needs relating to trade in the devil's claw. One of the first needs addressed was the development of a National Devil's Claw Situation Analysis (NDCSA) (Cole, 2002).

26. The NDCSA will focus on the following three main areas:

    a) The status of the resource;

    b) The socio-economic aspects related to resource management, benefits, and social implications with respect to the harvesting and trade in the devil's claw; and

    c) The nature of the local and export market.

27. The results of this research will provide the first comprehensive analyses of the devil's claw in Namibia and will enable important strategic policy decisions to be made with respect to resource management and utilization, trade and market related factors, and further research needs. The International Development Research Centre (IDRC), based in Canada, has funded the NDCSA. It began in January 2002 and is expected to be completed by September 2002 (Cole, 2002).

28. CRIAA plays an important role in promoting the sustainable utilisation of the devil's claw in Namibia. They currently run the Sustainably Harvested Devil's Claw Project (SHDCP), which works with 328 registered harvesters living on communal farms in the Omaheke region of Namibia. Harvesters working with the SHDCP practise sustainable harvesting. CRIAA is hoping to expand this project into other areas in Namibia.

South Africa

29. In South Africa, species in need of protection are listed on provincial ordinances and managed by provincial nature conservation bodies. *Harpagophytum* occurs in three of the nine South African provinces: the Northern Cape, the North West Province and the Limpopo Province. Harvesting for commercial purposes only takes place in the Northern Cape and the North West Province. *Harpagophytum procumbens* has a limited range in the Limpopo Province and is only harvested by traditional healers (Rodgers, pers. comm.).

30. Currently Northern Cape Nature Conservation requires permits for collecting, exporting or importing, moving plant parts across provincial boundaries, growing, and trading in *Harpagophytum*. Permits are issued once a year (Powell, pers. comm.) in accordance with Proclamation 240 of 1975 relating to the Ordinance of Cape Nature Conservation 26/1965. A new proclamation with detailed stipulations for trade management has been drafted and is under review (Powell, pers. comm.).

31. Policy and regulations for *Harpagophytum* in the N.W. Province are confusing because different ordinances apply in different areas owing to changes in provincial boundaries after 1994. Most of the harvesting takes place in the communal areas of the N.W. Province where there is no legislation regulating harvesting. At present, the N.W. Province issues permits only to buyers who may only buy from recognized and registered harvesters in possession of an identification card. Harvesters attend training courses where they receive an identification card that is valid for one year. Harvesters are taught to harvest sustainably by practising quadrat rotational harvesting (Van der Vyver, 2001). And harvesting takes place during the growing season between November and July. So far, 1,250 harvesters from ca. 35 villages have been trained. A collecting form is also placed at each harvesting sight and harvesters fill in how much is collected and sold each day. Both these monitoring procedures have only been in place for one year. Nature conservation officers conduct monitoring on an ad hoc basis (van der Vyver, 2001). N.W. Province Nature Conservation have trained harvesters but they do not have the capacity to monitor all harvesting effectively (van der Vyver, pers. comm.). A visit by the author to the N.W. Province harvesting areas found a number of populations that had been unsustainably harvested. The degree to which unsustainable harvesting is taking place in the N.W. Province requires further investigation.

Regional collaboration

32. Stakeholders from all three range States have recognized the need for regional collaboration. Namibia initiated collaboration through the hosting of the Regional Devil's Claw Conference in February 2002 in Windhoek, which brought together stakeholders from all sectors of the trade in the devil's claw. An action plan for the devil's claw has subsequently been formulated based on issues and suggested solutions voiced at the conference. These include the agreement to establish national and regional devil's claw Working groups. These groups will meet periodically to discuss and address needs associated with the *Harpagophytum* trade.

Conclusion

33. All three range States are addressing the sustainability of the *Harpagophytum* trade through changes in policy. These policies are at different stages of development. Even where legislation is not in existence government authorities in all three States are actively managing resource utilization. In addition, the NGO sector in Namibia and Botswana is contributing substantially to the development of a sustainable trade. The biggest hindrance to achieving sustainable utilization is the lack of capacity among government institutions in Namibia and South Africa to monitor harvesting practices. Furthermore, all three range States are not monitoring the actual population numbers. Without such data it is impossible to determine whether trade is negatively impacting on the biological status of *Harpagophytum.* Research on appropriate harvesting practices, including the season of harvesting and the method of tuber removal is vital for informing management. Existing and future research initiatives in all three range States need to be supported.

Sentiments toward a CITES listing

Botswana

34. A comprehensive resource survey has never been conducted in Botswana and there is no scientific evidence to indicate whether or not trade threatens this species. Despite this lack of data, all Botswanan stakeholders consulted, including representatives from the Government, NGOs, and communities, report that the devil's claw in Botswana is not threatened by trade. There is a widely held perception that utilization could be substantially increased without the devil's claw becoming threatened. The existing legislation is considered more than adequate to protect devil's claw populations in Botswana and stakeholders feel that a CITES Appendix-II listing will not provide any additional protection.

35. The majority of Botswanan stakeholders oppose a CITES Appendix-II listing based on the anticipated effect on devil's claw end-product consumers. They believe that an Appendix-II listing would send out a message that the plant is endangered and this is expected to affect sales of the finished product and the demand for devil's claw dried tubers. The result would be reduced income for thousands of poor rural harvesters.

36. Botswana does, however, suffer from lack of information pertaining to trade. Trade figures are not consistent. Furthermore, Botswanan exporters struggle to find buyers for their material and exports are erratic. The ability to track movement of devil's claw material originating in Botswana would allow Botswanan stakeholders to improve their understanding of the devil's claw market. The Botswana Government opposes the inclusion of *H. procumbens* in Appendix II, but may consider Appendix III which would provide a mechanism for tracking trade without providing any negative publicity on the biological status of the species. However, the CITES Management Authority for Botswana is likely to act in accordance with stakeholder interests.

Namibia

37. The majority of Namibian stakeholders, like those in Botswana, are against a CITES listing on account of the expected drop in demand that will affect the livelihoods of poor rural harvesters. The NGO CRIAA is most strongly opposed to a CITES listing, stating that at present no evidence exists to show that trade may endanger this species. In addition, their opinion is that a CITES listing will not provide any extra capacity to manage the trade because measures are needed at local levels to monitor populations and enforce compliance with permits. Monitoring at the international level will not provide a tool that promotes sustainable utilization. Despite the negative sentiment towards including the devil's claw in CITES, the CITES Management Authority for Namibia believes that the inclusion in Appendix II or III would provide much needed information on trade. In addition, it is argued that extra resources to manage the trade at local levels could be requested from sources other than Government should this species have the international recognition of being included in the CITES Appendices. However, the

CITES Management Authority in Namibia is likely to act in accordance with stakeholder interests and will not currently support a proposal to include *Harpagophytum* spp. in Appendix II, but might consider an Appendix-III listing.

South Africa

38. The CITES Management Authority, based in the Department of Environmental Affairs and Tourism (DEAT), has not been involved in the management of the devil's claw trade in South Africa. South Africa is not opposed to an inclusion in Appendix II or III, but will take the views of Botswana and Namibia into account regarding a potential listing.

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PROYECTOS DE DECISIÓN DE LA CONFERENCIA DE LAS PARTES

12.xx Los Estados del área de distribución de *Harpagophytum* spp. que autoricen la exportación de especímenes de esta especie deben proporcionar información actualizada sobre la aplicación de las políticas y los programas de gestión mencionados en los informes sometidos en cumplimiento de la Decisión 11.63 (documento PC12 Doc. 8.1), para someterla a la consideración de la 14a. reunión del Comité de Flora. Los informes sobre los progresos realizados en la aplicación de esta decisión deben someterse a la Secretaría 90 días antes de la 14a. reunión del Comité de Flora, para que la Secretaría los incluya en un informe que presentará a esa reunión.

12.xx Los Estados del área de distribución y a los países importadores deben entablar negociaciones con la industria de la garra del diablo a fin de obtener apoyo para los programas de gestión que promuevan la utilización sostenible y el desarrollo de las comunidades que se ocupan de la gestión del recurso. En este sentido, y si se estima conveniente, puede solicitarse la asistencia del Comité de Flora y la Secretaría. Los informes sobre los progresos realizados en la aplicación de esta decisión deben someterse a la Secretaría 90 días antes de la 14a. reunión del Comité de Flora, para que la Secretaría los incluya en un informe que presentará a esa reunión.

12.xx Los Estados del área de distribución deben examinar la forma de utilizar los procesos y los mecanismos en otros tratados internacionales con miras a obtener apoyo para la utilización sostenible del recurso y su comercio equitativo, y deberían solicitar la asistencia de la Secretaría, según proceda. Los informes sobre los progresos realizados en la aplicación de esta decisión deben someterse a la Secretaría 90 días antes de la 14a. reunión del Comité de Flora, para que la Secretaría los incluya en un informe que presentará a esa reunión.