CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

Sixteenth meeting of the Conference of the Parties
Bangkok (Thailand), 3-14 March 2013

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Listing of the species *Senna meridionalis* in CITES Appendix II, in accordance with Article II, paragraph 2 (a), of the Convention and Resolution Conf. 9.24 (Rev. CoP13), Annex 2 a, paragraph A.

B. B. Proponent

Madagascar*.

C. Supporting statement

1. Taxonomy

1.1	Class:	Dicotyledones
1.2	Order:	Fabales
1.3	Family:	Fabaceae
1.4	Genus and author:	*Senna meridionalis* Du Puy (1995).
1.5	Scientific synonyms:	*Cassia viguierella* var. *meridionalis* R. Vig. (1935); *Cassia meridionalis* R. Vig. (1939)
1.6	Common names:	Malagasy: Andapary, Tainjazamena, Taraby, Tsingarifary
1.7	Code numbers:	

2. Overview

Nine species of *Senna* are endemic to Madagascar. Most of these species are native to the south, west and north of the island. *Senna meridionalis* is a xerophilic shrub, 2 to 5 m tall. It is an ornamental species that is much in demand on the international market, owing to its form as a bonsai tree. *Senna meridionalis* is collected in the wild and has become scarce. However, it is not yet protected by CITES.

This document suggests that the species *Senna meridionalis* meets the criteria for inclusion in CITES Appendix II in accordance with Article II, paragraph 2 (a) of the Convention and Resolution Conf. 9.24 (Rev. CoP13), Annex 2 a, paragraph A. To avoid a diminishing of the wild population of the species resulting from the collection of specimens from nature, trade in the species needs to be regulated.

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* *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat or the United Nations Environment Programme concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

Similarly, regulation is required to avoid the threats to the survival of the species arising from continued harvesting or other influences.

3. Species characteristics

3.1 Distribution

Senna meridionalis is a species having a fragmented and limited geographical distribution, found throughout the xerophytic thickets of the south-western region, in locations such as Itampolo, Tsimanampetsotsa, Soalaro, Andatabo (GSPM, 2011).

The geographical distribution of *Senna meridionalis* is shown in Annex 1.

3.2 Habitat

Senna meridionalis grows in xerophytic thickets, often on limestone but also on sand, at an altitude of 0 to 200 m.

3.3 Biological characteristics

Senna meridionalis flowers from January to April.

3.4 Morphological characteristics

Senna meridionalis is a xerophytic much-branched or shrubby evergreen tree, easy to identify, and may reach 5 m in height. It has thick, flexuous and helicoid branches, from which grow several clusters of short lateral branches on which, in turn, the small leaves grow, comprising 3 to 6 pairs of leaflets arranged in a pinnate pattern.

The flowers are bright yellow, often single but also found in groups (up to 6 flowers) on short stems. They have seven 7 brown and fertile anthers. The seedpods of *Senna meridionalis* are small (approximately 40 x 15 mm), oblong and flat, containing 5 to 11 seeds.

3.5 Role of the species in its ecosystem

The seeds of *Senna meridionalis* are eaten by lemurs, in particular *Propithecus candidus*.

4. Status and trends

4.1 Habitat trends

The dry spiny growth of forests and thickets of the south-west covers an area of approximately 18,355 km², 4.5 % of which is located in protected areas. This type of forest has declined by 29.7 % since the 1970s (Moat & Smith, 2007).

This type of growth is fragile. Degradation results in open and degraded areas.

4.2 Population size

Around 420 specimens, 150 of them mature, were counted at Ahaviro, Toliara (Ravaomanalina, 2006).

Recent observations (early January 2012) carried out in Andatabo, a harvesting area, made it possible to obtain information on the abundance of the species (Table 1). Approximately 73 mature specimens per hectare were counted on the Table de Toliara mountain.

Table 1: Population density and abundance at Andatabo

Factors	Andatabo
Total area of the plots studied (ha)	0.3
Number of mature specimens in 0.1 ha	7.3
Average specific density (spec./ha)	73
Estimate of the area occupied by the species (ha)	2
Estimated total abundance	146

4.3 Population structure

It was observed that the harvesting areas visited were lacking juvenile or adult specimens. Natural regeneration is impeded by the various threats weighing on the habitat of the species.

4.4 Population trends

In the harvesting areas, the specimens usable for commercial purposes have become rarer and rarer. In addition to large-scale harvesting for export, habitat destruction by various anthropic activities has caused an ongoing decline in the size of the population still in existence, and it is predicted that future decline will amount to 77.8 %.

4.5 Geographic trends

Senna meridionalis is endemic to the south-west of Madagascar. It is of limited distribution: the area of occurrence is 21531.5 km²; the area where the species is actually found amounts only to 126 km². Populations are very fragmented.

5. Threats

Andatabo is the principal area for harvesting this species. However, the area was not subject to any conservation before 2008. The calcareous rocky soils in the area have been used for the manufacture of bricks, which has meant that the habitat of the species has suffered progressive destruction which has impeded natural regeneration.

In addition, excessive collecting from the wild of specimens of *Senna meridionalis* for export represents a real threat, endangering the survival of the species.

6. Utilization and trade

6.1 National utilization

In addition to being used as an ornamental plant, the wood of the species is used in building. The leaves have medicinal properties, being used to treat haemorrhoids.

6.2 Legal trade

When the stems are cut, this species takes the form of a bonsai tree. It is thus much in demand in the ornamental plant trade. A high level of exports was observed in 2004 (Table 2).

Table 2: Number of seedlings of *Senna meridionalis* exported per year

Years	2003	2004	2005	2006	2007	2008
Number of seedlings exported	-	483	166	23	-	-

Source: CITES Management Authority (DGEF) and Permanent Secretariat Madagascar, 2009

6.3 Parts and derivatives in trade

Senna meridionalis is exported as a live plant.

6.4 Illegal trade

No illegal trade in *Senna meridionalis* has been recorded. The species is not very often sold on the national market.

6.5 Actual or potential trade impacts

Although this species readily propagates from seed, those dealing in the species tend to collect it from its natural habitats. Since the species is not covered by CITES, harvesting and export are not subject to any form of regulation. Exporting could thus result in a lack of natural regeneration, which is already very low (9.1 %) and the decline or even disappearance of populations in the harvesting areas, which in the long term would represent a major threat to the species.

7. Legal instruments

7.1 National

As the species is not yet listed in the CITES Appendices, exploitation of it is not subject to the Convention's rules. Collecting and exporting are regulated only by the authorization procedures at national level.

7.2 International

Inclusion of the species in CITES Appendix II will make it possible to ensure that all exports are accompanied by a CITES permit certifying that the specimens have been collected in conformity with the relevant laws and by methods which do not threaten the survival of the species.

Furthermore, listing the species in Appendix II will give them the benefits of studies of significant trade, making it possible to track and update their biological and ecological data.

8. Species management

8.1 Management measures

The number of specimens authorized for export is dependent on the stocks of the species in a horticultural centre. A single request for collection, per species and per collector, is allowed, for creation of a stock to be used for breeding. Subsequently, those dealing in the species have to breed it *ex situ*. Export permits and authorizations are issued only for plants reproduced artificially.

8.2 Population monitoring

This species has already been the subject of a study of significant trade, with the aim of listing it in CITES Appendix II in 2010. Its conservation status as defined by IUCN was classified in 2010 as EN, Endangered, B1ab (ii, iii) + 2ab (ii, iii). An updating of the data in 2012 resulted in a classification of EN A1c B1ab (ii, iii) + 2ab (ii, iii) B2.

8.3 Control measures

8.3.1 International

The species is not yet listed in the CITES Appendices.

Inclusion of the species in CITES Appendix II will make it possible to ensure that all exports are accompanied by a CITES permit certifying that the specimens have been collected in conformity with the relevant laws and by methods which do not threaten the survival of the species.

8.3.2 Domestic

Some populations of this species are found in the National Parks of Cap Sainte Marie and Tsimanampetsotse.

8.4 Captive breeding and artificial propagation

This species propagates easily from seed (Pronk, personal communication).

8.5 Habitat conservation

Some populations of *Senna meridionalis* are found in the National Parks of Andohahela and Tsimanapetsotsa, and in the Special Reserve of Cap Sainte Marie. Other populations are doubtless located in the new protected areas (Amoron'i Onilahy), which will enhance the conservation of the habitat of the species.

8.6 Safeguards

In order to guarantee the continued survival of the species, export permits and authorizations must be limited strictly to specimens reproduced artificially.

Under an agreement between the CITES Secretariat and the Plants Scientific Authority, Madagascar, *Senna meridionalis* will be the subject of further research carried out during 2012, in order to amplify the existing data.

9. Information on similar species

10. Consultations

There were no consultations with other countries, since the species is endemic only to Madagascar.

11. Additional remarks

This species has already been the subject of a proposal for listing in Appendix II, in 2010. The biological and ecological data obtained have been updated and brought together in order to prepare this second proposal.

12. References

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13. Webography

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14. List of annexes

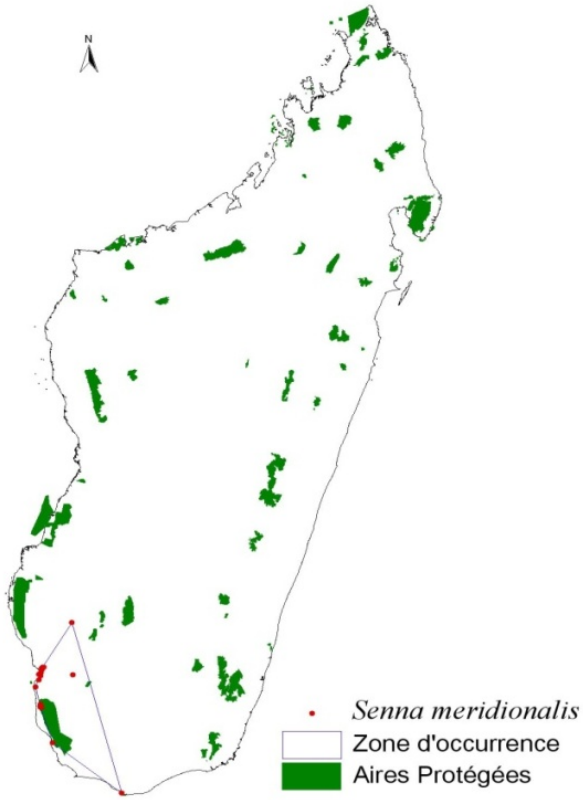
Annex 1: Illustrations and geographical distribution of *Senna meridionalis*

Annex 2: Preliminary data on the Web trade of Malagasy succulent plants species coordinated at RBG Kew (A Web survey investigating the current web-based trade in Malagasy succulent species has been carried out. The species include both CITES-listed and non CITES-listed species).

Illustrations and geographical distribution of *Senna meridionalis*

Overall view of *Senna meridionalis*
(Petignat & Cooke, 2009)

Flower-bearing branch of *Senna meridionalis*
Petignat & Cooke, 2009)



Preliminary data on the Web trade of Malagasy succulent plants species coordinated at RBG Kew

A Web survey investigating the current web-based trade in Malagasy succulent species has been carried out.
The species include both CITES-listed and non CITES-listed species.

	Website location					Specimen type for sale				Source of specimens for sale			Price range in USD			
Species	USA	EU	Other	Unknown	Total	Mature	Seedling	Seeds	unknown	Wild	Propagated	unknown	Per plant		Per seed	
													Min	Max	Min	Max
Operculicarya decaryi	**11**	**4**	**2**	**1**	**18**	**9**	**1**	**5**	**3**		**1**	**17**	**14.95**	**400.00**	**0.39**	**0.86**
Senna meridionalis	**3**		**1**		**4**	**3**		**1**		**1**		**3**	**20.35**	**150.00**	**0.51**	
Adenia firingalavensis	**1**	**1**	**1**		**3**	**2**		**1**		**1**		**2**	**75.00**	**236.72**	**1.41**	
Adenia subsessifolia	**1**	**1**			**2**	**2**						**2**	**8.00**	**15.65**		
Cyphostemma laza	3	2	1		6	3	1	1	1			6	28.00	65.00	1.18	
Uncarina stellulifera	3	1			4	1		3			1	3	70		0,66	2,52
Uncarina grandidieri	10				10	7	3						30	500		