

**Inclusion of *Heosemys* spp. in Appendix II. Proponent: China and Germany (on behalf of the Member States of the European Community).**

**Note:** According to the CITES standard taxonomy (Wermuth and Mertens, 1996), the genus *Heosemys* comprises five species, *H. depressa*, *H. grandis*, *H. leytensis*, *H. silvatica* and *H. spinosa*. The proposal is to include “*Heosemys* spp.” in Appendix II. This would appear to refer to the entire genus. However, the supporting statement notes that the taxonomic placement of *H. silvatica* is problematic and is intended to be excluded from the scope of the proposal. This analysis follows the intention of the supporting statement. *H. silvatica* is a rare turtle from southern India, classified (under the name *Geoemyda silvatica*) as Endangered (En B1+2c) by IUCN. *Leucocephalon yuwonoi*, the subject of CoP 12 Prop. 25, is regarded by some authorities as a member of the genus *Heosemys*, but is treated as *Geoemyda yuwonoi* in the standard CITES taxonomy.

**Summary:** The four turtles of the genus *Heosemys* under consideration range from the small to medium (carapace length of 20+ cm) *H. depressa*, *H. leytensis* and *H. spinosa* to the large *H. grandis* (48 cm). They occur in various parts of south-east Asia from Myanmar to Indonesia and the Philippines. Available information indicates that reproductive rate is low at two to seven eggs produced in one or two clutches per year; maturity is reached at six to ten years and in captivity, males can live up to 30 years, and females 22 years. Habitat requirements vary between species from evergreen forests and bamboo stands, to rivers, streams and marshes. All species are classified by IUCN as threatened. Habitat loss and modification are not thought to be a major threat to turtles in this genus, however, they are sought for consumption because of their relatively large size and many are exported to meet the demands of the Asian food market. In 2000, China issued import permits for 267 670 *H. grandis* and 36 600 *H. spinosa*; figures are lacking to assess the levels of trade in other species. There is a relatively small demand for the pet trade in Europe and the USA. Several species are afforded some protection in a number of countries but legislation may not be implemented effectively. The proponents seek inclusion of *H. depressa* in Appendix II in accordance with Article II, Resolution Conf. 9.24, Annex 2a criteria A and Bi) on the grounds that if international trade is not strictly regulated the species will meet the criteria for inclusion in Appendix I in the near future and that harvesting of specimens from the wild will exceed, over an extended period, the level that can be continued in perpetuity; inclusion of *H. grandis* and *H. spinosa* in Appendix II in accordance with Article II, Resolution Conf. 9.24, Annex 2a criterion Bi); and inclusion of *H. leytensis* in Appendix II in accordance with Article II, Resolution Conf. 9.24, Annex 2a criterion A on the grounds that if international trade is not strictly regulated the species will meet the criteria for inclusion in Appendix I in the near future.

**Analysis** Following Resolution Conf. 9.24 available information suggests that *H. depressa*, *H. grandis*, and *H. spinosa* meet the criteria for inclusion in Appendix II. All three are classified under varying degrees of threat, and all are recorded in international trade, with substantial trade levels recorded for *H. grandis*; it is likely that harvest for international trade is not sustainable. In at least one case (*H. leytensis*) and probably another (*H. depressa*), the restricted distribution of the species, its Critically Endangered status and the reputed demand for the hobbyist trade probably mean that any further collection for trade is likely to reduce it to a population level where its survival would be threatened by other influences.

Supporting Statement (SS)	Additional information
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Taxonomy

See note above.

Range

*H. depressa*: Myanmar  
*H. grandis*: Cambodia, Lao PDR, Malaysia (Peninsular), Myanmar, Thailand, and Viet Nam  
*H. leytensis*: Philippines  
*H. spinosa*: Brunei Darussaleam, Indonesia (Sumatra, Mentawai Islands, Natuna Islands, Banka, Batu and Banyak Islands and Kalimantan), Malaysia (Peninsular Malaysia, Sarawak and Sabah), Myanmar, the Philippines (Mindanao), Singapore and Thailand.

Supporting Statement (SS)	Additional information
<u>IUCN Global Category</u>	
<p><i>H. depressa</i>: CR A2cd and B1 +2c  <i>H. grandis</i>: VU A1d +2cd  <i>H. leytensis</i>: CR A2d and B1 +2c  <i>H. spinosa</i>: EN A1bcd</p>	

**Biological and trade criteria for inclusion in Appendix II**

**A) Trade regulation needed to prevent future inclusion in Appendix I**

*H. depressa* and *H. leytensis* are both likely to meet the criteria for inclusion in Appendix I within five years.

**B) Harvesting for international trade has, or may have, detrimental impact on population**

**(i) exceeds sustainable yield; (ii) reduces population to potentially threatened level**

No population estimates or data on population trends are available for any species. Available information indicates a low reproductive output of two to seven eggs produced in one or two clutches per year; maturity is reached at six to ten years. These turtles are thought to be primarily herbivorous in the wild, but some eat meat in captivity.

***H. depressa***: restricted to Arakan Yoma Hill range in Rhakine State, the species is considered 'rare and restricted' in Myanmar. The main threats to this species are understood to be from over-collection for local consumption and the international food trade. Significant demand also exists for the international pet trade. Substantial numbers of this species are strongly suspected to enter international trade from Myanmar, despite such trade being illegal.

***H. grandis***: occurs in lowland wetland areas. Cambodia: the population is considered 'significant'; Lao PDR: no information; Malaysia: individuals are 'encountered in fair numbers by locals'; Myanmar: the population is regarded as 'threatened by unsustainable harvest'; Thailand: surveys found the species to be 'uncommon to rare'; it is presumed depleted in most areas outside of protected areas; Viet Nam: no information on population status is available.

This species is particularly sought after because of its large size and is either used or is in domestic trade to some extent, in all countries in which it occurs. According to available data, Malaysia exports the largest number, with 325 specimens entering international trade during the period January to October 1999. Figures for Viet Nam show increasing exports in the early 1990s peaking in 1996 with 740 specimens followed by declining exports in the second part of that decade. The species is thought to be part of the substantial illegal trade in turtles from Cambodia and Lao PDR, and is known to be traded illegally in Myanmar and Thailand.

Official statistics for China indicate that permits for the import of 21 500 *H. grandis* were issued for 1998 and 267 670 specimens for 2000. The species has been regularly observed for sale in China and occasionally encountered for sale in Hong Kong SAR.

***H. depressa***: The species has been very rarely recorded in the wild, although 17 specimens, including one live individual, were examined during an expedition in early 2000 (Platt et al., 2000). Despite the paucity of information, in the 1980s this species was not regarded as endangered, as market demands were low, harvest levels appeared minimal and extensive habitat remained (Salter, 1983 cited in Platt et al., 2000). It was noted though, that populations could become threatened if harvesting increased.

***H. grandis***: Tana et al. (2000) consider Thailand to have the largest population of this species, followed by Cambodia, Lao PDR and Viet Nam. In Lao PDR, the species is considered susceptible to collection because it is associated with habitat that is heavily used by humans (Stuart and Timmins, 2000). According to hunters, the population status in Myanmar 'is very low' and most hunters capture fewer than 10 turtles per year (Kalyar, 2002). van Dijk and Palasuwan (2000) describe the trade impacts on *H. grandis* as potentially serious given the depleted populations and the likelihood that organised teams of collectors probably trespass into protected areas.

Available trade data from the CITES Management Authority of Viet Nam (TRAFFIC East Asia, 2002) show that for the period 1999 to 2001, there were no reported exports of this species from Viet Nam, however, 300 were re-exported from Viet Nam to China, the country of origin is unknown. Hendrie (2000) notes that the species has been observed in seizures along the main ground transport route from Viet Nam to China.

***H. spinosa***: Samedí and Iskandar (2000) consider this species to be 'rare' in Indonesia. van Dijk and Palasuwan (2000) describe the potential trade impacts on *H. spinosa* in Thailand as modest if the protected areas system remains effectively enforced.

As many as 500 specimens of this species were observed in one exporter's premises in Medan, Sumatra, Indonesia, September 1999, although it has not been recorded to occur in the immediate vicinity of Medan (Shepherd, 2000). This species is occasionally delivered to Tembilahan (it does not occur in this region) for export by collectors from the neighbouring

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<p>It is thought that populations in most countries will not be able to sustain the current levels of exploitation for international trade.</p> <p><b>H. leytensis:</b> Philippines: only a single individual has been encountered on Palawan during biological surveys conducted over the last 80 years, indicating that it is extremely rare. It is assumed that this species has been affected by collection for subsistence in the Philippines. There is great interest in this species from hobbyists.</p> <p><b>H. spinosa:</b> Brunei Darussalam: rare. Indonesia: considered 'critically endangered'; Malaysia: relatively good populations are found, suggested 'vulnerable'; Myanmar: considered 'threatened by unsustainable harvest'; Philippines: the late discovery of this species suggests that it is uncommon or rare; Singapore: 'uncommon'; Thailand: considered 'vulnerable' to 'endangered'. No data on population trends are available, but declines are inferred for some areas and from declining quantities of exports, despite stable or increasing demand for this species. There is some domestic use in most range States. In the period 1998-2001 over 8 000 were recorded as exported from Indonesia for the pet trade. In 2000, China issued import permits for 36 000 specimens. This species is rarely encountered in illegal trade in Thailand, and is not known to be traded illegally in Myanmar, the Philippines or Singapore.</p>	<p><i>province of West Sumatra and is the most valuable species to be exported from there (Shepherd, 2000).</i></p> <p><i>US import data show reported total imports of 1 163 live specimens of H. spinosa between April 1998 and July 2001. The species has also been recorded on sale in reptile shops in Japan.</i></p> <p><i>There appears to be extensive exports of turtles from Lao PDR to Thailand and Viet Nam. It is likely that Heosemys spp. are included in trade in Viet Nam, (destined for China), which involves many specimens that originated in Cambodia (Jenkins, 1995). Heosemys spp. were recorded on sale in reptile shops in Japan in March 2002 (Kameoka, in prep.).</i></p>

#### Other information

#### Threats

Habitat loss, though not a major threat, is assumed to affect several species to some extent.

#### Conservation, management and legislation

Commercial exports of turtles are prohibited from Myanmar, the Philippines and Viet Nam. Exports of turtles from Peninsular Malaysia are controlled by the Department of Wildlife and National Parks.

*H. depressa:* specifically protected in Myanmar

*H. grandis* is protected in Myanmar, Thailand and most states in Peninsular Malaysia but is not domestically protected in Viet Nam. Although it appears that wild animals cannot be hunted with traps, sold, commercialised or transported in Cambodia, there is a legal export of turtles, restricted by an annual quota and by the size of individual turtles.

*H. spinosa* is specifically protected in Thailand and most states in Peninsular Malaysia and is included under general legislation in Singapore. It occurs in a number of protected areas. Exports from Indonesia are subject to quota. No information is available for Brunei Darussalam.

*H. leytensis* is not specifically protected in the Philippines.

Legislation in Lao PDR is currently under review.

*Legislation to protect turtles is not effectively enforced in Myanmar (CITES Management Authority of Myanmar, 2002).*

*For information on recent import restrictions to China, see Conservation, Management and Legislation section of the analysis of Proposal 12.20, to include Platysternon megacephalum in Appendix II.*

*Legislation in Cambodia is unclear.*

Supporting Statement (SS)	Additional information
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**Similar species**

*It is possible that Hieremys annandalii may have been exported from Viet Nam under permits for Heosemys grandis due to their similarity of appearance (Hendrie, 2000).*

**Captive breeding**

*H. grandis* has been bred in captivity by zoos and hobbyists in the USA, Germany, the Netherlands and probably Thailand and elsewhere; *H. spinosa* has been bred in the USA; *H. depressa* and *H. leytensis* have not been reported as bred in captivity.

**Other comments**

All participants of the Technical Workshop on Trade in Freshwater Turtles and Tortoises in Asia, Kunming, China, 25-28 March 2002, including representatives from range and non-range countries, supported this proposal.

The Cambodian Department of Fisheries treats the protection of turtles in Cambodia as a priority and is undertaking species inventories. Studies have not yet been extended to collect information on abundance and conservation management of turtles and without this information, the Department is reluctant to support the proposal (CITES Management Authority of Cambodia, 2002).

**Reviewers:** TRAFFIC East Asia, TRAFFIC East Asia-Japan, TRAFFIC Southeast Asia, TRAFFIC Southeast Asia - Indochina, N. Kalyar.

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