

Proposal (A): Inclusion of the following species of the Family Trionychidae in Appendix II: *Aspideretes leithii*, *Dogania subplana*, *Nilssonina formosa*, *Palea steindachneri*, *Pelodiscus axenaria*, *P. maackii*, *P. parviformis*, and *Rafetus swinhoi* (B): Transfer of the following species from Appendix II to Appendix I: *Chitra chitra* and *Chitra vandijki*

(B): Transfer of the following species from Appendix II to Appendix I: *Chitra chitra* and *Chitra vandijki*

Proponent: China and the United States of America

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Summary: This part of the proposal seeks to include eight species of Asian softshelled turtle of the family Trionychidae in Appendix II. Three species of these eight are not currently included in the CITES Appendices: *Aspideretes leithii*, *Dogania subplana*, *Nilssonina formosa*. The remaining five species were listed in Appendix III by China in 2005: *Palea steindachneri*, *Pelodiscus axenaria*, *P. maackii*, *P. parviformis*, and *Rafetus swinhoi*. The proposal would have the effect that all south and east Asian species of Trionychidae except the farmed *Pelodiscus sinensis* would be included in CITES (the Mid-East, African and North American species are excluded).

Half the species proposed for inclusion in Appendix II are globally threatened according to the current IUCN Red List: one (*Rafetus swinhoi*) is Critically Endangered, two are Endangered and one is Vulnerable. Of the remainder, one was assessed as Lower Risk/least concern and three (*Palea* spp.) were not evaluated. Recently the IUCN Tortoise and Freshwater Turtle Specialist Group has reviewed current listings and proposed some changes. Almost no quantitative information from assessment or monitoring studies of wild trionychid populations is available. There is good evidence that some of the species, particularly *Rafetus swinhoi*, have undergone marked decline, but trends and the level of risk faced by lesser-known species (such as the *Pelodiscus* spp.) are inferred mainly from the volume of trade and/or the relative availability of specimens in food and pet markets.

Turtles are heavily exploited in many range countries, particularly in China. Heavy exploitation and rising levels of trade between countries are believed to be putting almost all Asian turtles at increasing risk as the focus of collection shifts from one population to another. Softshell turtles are generally considered the most palatable chelonians in Southeast and East Asia, and appear to be more valuable commercially than other chelonian species in the food trade, with smaller specimens of a given species more desirable than larger ones as they are considered to have higher quality meat. Softshell turtles, notably *Pelodiscus sinensis* (not proposed for inclusion in the Appendices), are bred in China and Southeast Asia in very large numbers for consumption.

There is little information on levels of international trade in wild specimens of softshells, even where species have been listed in Appendix III. Loss or degradation of habitat, caused by sand or gold mining, dam construction, drainage and pollution also affects many species. Local subsistence use is high in several areas. Species are nominally protected by law in some parts of the range but it is considered that high levels of unreported trade occur, with substantial cross-border movement in parts of Asia.

***Aspideretes leithii* (*Nilssonina leithii*)** Endemic to India where confined to large river systems and reservoirs of the central and southern peninsula. Formerly common but reportedly declining at the end of the 20th century, and absent from much of its range. Decline said to be mainly a result of siltation and rivers drying up, although other sources attribute decline (perhaps as much as 90%) to excess collection for trade. There are no survey or monitoring data on population size or trade volume. Heavily used for food, mainly at local level. Assessed as Vulnerable by IUCN in 2000.

Dogania subplana Widely distributed in Southeast Asia, from Myanmar to the Philippines. Reported to be still locally common in much of the range. It is collected for subsistence consumption and trade. It was reported as exported from Medan in some quantity in the late 1990s, with around 200 kg per day received for export. There are no comprehensive data on population size or trade volumes. Present in some protected areas. Assessed as Lower Risk/least concern by IUCN in 2000.

Nilssonia formosa A riverine species largely restricted to Myanmar, but recently reported from Yunnan and may occur peripherally in Thailand. Uncommon to rare in the wild, and reported by fishermen to have declined over recent decades as a result of heavy fishing and egg collection, particularly with the spread of trade networks to formerly remote parts of the range. Also affected by gold-mining and accidental catch. There are no survey or monitoring data on population size or trade volume. Nominally protected by legislation. Assessed by IUCN in 2000 as Endangered.

Palea steindachneri Occurs in southern China (including Hainan), northern Viet Nam and adjacent Lao PDR (also introduced populations in Hawaii (USA) and Mauritius). Highly valued in the food trade. There are no survey data on population size or trade volume. Since its listing in Appendix III in 2005 no trade in this species has been recorded in the CITES trade database. Turtle farms in China produce more than 80 000 individuals annually from a captive stock of 252 000 adults. Considered endangered in the natural range, and assessed by IUCN in 2000 as Endangered globally.

Pelodiscus axenaria A Chinese endemic apparently restricted to Hunan province. Described in 1991, it remains poorly known. It was listed in CITES Appendix III in 2005. Since then the USA and Australia have imported 40 kg and 2 kg, respectively, of *P. axenaria* derivatives from China; Australia has imported 100 bottles of powder from China; the USA has reported import of 1312 live ranched specimens from Thailand (not in the known range), all for commercial purposes. Thailand produces very large amounts of farmed *Pelodiscus sinensis* and it is possible that these were misreported specimens of the latter. Not assessed by IUCN.

Pelodiscus maackii Fairly widespread in northeast Asia, ranging from China, the Korean Peninsula and Russia. Listed in CITES Appendix III (China) in 2005. There is a single subsequent trade record of 100 kg of shells (of wild origin) exported from Mexico to the USA for commercial purposes in 2007. Not assessed by IUCN.

Pelodiscus parviformis Present in southern China and northern Viet Nam. Listed in CITES Appendix III (China) in 2005; no trade subsequently reported. Not assessed by IUCN.

Rafetus swinhoei Formerly occurred in the Yangtse flood plain west of Shanghai, and in the Red River (China/Viet Nam). Can grow to a very large size. Not confirmed in the wild for around 15 years; only four live captive individuals are known to exist, a male and female at Suzhou Zoo in China (where breeding attempts have failed), and two males in separate lakes in and near Hanoi. There is a possibility some individuals remain in the wild. Decline is attributed to excess exploitation, also affected by water pollution and wetland modifications. China listed the species in Appendix III in 2005 and one record of a specimen is recorded as having been exported for educational purposes by China to the Republic of Korea in 2010.

Analysis: Information on population trends and trade volume is not comprehensive and for some included taxa little or no species-specific information is provided in the proposal. The following brief observations can be made regarding whether the species may meet the criteria for inclusion in Appendix II set out in Annex 2 a to *Resolution Conf. 9.24 (Rev. CoP15)*, that is whether regulation in trade in the species is necessary to prevent it becoming eligible for inclusion in Appendix I in the near future, or to ensure that harvest for trade is not reducing the population to a level at which its survival might be threatened by continued harvest or other influences.

Aspideretes leithii (*Nilssonia leithii*) is endemic to India where it has reportedly undergone marked declines. Harvested for local consumption, although information on the extent and impact of use is conflicting; it is not known whether the species enters international trade. There is insufficient information to

determine whether the species meets the criteria for inclusion in Appendix II in Annex 2 a to *Resolution Conf. 9.24 (Rev. CoP15)*.

Dogania subplana is widespread in Southeast Asia. Information on its desirability as a food item is conflicting, but it is known to be harvested for export in at least part of its range. The species may possibly meet the criteria for inclusion in Appendix II in Annex 2 a to *Resolution Conf. 9.24 (Rev. CoP15)*.

Nilssonina formosa is known from Myanmar and China and possibly occurs in Thailand. Believed to have declines as a result of overexploitation and other factors and known to occur in food markets in East Asia. The species may meet the criteria for inclusion in Appendix II in Annex 2 a to *Resolution Conf. 9.24 (Rev. CoP15)*.

Palea steindachneri occurs in China, Lao PDR and Viet Nam, with introduced populations in the USA (Hawai'i) and Mauritius. Valued in the food trade and reported to be captive-bred in China. There is no information on international trade in this species, or on harvest of wild populations for trade. There is thus insufficient information to determine whether the species meets the criteria for inclusion in Appendix II in Annex 2 a to *Resolution Conf. 9.24 (Rev. CoP15)*.

Pelodiscus axenaria is a poorly known species endemic to China. There is little information in international trade, other than report of export of just over 1000 ranched specimens from Thailand (not a range State) to the USA which may be misreported. There is insufficient information to determine whether the species meets the criteria for inclusion in Appendix II in Annex 2 a to *Resolution Conf. 9.24 (Rev. CoP15)*.

Pelodiscus maackii is the most northerly softshell species in Asia, occurring in China, the Korean Peninsula and Russia. The only recorded trade in the CITES trade database (the species was included in Appendix III by China in 2005) is of 100 kg of shells exported from Mexico to the USA in 2007. This is almost certainly a result of misreporting. There is insufficient information to determine whether the species meets the criteria for inclusion in Appendix II in Annex 2 a to *Resolution Conf. 9.24 (Rev. CoP15)*.

Pelodiscus parviformis occurs in southern China and northern Viet Nam. There is no information on status of or trade in this species; it is thus not possible to say whether it meets the criteria for inclusion in Appendix II in Annex 2 a to *Resolution Conf. 9.24 (Rev. CoP15)*.

Rafaetus swinhoi is only known from four specimens. It clearly meets the biological criteria for inclusion in Appendix I.

From the above, it would appear that *Dogania subplana* and *Nilssonina formosana* may meet the criteria for inclusion in Appendix II in Annex 2 a and that *Rafaetus swinhoi* does not, by virtue of already meeting the criteria for inclusion in Appendix I and there being little likelihood of any harvest for trade. For the remaining species there is insufficient information to determine whether the species do or do not meet the criteria. A general understanding of the dynamics of the turtle trade in Asia, and the fact that softshell turtles are said to be more highly sought after in the food trade than other species, might indicate that they are more likely to than not.

The different species all resemble each other to a greater or lesser degree, and can be distinguished from other chelonians in the region, though they cannot necessarily be told with ease from members of the Trionychidae from other parts of the world. If it is concluded that some of the species considered here meet the criteria for inclusion in Appendix II set out in Annex 2 a to *Resolution Conf. 9.24 (Rev. CoP15)*, then it is likely that the other species would meet the criteria in Annex 2 b.

(B): Transfer of the following species from Appendix II to Appendix I: *Chitra chitra* and *Chitra vandijki*

Summary: The genus *Chitra*, currently containing three species *Chitra chitra*, *C. indica* and *C. vandijki*, was listed in Appendix II in 2003. This part of the proposal is to transfer *Chitra chitra* and *Chitra vandijki* from Appendix II to Appendix I. There are no reliable estimates of actual population size or density, and the total area occupied within the drainage basins they occur in is not known in detail. There is strong evidence that both have declined and are rare or very rare in many parts of their known ranges, perhaps throughout. IUCN has assessed *C. chitra* as Critically Endangered but has not assessed *C. vandijki* because it was described after the 2000 evaluations. Freshwater turtles, especially trionychids, are heavily exploited in most range countries, and much trade is focused on China, where demand for turtles for food and medicinal uses has increased greatly, to the extent that collection pressure is depleting turtle populations across the region. There is also demand for the pet trade. Loss or degradation of habitat, caused by sand or gold mining, and the disruption of water flow following dam construction, has affected both these species. They are nominally protected by law in most of the range but it is clear that high levels of illegal trade occur, with substantial cross-border movement between countries in the region. There has been very little reported international trade in *Chitra* since the genus was listed in Appendix II in 2003.

Chitra chitra A large riverine species initially thought to be restricted to Thailand but now known from peninsular Malaysia, Sumatra and Java. Although quantitative population data are not available, the species seems everywhere rare and in serious decline, primarily because of excess exploitation, but also following river modification. Good evidence for increasing rarity in Thailand where collected for food and live animals. Eggs are highly sought after and sandbanks used for nesting are increasingly impacted by changing water flow following dam construction. Not recently confirmed in the wild in Malaysia; rare and poorly known in Sumatra; confirmed to occur in two rivers in northeast Java (treated as a distinct subspecies). Nominally protected by legislation in Thailand and Indonesia. There has been very little international trade in *Chitra* reported to CITES; Malaysia reportedly exported 183 live *Chitra chitra* in 2004, with between 0 and 84 in later years for an annual average of 32 live animals in the period 2000-2011 (CITES Trade Database). Assessed by IUCN in 2000 as Critically Endangered.

Chitra vandijki A large riverine species largely restricted to Myanmar where present in the Ayeyarwaddy (Irrawaddy) drainage and the Salween river, in which extends marginally into northwest Thailand. Although quantitative population data are not available, market surveys and consultation with fishermen suggest the species is everywhere rare or very rare. Fishermen in the remote Upper Chindwin reported that river turtles had declined over the past 20-30 years and attributed this mainly to increased human presence and fishing effort; illegal trade of turtles from here to China only developed around 2000, after turtle populations around Mandalay (a trade centre) became depleted. Sandbanks used for nesting are increasingly impacted by dam construction. Eggs are highly sought after and nests are easily located. Nominally protected by Fisheries and Forestry laws in Myanmar. Held in a captive breeding facility in Mandalay. First formally described in 2003 (from a market specimen in Yunnan believed to have derived from the Ayeyarwaddy in Myanmar) hence not assessed by IUCN in 2000.

Analysis: There is good evidence that both *Chitra chitra* and *C. vandijki* are rare or very rare in many parts of their known ranges, perhaps throughout, and that both have declined markedly in recent decades while habitat area and quality have also decreased in substantial parts of the range, and there is continuing trade demand. Accordingly both *C. chitra* and *C. vandijki* may meet the biological conditions for Appendix I listing under the criteria in Paragraph C of Annex 1 to *Resolution Conf. 9.24 (Rev. CoP15)*. It is not straightforward to assess *Chitra* in relation to criteria in Paragraphs A and B, which require, respectively, a small population size and a restricted distribution area (with additional sub-criteria). Population size is not known for either species and comprehensive distribution information is lacking for both, however, both *C. chitra* and *C. vandijki* may be inferred to meet the basic requirement of Criterion B, and at least subcriteria Biii (vulnerability) and Biv (decrease in individuals and habitat) would apply.

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Supporting Statement	Other information
<p><i>Aspideretes leithii</i> Leith's Softshell Turtle.</p> <p>IUCN Global Category: Vulnerable A1c ver 2.3 (ATTWG, 2000a; needs updating). (Draft Critically Endangered*).</p> <p>Range: India.</p> <p>Regarded as common until the 1990s but estimated to have declined by 90% by 2005 as a result of excess exploitation. Long harvested for local subsistence use but more recently in trade networks, also affected by changes to river habitats. * see table footnote re "draft" categorisations</p>	<p><i>Recent opinion is that the generic name Aspideretes is a junior synonym of Nilssonina, in which case A. leithii would become Nilssonina leithii (Praschag et al., 2007); see also Fritz and Havas (2007, appendix) and the Turtle Taxonomy Working Group checklist (van Dijk et al., 2011).</i></p> <p><i>Rivers of peninsular India, including Bhavani, Godaveri, Moyer and others (Fritz and Havas, 2007), south at least to the Bharathapuzha River in Kerala (Kumar, 2004).</i></p> <p><i>Relatively common but declining; threatened by heavy local consumption and use in trade (Choudhury et al., 2000). Populations in the southern part of its range are small, fragmented and scattered (van Dijk in litt., 2012). Formerly common but has disappeared from much of its range, mainly due to siltation and drying up of rivers during the summer; also affected by trade up to the mid 1970s (ATTWG, 2000a).</i></p> <p><i>It has become subject to intensive exploitation over the past 30 years, plus has suffered habitat degradation, and is believed to have suffered a range-wide decline averaging over 90% during this period (van Dijk in litt., 2012).</i></p>
<p><i>Dogania subplana</i> Malayan Softshell Turtle.</p> <p>IUCN Global Category: Lower Risk/least concern ver 2.3 (ATTWG, 2000b; needs updating).</p> <p>Range: Indonesia, Malaysia, Myanmar, Philippines, Singapore, Thailand.</p> <p>Harvest prohibited in Singapore.</p>	<p><i>In general softshell turtles are regarded as the most palatable chelonians within Southeast and East Asia and are widely eaten by many ethnic groups and peoples of different denominations, with the exception of Muslims, who are forbidden to eat the meat (but not the eggs) of these and other chelonians under Islamic dietary rules. Palatability and desirability of different species appears to vary, although it is difficult to discern a consistent pattern (Jenkins, 1995).</i></p> <p><i>TFTSG and ATTWG, (2000) noted that the species was still locally common in Indonesia, Malaysia and Thailand, was exported in some numbers but was the least favoured softshell for food and was present in several protected areas. Shepherd (2000) reported that in 1999 the single exporter in Medan (Sumatra, Indonesia) received some 200 kg daily for export, one fifth the amount of Amyda cartilaginea but considerably more than the other softshell exported, Pelochelys cantori. Dogania subplana was more highly sought after than the latter. He also noted that softshell turtles were in general more valuable commercially than other turtles exported through Medan. Smaller specimens commanded higher prices per kg as their meat was considered of higher quality.</i></p> <p><i>Within the Philippines, present at least on Luzon, Mindanao, Mindoro and Palawan. Common in parts of Palawan where present in forested creeks at higher elevation than</i></p>

Supporting Statement	Other information
<p><i>Nilssonina formosa</i> Burmese Peacock Softshell Turtle.</p> <p>IUCN Global Category: Endangered A1cd+2d, B1+2c ver 2.3 (ATTWG, 2000c; needs updating). (Draft Critically Endangered*).</p> <p>Range: Myanmar.</p> <p>Considered uncommon to rare; harvested for food and exported in significant numbers, also impacted by gold-mining and other changes to river habitat.</p> <p>In Myanmar turtles are protected by Fisheries and Forestry laws, and all wildlife is protected in wildlife sanctuaries and national parks. Held in a captive breeding facility in Mandalay.</p>	<p><i>other freshwater species; some populations possibly depleted by excess harvest (Fidenci and Castillo, 2009).</i></p> <p><i>Ayeyarwady (Irrawaddy), Sittaung, Thanklwin (Salween) rivers, probably also shared drainage in Thailand, also recently confirmed from the uppermost Mekong system in Yunnan (China) (Liebig et al., 2012).</i></p> <p><i>Based on interviews with fishermen along the Upper Chindwin, Kuchling et al. (2004) reported this species was found at intermediate abundance compared with Chitra vandijki (higher) and Amyda cartilaginea (lower) in the main channel, and lowest in narrower side channels (Kuchling et al. stress that this is an indication of relative abundance only, not of overall population status). Fishermen reported that river turtles had declined over the past 20-30 years and attributed this mainly to increased human presence and fishing effort. Kuchling et al. (2004) note that illegal trade of turtles from the Upper Chinwin to China only developed around 2000, after turtle populations around Mandalay (a trade centre) became depleted. In addition to trade in turtles and shells, Win Ko Ko et al. (2006) note the following threats in the Upper Chindwin: gold mining, accidental entanglement in fishing gear (especially gillnets) and excess egg collection.</i></p> <p><i>Traded in some numbers in the East Asian food trade; uncommon to rare in the wild; not known to inhabit effectively protected areas (ATTWG, 2000c).</i></p>
<p><i>Palea steindachneri</i> Wattle-necked Softshell Turtle.</p> <p>IUCN Global Category: Endangered A1cd+2cd ver 2.3 (ATTWG, 2000d; needs updating).</p> <p>Range: China, Lao PDR, Viet Nam, (introduced Mauritius, USA: Hawaii).</p> <p>Not protected by law in Viet Nam. Most softshells are listed as national protected animals in China. It is estimated that turtle farms in China produce more than 80 000 individuals annually from a captive stock of 252 000 adults.</p> <p>Listed in CITES Appendix III (China, 2005).</p>	<p><i>See general comment on softshell use under Dogania above.</i></p> <p><i>Southeast China (including Hainan Island), northern Viet Nam (Fritz and Havas, 2007). The current Red List does not include Lao PDR in the range (ATTWG, 2000d in IUCN, 2012).</i></p> <p><i>No reported international trade since listing in Appendix III in 2005 (CITES Trade Database).</i></p> <p><i>Highly valued in the food trade and considered Endangered in both China and Viet Nam (ATTWG, 2000d).</i></p>
<p><i>Pelodiscus axenaria</i> Hunan Softshell Turtle.</p> <p>IUCN Global Category: Not assessed (IUCN, 2012). (Draft Data Deficient*).</p> <p>Range: China.</p>	<p><i>See general comment on softshell use under Dogania above.</i></p> <p><i>Hunan Province (Fritz and Havas, 2007).</i></p> <p><i>Since listing in Appendix III in 2005 the USA and Australia have imported 39.55 kg and 1.9 kg, respectively, of P. axenaria derivatives and extract from Taiwan; Australia has imported 100 bottles of powder from China; the USA has imported 1312 live ranched specimens from Thailand (CITES Trade Database). All reported trade for commercial</i></p>

Supporting Statement	Other information
<p>Most softshells are listed as national protected animals in China.</p> <p>Appendix III (China, 2005).</p>	<p><i>purposes. Thailand has many turtle farms that produce very large quantities of Pelodiscus sinensis and it is possible that these were misreported specimens of the latter (Jenkins, 1995).</i></p> <p><i>Genetic analysis (Fritz et al., 2010) has provided evidence of at least seven distinct genetic lineages within Pelodiscus; P. axenaria is highly distinct and validity of P. maackii is confirmed, but it is not clear which names and rank should be applied to several taxa in the central and southern parts of the range. These findings suggest systematic revision is needed as a basis for improved assessment of the conservation status of Pelodiscus species.</i></p>
<p><i>Pelodiscus maackii</i> Northern Chinese Softshell Turtle.</p> <p>IUCN Global Category: Not assessed (IUCN, 2012). (Draft Data Deficient*).</p> <p>Range: China, DPR Korea (non-CITES Party), Republic of Korea, Russian Federation.</p> <p>Most softshells are listed as national protected animals in China.</p> <p>Appendix III (China, 2005).</p>	<p><i>Amur, Ussuri, Sungari, & Liao-che rivers (Fritz and Havas, 2007).</i></p> <p><i>One transaction has been reported since listing in Appendix III in 2005: 100 kg Pelodiscus maackii shells of wild origin exported from Mexico to the USA in 2007 for commercial purposes (CITES Trade Database). This seems extremely likely to be a result of misreporting.</i></p> <p><i>Genetic analysis (Fritz et al., 2010) has provided evidence of at least seven distinct genetic lineages within Pelodiscus; P. axenaria is highly distinct and validity of P. maackii is confirmed, but it is not clear which names and rank should be applied to several taxa in the central and southern parts of the range. These findings suggest systematic revision is needed as a basis for improved assessment of the conservation status of Pelodiscus species.</i></p>
<p><i>Pelodiscus parviformis</i> Lesser Chinese Softshell Turtle.</p> <p>Proposed for transfer from Appendix III (China, 2005) to Appendix II.</p> <p>IUCN Global Category: Not assessed (IUCN, 2012). (Draft Data Deficient*).</p> <p>Range: China, Viet Nam.</p> <p>Not protected by law in Viet Nam. Most softshells are listed as national protected animals in China.</p>	<p><i>See general comment on softshell use under Dogania above.</i></p> <p><i>China: Guangxi, Hunan Province (Fritz and Havas, 2007).</i></p> <p><i>No reported international trade since listing in Appendix III in 2005 (CITES Trade Database).</i></p>
<p><i>Rafetus swinhoei</i> Yangtze Giant Softshell Turtle.</p> <p>Proposed for transfer from Appendix III (China, 2005) to Appendix II.</p> <p>IUCN Global Category: Critically Endangered A1cd+2cd ver 2.3 (ATTWG, 2000e; needs updating).</p>	<p><i>Le and Pritchard (2009) note the disjunct distribution, with two areas of occurrence: Tai Hu Lake and Suzhou area west of Shanghai, and the Red River system in Yunnan (China) and northern Viet Nam (possibly also formerly further south in Thanh Hoa Province).</i></p> <p><i>Probably already rare in the 1870s, although still found by fishermen up to around 2000; Pritchard found more than 20 museum specimens in China and Viet Nam,</i></p>

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<p>Range: China, Viet Nam.</p> <p>Formerly occurred in the Red River (China/Viet Nam) and the Yangtse flood plain in China. Not confirmed in the wild for around 15 years; only four live captive individuals are known to exist. Decline is attributed to excess exploitation, also impacted by water pollution and wetland modifications.</p> <p>Not protected by law in Viet Nam. Most softshells are listed as national protected animals in China. Qingtian Reserve (Zhejiang Province, China) was reportedly designated specifically to protect <i>Rafetus swinhoei</i>. Breeding has been attempted by the pair in Souhou Zoo (China) since 2008 but no hatchlings have been produced.</p> <p>Appendix III (China, 2005).</p>	<p><i>mostly decades old and misidentified (Le and Pritchard, 2009). Several surveys for Rafetus swinhoei have taken place recently in Vietnam, Laos and China. One of the two specimens in Vietnam (probably a middle-aged adult male) was discovered during such a survey in Dong Mo Lake in the Viet Nam sector of Red River drainage in 2007. A survey along the Red River in Yunnan confirmed the historic occurrence of the species and listed several individuals that were recorded up to 1998, but no firm evidence of captures or sightings has emerged since that date (Kuchling, 2012). There remains a possibility that turtles of this species remain in Yunnan because monitoring staff have been checking markets in the area for giant softshells (which would be Rafetus swinhoei) rather than looking for smaller (younger) turtles with other features diagnostic of the species (Kuchling, 2012). Only four known individuals remaining.</i></p> <p><i>Rafetus swinhoei was recently listed among the “Top 25” most highly threatened turtles (TCC, 2011).</i></p> <p><i>Wetland destruction and water pollution also contributed to decline of Rafetus swinhoei, and there is a fair chance that a few wild individuals remain in remote parts of the range (TCC, 2011).</i></p> <p><i>Since listing in Appendix III in 2005 there has been one record of trade in Rafetus swinhoei: one specimen exported from China to the Republic of Korea in 2010 for educational purposes (source code O) (CITES Trade Database).</i></p>

(B): Transfer of the following species from Appendix II to Appendix I: *Chitra chitra* and *Chitra vandijki*

Supporting Statement	Other information
<p><i>Chitra chitra</i> Asian Narrow-headed Softshell Turtle.</p> <p>IUCN Global Category: Critically Endangered A1cd, B1+2c ver 2.3 (ATTWG, 2000).</p> <p>Range: Indonesia, Malaysia, Thailand.</p> <p>A riverine species subject to by-catch and targeted catch for food and live animals. Vulnerable because geographically and temporally concentrated during egg-laying. Sandbanks used for nesting are increasingly impacted by dam construction. Eggs are highly sought after and nests are easily located. Although quantitative population data are not available, populations are believed to be widely in serious decline, primarily</p>	<p><i>See general comment on softshell use under Dogania above.</i></p> <p><i>Until the late 1980s (described 1990) regarded as conspecific with Chitra indica.</i></p> <p><i>Initially thought to be restricted to Thailand, populations currently regarded as this species are now known to occur in Java, Sumatra and in (West) Malaysia (McCord and Pritchard, 2003; TCC, 2011). In Thailand recorded from the Mae Klong and Chao Phraya drainages (Kitimasak and Thirakhupt, 2002; Kitimasak et al., 2005). In Malaysia, the very few validated specimens known are from the Tahan-Pahang river system and the vicinity of Taman Negara; also reportedly found in southern and eastern parts of the peninsula (McCord and Pritchard, 2003). In Java, currently known from the Pasuruan and Solo drainages in the east (McCord and Pritchard, 2003).</i></p>

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<p>because of excess exploitation, but also following river modification.</p> <p>Protected by law from all forms of exploitation in Thailand, including import and export. In Indonesia protected from commercial trade by Government Decree No.7/1999.</p>	<p><i>McCord and Pritchard (2003) note that Chitra chitra appears to have a relatively restricted range in Thailand and to be very rare or possibly extirpated in Malaysia, with recent instances where observers have failed to confirm the species during extended surveys. McCord and Pritchard (2003) cite a source (Samedi and Iskander, 2000) stating Chitra chitra is rare in Sumatra and Java.</i></p> <p><i>Kitimasak et al. (2005) consider on the basis of extensive consultation with fisheries staff and fishermen that both Chitra have declined rapidly in the previous two decades and describe both as very rare in Thailand. The habitat of Chitra chitra has certainly been decreasing in area and quality because of sand mining (affecting nesting habitat) and flow disruption caused by large dams (TCC, 2011). Kitimasak et al. (2005) note specific instances in the Mae Klong system where Chitra chitra have attempted to nest in unsuitable substrates, such as former hilltops that now form islands in the flooded area upstream of a dam, because the original nesting sandbanks have been submerged. Similarly, nesting attempts downstream are also usually unsuccessful because nests may be flooded when water is released from the dam for power generation or irrigation, or they may be left high and dry (too dry for hatchling emergence) if water levels fall.</i></p> <p><i>There have been no direct quantitative field surveys of population size and no direct monitoring of trends in Chitra chitra or Chitra vandijki (nor any other Asian trionychids). Some idea of abundance or rarity, and trends, may be estimated on the basis of consultation with villagers, fishermen or fisheries staff, and are often inferred more broadly from the demand for turtles, the relative occurrence of different turtles species in food or pet markets, and their changing availability over time.</i></p> <p><i>The Asian Narrow-headed Softshell Chitra chitra was recently listed among the turtle species regarded as at highest risk of extinction (TCC, 2011).</i></p> <p><i>Intensively exploited for food and international pet trade (ATTWG, 2000).</i></p> <p><i>According to exporter records in the CITES trade database, 368 live specimens of Chitra chitra (180 wild and 188 captive-bred) were exported between 2003 and 2010. All except one record involved Malaysia as the exporting country. According to importers only 120 specimens were traded (six wild and 114 captive-bred). The main destinations in terms of quantities of specimens traded were Taiwan (238 live specimens according to exporter reports) Japan and the US. Other destinations were the Czech Republic and Spain.</i></p> <p><i>Chitra chitra is protected under WARPA (Wild Animals Reservation and Protection Act B.E. 2535) in Thailand but adults and eggs (sometimes for incubation and sale of hatchlings) are exploited continuously (Kitimasak et al., 2005). It is reportedly protected</i></p>

Supporting Statement	Other information
	<p>by law (as <i>C. indica</i>) in Indonesia, (Government Regulation Act. No. 7 and 8 of 1999; Samedj and Iskandar, 2000).</p> <p>Although <i>Chitra chitra</i> is capable of extremely large clutch sizes, captive breeding for the purpose of head-starting turtles is difficult because hatchlings and juveniles are very susceptible to bacterial infections and juveniles are very sensitive to changes in temperature. It is recommended that the majority of hatchlings produced from captive breeding be immediately released into suitable habitat to avoid the high levels of mortality often associated with captive rearing (Horne et al., 2012).</p>
<p><i>Chitra vandijki</i> Burmese Narrow-headed Softshell Turtle.</p> <p>IUCN Global Category: Not assessed (IUCN, 2012). (Draft Critically Endangered*).</p> <p>Range: Myanmar.</p> <p>A riverine species subject to by-catch and targeted catch for food and live animals. Market surveys and consultation with fishermen suggest the species is rare or very rare. Vulnerable because geographically and temporally concentrated during egg-laying. Sandbanks used for nesting are increasingly impacted by dam construction. Eggs are highly sought after and nests are easily located. Although quantitative population data are not available, populations are believed to be widely in serious decline, primarily because of excess exploitation, but also following river modification.</p> <p>In Myanmar, turtles are protected by Fisheries and Forestry laws, and all wildlife is protected in wildlife sanctuaries and national parks. Held in a captive breeding facility in Mandalay.</p>	<p>See general comment on softshell use under <i>Dogania</i> above.</p> <p>Presence of <i>Chitra</i> in what was then Burma was reported in the 19th century (confused with <i>C. indica</i>) but not fully confirmed until 1994 (McCord and Pritchard, 2003).</p> <p><i>Chitra vandijki</i> was only described in 2003 and so was not assessed by the Asian Turtle Trade Working Group in 2000 and does not appear in the online Red List (IUCN, 2012, accessed 7.xi.12).</p> <p>Also present in Thailand. In Myanmar, present in the Ayeyarwaddy (Irrawaddy) drainage, including the Chindwin, and in the Salween river, including the Salween along the border with Thailand (but not reported from the upper Salween which flows south through Yunnan Province of China). The holotype of this species, as designated in 2002, was found in a market in Yunnan but reportedly originated from the Ayeyarwaddy in northeast Myanmar (McCord and Pritchard, 2003). Occurs in Thailand in the stretch of the Salween River forming part of the border with adjacent Myanmar, and possibly in left-bank affluents (Kitimasak et al., 2005).</p> <p>McCord and Pritchard (2003) note that fishermen at two localities on the Ayeyarwaddy (Myanmar) reported <i>Chitra vandijki</i> to be rarely encountered, and at one of these sites they only saw about one specimen per year. Kitimasak et al. (2005) consider on the basis of extensive consultation with fisheries staff and fishermen that both <i>Chitra</i> have declined rapidly in the previous two decades and describe both as very rare in Thailand. Based on interviews with fishermen along the Upper Chindwin, Kuchling et al. (2004) reported this species was found at higher abundance in the main channel compared with <i>Nilssonina formosa</i> (medium) and <i>Amyda cartilaginea</i> (lower) (Kuchling et al. stress that this is an indication of relative abundance only, not of overall population status). Fishermen reported that river turtles had declined over the past 20-30 years and attributed this mainly to increased human presence and fishing effort. Kuchling et al. (2004) note that illegal trade of turtles from the Upper Chinwin to China only developed around 2000, after turtle populations around Mandalay (a trade centre) became depleted. In addition to trade in turtles and shells, Win Ko Ko et al. (2006) note the following threats in the Upper Chindwin: gold mining, accidental entanglement in fishing gear (especially gillnets) and excess egg collection.</p>

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	<p><i>There have been no direct quantitative field surveys of population size and no direct monitoring of trends in Chitra chitra or Chitra vandijki (nor any other Asian trionychids). Some idea of abundance or rarity, and trends, may be estimated on the basis of consultation with villagers, fishermen or fisheries staff, and are often inferred more broadly from the demand for turtles, the relative occurrence of different turtles species in food or pet markets, and their changing availability over time. Has apparently not yet been bred in captivity (Horne et al., 2012).</i></p>

* “Draft” IUCN Red List assessments, as shown in Table 1 of the proposal Supporting Statement are by the Tortoise and Freshwater Turtle Specialist Group (the official authority for tortoises and freshwater turtles for the IUCN Red List); although some categorisations have been published (Van Dijk et al., 2011) they are subject to revision and not yet incorporated in the IUCN Red List itself (IUCN, 2012). The draft categories are only shown in the Table above if they differ from those in IUCN (2012) or if the species was not assessed for IUCN (2012).

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