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

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Decimoséptima reunión de la Conferencia de las Partes
Johannesburgo (Sudáfrica), 24 de septiembre – 5 de octubre de 2016

Cuestiones específicas sobre las especies

TORTUGAS TERRESTRES Y GALÁPAGOS (TESTUDINES SPP.)

1. Este documento ha sido preparado por la Secretaría.

Antecedentes

2. En su 16ª reunión (Bangkok, 2013) la Conferencia de las Partes adoptó la Decisiones 16.109 a 16.124 sobre *Tortugas terrestres y galápagos (Testudines spp.)*, como sigue:

Dirigida a la Secretaría

16.109 Sujeto a la disposición de financiación externa, la Secretaría deberá contratar a consultores independientes para llevar a cabo un estudio, tomando en consideración los resultados del taller de Cancún sobre los dictámenes de extracción no prejudicial y otras fuentes de información relevantes, para identificar y debatir factores que tienen particular importancia para formular dictámenes de extracción no prejudicial para las tortugas terrestres y galápagos. Esos factores deberían incluir, sin limitarse a ello, la situación y la dinámica de la población de las tortugas terrestres y galápagos, la dinámica del comercio, los sistemas de producción y el comercio de partes y derivados. Este estudio debería proporcionar orientación para formular dictámenes de extracción no perjudicial para las tortugas terrestres y galápagos.

16.110 La Secretaría deberá presentar los resultados del estudio a que se hace referencia en la Decisión 16.109 a la consideración del Comité de Fauna, en la medida de lo posible, en su 27ª reunión.

Dirigida al Comité de Fauna

16.111 El Comité de Fauna deberá examinar el estudio realizado con arreglo a la Decisión 16.109 y formular recomendaciones, según proceda y en la medida de lo posible, en su 27ª reunión, para someterlas a la consideración del Comité Permanente y las Partes.

Dirigidas al Comité Permanente

16.112 El Comité Permanente deberá examinar el estudio realizado con arreglo a la Decisión 16.109 y las recomendaciones del Comité de Fauna, y formulará sus propias recomendaciones, según proceda, a fin de comunicarlas a las Partes o presentarlas a la consideración de la 17ª reunión de la Conferencia de las Partes.

Dirigidas a las Partes

16.113 Las Partes, en particular las de la región de Asia, deberían compilar datos sobre confiscaciones de especímenes vivos de tortugas terrestres y galápagos incluidos en los Apéndices de la CITES, y notificar esos datos anualmente a la Secretaría, junto con la disposición de los especímenes. Las Partes deberían proporcionar datos conjuntamente con la presentación de sus informes anuales. Esos datos deberían comunicarse para las confiscaciones hasta finales de 2019.

Las Partes deberían informar, en la medida de lo posible, sobre los siguientes parámetros: especies, cantidad de especímenes, destino (para las exportaciones) o país de origen/reexportación (para las importaciones) y disposición de los animales conforme a la Resolución Conf. 10.7 (Rev. CoP15), sobre la Disposición de especímenes vivos confiscados de especies incluidas en los Apéndices.

16.114 Se alienta a las Partes a que compilen y comuniquen datos voluntariamente, de la misma forma que se indica en la Decisión 16.113, sobre confiscaciones de envíos internacionales de especímenes de tortugas terrestres y galápagos no incluidos en los Apéndices de la CITES, de modo que esos datos puedan arrojar luz sobre los métodos de comercio ilegal y proporcionar información útil para las Autoridades Administrativas y las autoridades encargadas de la observancia.

16.115 Se alienta a las Partes a que compilen y comuniquen voluntariamente datos comparables sobre confiscaciones de especímenes de especies de tortugas terrestres y galápagos CITES y no CITES comercializadas nacionalmente. Se alienta a las Partes a proporcionar los datos anualmente previa invitación de la Secretaría.

Dirigida a la Secretaría

16.116 La Secretaría deberá invitar a las Partes a proporcionar la información a que se hace referencia en las Decisiones 16.114 y 16.115, considerar la información sometida con arreglo a la Decisión 16.113, e informar sobre su evaluación de los datos recibidos al Comité Permanente en su próxima reunión ordinaria, y formular recomendaciones para la aplicación y observancia de la Convención.

Dirigidas al Comité Permanente

16.117 El Comité Permanente deberá considerar los informes presentados por la Secretaría y sus recomendaciones y formular recomendaciones según estime conveniente.

Dirigidas a las Partes

16.118 Habida cuenta del comercio ilegal y no documentado a gran escala de partes y derivados de tortugas terrestres y galápagos incluidos en los Apéndices de la CITES, las Partes deberían:

a) tomar nota de este problema y adoptar medidas para abordarlo dentro de sus sistemas nacionales a fin de garantizar que los permisos CITES se expiden debidamente y la Convención se aplica y observa plenamente;

b) examinar sus esfuerzos de observancia respecto del comercio de esas partes y derivados, y tomar las medidas adecuadas para disuadir y detectar el comercio ilegal y no documentado;

c) realizar esfuerzos en materia de educación y divulgación dirigidos a las granjas de tortugas, los compradores y los vendedores de caparazones, huesos, cartílago (calipee) y otras partes de tortuga, los fabricantes de productos medicinales, los transportistas, los intermediarios y otros importantes interesados con miras a garantizar que las partes y derivados de tortuga se comercializan de conformidad con las leyes nacionales y los requisitos de la CITES; y

d) comunicar sus progresos en esas esferas, a través de la Secretaría, en la 65ª reunión del Comité Permanente.

Dirigida a la Secretaría

16.119 La Secretaría deberá:

a) transmitir los informes presentados de conformidad con la Decisión 16.118 al Comité Permanente, formulando las recomendaciones que estime apropiadas;

b) recabar financiación para establecer y convocar un Equipo especial sobre tortugas terrestres y galápagos de la CITES, que debería llevar a cabo un intercambio de inteligencia y diseñar estrategias para luchar contra el comercio ilegal. Los miembros del equipo especial podrían

incluir a la Red de observancia de la legislación sobre fauna y flora silvestre de la ASEAN, los miembros del Consorcio Internacional para Combatir los Delitos contra la Vida Silvestre, y esas Partes en Asia más afectadas por el comercio ilegal de tortugas terrestres y galápagos y sus partes y derivados; e

c) *informar sobre el trabajo del equipo especial en las reuniones 65ª o 66ª del Comité Permanente y formular las recomendaciones que estime apropiadas.*

Dirigidas al Comité Permanente

16.120 El Comité Permanente deberá considerar en sus reuniones 65ª o 66ª toda la información y las recomendaciones sometidas por la Secretaría en cumplimiento con la Decisión 16.119 y formular las recomendaciones que estime apropiadas.

Dirigida a las Partes

16.121 Se alienta a las Partes, en particular a las de la región de Asia, a:

a) *aumentar las actividades de observancia para disuadir, detectar y atajar el comercio ilegal y no documentado de especímenes vivos de tortugas terrestres y galápagos incluidos en los Apéndices de la CITES, así como sus partes y derivados, entre otras cosas, impartiendo capacitación apropiada a las autoridades nacionales de observancia, reforzando la observancia y la aplicación de la Convención para esas especies, divulgando materiales de identificación y fomentando la sensibilización del poder judicial; y*

b) *proporcionar la información pertinente sobre sus progresos realizados en estas esferas a la Secretaría para que presente un informe en la 65ª reunión del Comité Permanente.*

Dirigida a la Secretaría

16.122 La Secretaría deberá:

a) *reconociendo la prevalencia actual de un comercio ilegal de especímenes vivos de tortugas terrestres y galápagos para el comercio de medicamentos, alimentos y animales de compañía que está amenazando la supervivencia de algunas especies en la naturaleza y repercutiendo en la integridad de la Convención, recabar financiación externa y, sujeto a su disponibilidad, contratar a un consultor para analizar los datos comunicados, identificar especies predominantes en el comercio ilegal y documentar incidentes de comercio ilegal, rutas comerciales (inclusive el comercio por Internet), los métodos de ocultamiento y otros aspectos relevantes para aplicar las disposiciones de la CITES en relación con el comercio de tortugas terrestres y galápagos;*

b) *sujeto a la disponibilidad de fondos externos, contratar a un consultor para identificar y evaluar materiales de identificación y fomento de capacidad de las tortugas terrestres y galápagos, y ayudar a preparar materiales adicionales según se estime necesario, inclusive la preparación y distribución de materiales de identificación multilingües [bahasa indonesia, bahasa malay [melayu], bangla [bengalí], birmano, chino, inglés, hindi, jemer, laosiano, tailandés, urdu y vietnamita y otros idiomas] centrados en los caparazones y piezas de caparazones de tortugas terrestres y galápagos asiáticos; y*

c) *presentar un informe sobre los progresos realizados en relación con el párrafo b) de la Decisión 16.121, y los párrafos a) y b) supra, incluyendo sus recomendaciones, en las reuniones 65ª y 66ª del Comité Permanente.*

Dirigidas al Comité Permanente

16.123 El Comité Permanente deberá considerar en sus reuniones 65ª y 66ª toda la información sometida por la Secretaría en virtud de la Decisión 16.122 y formular las recomendaciones que estime apropiadas.

Dirigida al Comité de Fauna

16.124 El Comité de Fauna deberá incluir las especies Cuora galbinifrons *y* Mauremys annamensis *en su Examen periódico de los Apéndices con carácter prioritario.*

3. Estas Decisiones se refieren a: los estudios sobre la realización de dictámenes de extracción no perjudicial; la recopilación de datos sobre decomisos y confiscaciones; capacitación y formación; la aplicación de la Convención; la creación de un Grupo de tareas especiales sobre tortugas terrestres y galápagos de la CITES; y el Examen Periódico de los Apéndices. Durante su 66ª reunión (Ginebra, enero de 2016), el Comité Permanente pidió a la Secretaría que informara a la Conferencia de las Partes durante la presente reunión sobre la aplicación de las Decisiones 16.109 a 16.124.[1]

Dictámenes de extracción no perjudicial: Decisiones 16.109 a 16.112

4. En la 27ª reunión del Comité de Fauna (Veracruz, abril de 2014), la Secretaría presentó el documento AC27 Doc. 20, y explicó que todavía no reunía las condiciones para aportar el estudio solicitado en la Decisión 16.109 pero que había estado hablando con la UICN para que se realizara el estudio con los recursos disponibles. El Comité de Fauna tomó nota y estableció un grupo de trabajo entre sesiones sobre tortugas terrestres y galápagos para que trabajara en las tareas encomendadas al Comité en la Decisión 16.111.

5. Después de la 27ª reunión del Comité de Fauna, la Secretaría, con la financiación generosa de Suiza y de la Unión Europea, pudo contratar a la UICN y al Grupo de especialistas en tortugas terrestres y galápagos de la Comisión de Supervivencia de las Especies de la UICN (UICN/CSE) para realizar el estudio indicado en la Decisión 16.109. De acuerdo con lo previsto por esa Decisión, el Grupo de especialistas en Tortugas Terrestres y Galápagos de la UICN/CSE preparó una guía para las Autoridades Administrativas y Científicas de la CITES sobre los dictámenes de extracción no perjudicial y la gestión del comercio de tortugas terrestres y galápagos.

6. De acuerdo con lo previsto por la Decisión 16.111, durante su 28ª reunión (Tel Aviv, agosto de 2015), el Comité de Fauna examinó la guía (véase el Anexo 2 del documento AC28 Doc. 15).[2] El Comité recibió con agrado el estudio y la guía, y presentó sus recomendaciones al Comité Permanente durante su 66ª reunión mediante el documento SC66 Doc. 57.2.[3] El Comité Permanente pidió que se difundiera la guía entre las Partes.

7. El estudio, titulado *Dictámenes de extracción no perjudicial y gestión del comercio de las tortugas terrestres y galápagos - Guía para las Autoridades Científicas y Administrativas de la CITES,* está disponible en la página web de la CITES y se notificará a las Partes a través de una Notificación.

Información sobre decomisos, confiscaciones y disposición de especímenes: Decisiones 16.113 a 16.117

8. La Secretaría envió la Notificación a las Partes No. 2013/062 con fecha 20 de diciembre de 2013[4] para recordar a las Partes que enviaran los datos solicitados en la Decisión 16.113 junto con sus informes anuales. Los informes correspondientes a 2014 se tenían que enviar antes del 31 de octubre de 2014. En la Notificación se invitó a las Partes a proporcionar la información indicada en las Decisiones 16.114 y 16.115 para esa misma fecha. Durante la 65ª reunión del Comité Permanente (Ginebra, julio de 2014), la Secretaría informó de que, salvo que hubiera una respuesta general buena y las Partes proporcionaran los datos conforme a los parámetros propuestos en esas Decisiones, resultaría difícil para la Secretaría hacer una evaluación correcta de los datos, tal y como estaba previsto por la Decisión 16.116, y asimismo para el Comité Permanente hacer las recomendaciones pertinentes, según lo previsto por la Decisión 16.117.

Comercio ilegal y no documentado de partes y derivados de las especies de tortugas terrestres y galápagos incluidas en los Apéndices de la CITES: Decisiones 16.118 a 16.120

9. En la Notificación a las Partes No. 2013/062, se invitó a las Partes a presentar un informe a la Secretaría conforme a lo previsto por la Decisión 16.118. Pakistán presentó el informe debido. De acuerdo con lo

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1 https://cites.org/sites/default/files/eng/com/sc/66/ExSum/E-SC66-Sum-09.pdf

2 https://cites.org/sites/default/files/eng/com/ac/28/E-AC28-15-Annex2.pdf

3 https://cites.org/sites/default/files/eng/com/sc/66/E-SC66-57-02.pdf

4 http://cites.org/sites/default/files/notif/E-Notif-2013-062.pdf

previsto por la Decisión 16.119, párrafo a), el informe se hizo llegar al Comité Permanente en el Anexo 1 del documento SC65 Doc. 45.[5] En cumplimiento de los requisitos de presentación de informes previstos por la Decisión 16.118, párrafo d), y por la Decisión 16.121, párrafo b), en abril de 2014, Tailandia envió información sobre los decomisos de especies de tortugas terrestres y galápagos incluidas en los Apéndices de la CITES correspondientes al período 2013 hasta abril de 2014, tal y como se indica en el Anexo 2 del documento SC65 Doc. 45. En su informe a la 65ª reunión del Comité Permanente, la Secretaría señaló que la información enviada por Tailandia parecía estar más relacionada con lo previsto por la Decisión 16.113. La Secretaría señaló, además, que se habían recibido muy pocas respuestas de las Partes con respecto a la Decisión 16.118 y que tenía poca información sobre los progresos logrados por las Partes en cuanto a las acciones que les correspondían conforme a esa Decisión. La Secretaría también indicó que la falta de información probablemente impidiera al Comité Permanente formular las recomendaciones procedentes, tal y como estaba previsto por la Decisión 16.120.

Observancia y capacitación: Decisiones 16.121 a 16.123

10. En la Notificación a las Partes No. 2013/062 se invitó a las Partes a enviar sus informes a la Secretaría, en cumplimiento de lo previsto por la Decisión 16.121, párrafos a) y b). Durante la 65ª reunión del Comité Permanente, la Secretaría señaló que, igual que ocurrió con la Decisión 16.118, se habían recibido pocas respuestas de las Partes relativas a la Decisión 16.121, párrafo b). Pakistán y Tailandia enviaron sus informes, tal y como se indica en el párrafo 9 anterior, y la Unión Europea informó a la Secretaría sobre los decomisos de tortugas terrestres y galápagos en la Unión Europea durante 2012 (véase el Anexo 3 del documento SC65 Doc. 45). El Anexo 4 del documento SC65. Doc. 45 incluía un resumen de los datos sobre decomisos de la Unión Europea, preparado por la Secretaría.

Examen periódico de los Apéndices: Decisión 16.124

11. Durante su 27ª reunión, el Comité de Fauna seleccionó las especies *Cuora galbinifrons* y *Mauremys annamensis* para su Examen periódico de los Apéndices. Viet Nam acordó realizar el examen. Los resultados fueron presentadas por Viet Nam al Comité de Fauna durante el 28ª reunión del Comité de Fauna mediante los documentos AC28 Doc. 20.3.8 (Examen periódico de *Cuora galbinifrons*) y AC28 Doc. 20.3.9 (Examen periódico de *Mauremys annamensis*). El Comité estaba de acuerdo con las recomendaciones consiguientes sobre la presentación de una propuesta para transferir ambas especies al Apéndice I.

12. De este modo, el Comité de Fauna cumplió los requisitos de la Decisión 16.124, tal y como informó la Presidencia del Comité de Fauna al Comité Permanente mediante el documento SC66 Doc. 24 y se describió en el documento CoP17 Doc. 10.2.1 (informe de la Presidencia del Comité de Fauna). La Secretaría señala que las propuestas correspondientes no fueron presentadas por Viet Nam para ser estudiadas durante la presente reunión de la Conferencia de las Partes.

Aplicación de las Decisiones 16.113 a 16.123

13. Durante la 65ª reunión del Comité Permanente, la Secretaría comentó que las Decisiones sobre *Tortugas terrestres y galápagos (Testudines spp.)* adoptadas por la 16ª reunión de la Conferencia de las Partes complementaban (y en ocasiones parecían duplicar) las disposiciones actualmente vigentes de la Resolución Conf. 11.9 (Rev. CoP13) sobre *Conservación y comercio de tortugas terrestres y galápagos*.[6] La Secretaría señaló que se habían recibido pocas respuestas de las Partes a las peticiones de datos o informes, reconociendo que el número considerable de requisitos de presentación de informes derivado de las distintas Decisiones puede haber resultado, en alguna medida, disuasorio o confuso (por ejemplo, las instrucciones para la presentación de informes previstas por la Decisión 16.121 parecen coincidir en parte con las que figuran en las Decisiones 16.113 y 16.118).

14. El Comité Permanente tuvo en consideración las opiniones de la Secretaría y concluyó que la aplicación de la Decisión 16.119, párrafo b), y de la Decisión 16.122, párrafos a) y b), podría complementar o sustituir parcialmente a los informes sobre los progresos logrados y la información que las Partes tengan que presentar en cumplimiento de las Decisiones 16.113 a 16.118, 16.119, párrafo a), y 16.121. También concluyó que la aplicación de la Decisión 16.119, párrafo b), y Decisión 16.122, párrafos a) y b), podría

[5] https://cites.org/sites/default/files/eng/com/sc/65/E-SC65-45_0.pdf

[6] https://cites.org/sites/default/files/eng/com/sc/65/E-SC65-45_0.pdf

fomentar la puesta en marcha de las actividades previstas e instó a las Partes a que considerasen la aportación de fondos a la Secretaría para financiar su realización.[7]

15. En respuesta a dicha petición, los Estados Unidos de América proporcionó la financiación para la aplicación de la Decisión 16.119, párrafo b), y de la Decisión 16.122, párrafos a) y b). La Secretaría agradece mucho este apoyo generoso.

16. La Secretaría ha contratado a la Unión Internacional para la Conservación de la Naturaleza (UICN) para apoyar la aplicación de la Decisión 16.122, párrafos a) y b). Durante la 66ª reunión del Comité Permanente, la Secretaría informó de que los productos de este trabajo serían dos informes, uno sobre el comercio legal e ilegal de especímenes de tortugas terrestres y galápagos y otro sobre los materiales de identificación y capacitación relativos a tortugas terrestres y galápagos. Dichos informes han sido terminados después de la 66ª reunión del Comité Permanente y se habla de ellos en mayor detalle a continuación.

17. La Secretaría considera que se han cumplido los requisitos de las Decisiones 16.113 a 16.123 con la finalización de estos dos informes y con la reunión del Grupo de tareas especiales sobre tortugas terrestres y galápagos de la CITES que se celebrará antes de la 17ª reunión de la Conferencia de las Partes, por lo que recomienda la supresión de esas Decisiones.

Prevalencia actual del comercio ilegal: Decisión 16.122, párrafo a)

18. El resumen ejecutivo del informe sobre el comercio legal e ilegal de especímenes de tortugas terrestres y galápagos, encargado por la Secretaría de acuerdo con lo previsto por la Decisión 16.122 párrafo a), está disponible en español, francés e inglés y figura en el Anexo 1 del presente documento. El informe completo solo está disponible en inglés y se adjunta al presente en el Anexo 2.

19. Uno de los objetivos iniciales del estudio consistía en examinar el comercio de tortugas terrestres y galápagos con diversos fines, específicamente el comercio de mascotas, alimentos y productos medicinales. No obstante, esto no resultó factible en la práctica, tal y como se explica en el informe; por consiguiente, el estudio distingue entre el comercio de ejemplares vivos con cualquier fin y el comercio de partes y derivados. El estudio incluye el comercio de productos alimentarios y medicinales, trofeos, artículos ornamentales, objetos curiosos, y el comercio con fines científicos; el informe no hace referencia al comercio de mascotas.

20. Tal y como se indica en el informe, hay unas 320 especies de tortugas terrestres y galápagos, de las cuales 168 están incluidas en los Apéndices de la CITES. Las especies incluidas en los Apéndices de la CITES están presentes en 163 Estados o territorios, siendo la mayoría de ellos Partes de la CITES.

21. Los registros de decomisos correspondientes al período entre 2000 y 2015 fueron recopilados de diversas fuentes para el estudio. Según esos registros, fueron decomisados ejemplares de 145 especies de tortugas terrestres y galápagos (representando aproximadamente el 45% de todas las especies conocidas), entre ellas 124 especies incluidas en los Apéndices de la CITES. Las 21 especies decomisadas con mayor frecuencia incluyen cuatro especies del Apéndice 1 y quince especies del Apéndice II. Además, 15 de esas 21 especies son autóctonas de Asia, entre ellas las cinco especies decomisadas con mayor frecuencia.

22. Los datos sobre decomisos indican un número cada vez mayor de decomisos, así como un número creciente de ejemplares decomisados entre 2000 y 2015. Según los registros, hubo una disminución puntual de los decomisos entre 2007 y 2011 pero después el número de decomisos volvió a aumentar hasta niveles superiores a todos los años anteriores.

23. La Secretaría quisiera destacar los siguientes resultados del estudio:

Comercio legal de especímenes vivos

i) Con el fin de determinar la escala del comercio legal de tortugas terrestres y galápagos, se recopilaron y cotejaron los datos disponibles para el período entre el 1 de enero de 2011 y el 30 de diciembre de 2014. Las exportaciones netas de especímenes vivos de especies de tortugas terrestres y galápagos registradas en la Base de datos sobre el comercio CITES llevada por PNUMA-CMCM fueron tabuladas

[7] *https://cites.org/sites/default/files/eng/com/sc/65/exsum/E-SC65-Sum-08.pdf*

y sumadas y, según los datos, se registró un total de 3.457.703 ejemplares vivos de tortugas terrestres y galápagos durante el cuatrienio indicado.

ii) El comercio legal de ejemplares vivos de tortugas terrestres y galápagos abarcaba 64 géneros e incluía: 584 especímenes de especies incluidas en el Apéndice I (principalmente, repatriaciones y otros traslados de ejemplares vivos confiscados); 2.213.729 especímenes de especies incluidas en el Apéndice II; y 1.243.390 especímenes de especies incluidas en el Apéndice III. Estas cifras representan un promedio anual de unos 865.000 ejemplares vivos de tortugas terrestres y galápagos en el comercio.

iii) La gran mayoría de los especímenes vivos de tortugas terrestres y galápagos que se encuentran en el comercio legal proceden de establecimientos de cría en cautividad o cría en granjas.

iv) Se calcula que aproximadamente 552.000 de los ejemplares vivos de tortugas terrestres y galápagos encontrados en el comercio legal entre el 1 de enero de 2011 y el 31 de diciembre de 2014 procedían del medio silvestre, lo que representa un promedio de 138.000 ejemplares anuales.

Comercio ilegal de especímenes vivos

v) Se registraron 2.561 decomisos de ejemplares vivos en el período entre 2000 y 2015, con un total de 303.774 especímenes.

vi) Los datos disponibles indican que la cantidad de tortugas terrestres y galápagos decomisada representa una cuarta parte del uno por ciento (0,25%) de los especímenes encontrados en el comercio legal.

vii) Lo más importante es que los datos también indican que los ejemplares de tortugas terrestres y galápagos encontrados en el comercio ilegal proceden en su mayoría del medio silvestre y que la cantidad de ejemplares confiscados equivale a aproximadamente el 19% del volumen de tortugas terrestres y galápagos silvestres comercializados legalmente. Teniendo en cuenta que no se detecta la totalidad del comercio ilegal, es posible que incluya una cantidad significativa de ejemplares silvestres, lo que probablemente tenga un impacto adverso sobre las poblaciones silvestres.

viii) Según los indicios, la extracción de tortugas terrestres y galápagos del medio silvestre es una práctica extensiva y difundida que moviliza a un gran número de recolectores locales mientras, por otra parte, opera una red de tamaño mediano (o varias redes de este tipo) formada por personas que actúan como compradores, mayoristas, exportadores e importadores regionales.

ix) La tortuga estrellada de la India (*Geochelone elegans*, Apéndice II) es la especie decomisada con mayor frecuencia, con 34.080 ejemplares decomisados entre 2000 y 2015. Le siguen: la tortuga de nariz de cerdo (*Carettochelys insculpta*, Apéndice II) con 29.692 ejemplares decomisados; la tortuga de caja malaya (*Cuora amboinensis*, Apéndice II) con más de 20.000 ejemplares decomisados; la tortuga del Ganges (*Nilssonia gangetica*, Apéndice I) con más de 16.428 ejemplares decomisados; y la tortuga de Hamilton (*Geoclemys hamiltonii*, Apéndice I) con más de 11.451 ejemplares decomisados.

x) El número de ejemplares vivos (147.024) correspondientes a especies autóctonas del país en que fueron decomisados (por tanto, probablemente especies protegidas por las leyes nacionales de conservación de la vida silvestre) fue más del doble que el número de ejemplares de especies no autóctonas decomisados (69.216). Esto podría ser debido a una mayor probabilidad de detección cuando se trate de especies autóctonas comercializadas ilegalmente o a un mayor conocimiento por parte de los funcionarios de inspección sobre las especies autóctonas y sobre las leyes vigentes que las protejan, justificándose así el decomiso de los especímenes.

Comercio ilegal de partes y derivados

xi) Durante el período 2000–2015, se registraron 1.001 decomisos de partes y derivados, consistentes en 2.113 kg de materiales, además de 78.818 artículos.

xii) La información sobre decomisos de partes y derivados de tortugas terrestres y galápagos en el comercio es bastante menos completa que la información que existe sobre especímenes vivos.

Tendencias del comercio ilegal

xiii) Parece que muchos de los decomisos de tortugas terrestres y galápagos son de cantidades pequeñas de ejemplares que se llevan o se tienen como mascotas personales o recuerdos turísticos.

xiv) Lo que es más importante es que el número reducido de decomisos de envíos grandes o muy grandes (con cientos o miles de ejemplares vivos) sería indicativo de la existencia de redes delictivas bien organizadas formadas por recolectores, comerciantes locales, mayoristas, exportadores e importadores.

xv) Desde una perspectiva geográfica, las tendencias son diferentes y hay un número relativamente grande de decomisos de cantidades más pequeñas de ejemplares por decomiso en Europa y América del Norte. En comparación, con un número relativamente menor de decomisos en Asia, la cantidad de ejemplares decomisados resultó ser mucho mayor .

xvi) Con respecto a los decomisos de especies incluidas en el Apéndice I, parece existir un comercio ilegal extendido de galápagos de Hamilton (*Geoclemys hamiltonii*), tortugas del Ganges (*Nilssonia gangetica*) y galápagos tricarenados (*Melanochelys tricarinata*) procedentes del sur de Asia y destinados al sureste y este de Asia.

xvii) Hay varias especies de tortuga terrestre de Madagascar que se introducen en Asia y, en cantidades más pequeñas, en Europa. La tortuga egipcia (*Testudo kleinmanni*) se introduce de contrabando en Europa y en otros países desde África del Norte.

xix) Según se informa, parece que los envíos ilegales de tortugas terrestres y galápagos muchas veces no son transportados por rutas directas o a través de los nodos de transporte más accesibles. Aparentemente los envíos ilegales se canalizan de forma intencionada a través de las rutas más diversificadas y extendidas, recurriendo a redes de transporte aéreo, marítimo y por carretera y, con frecuencia, desviándose grandes distancias o transitando expresamente por varios países.

xx) La mayoría de los decomisos tienen lugar en los puestos fronterizos tales como los aeropuertos, puertos marítimos y los puestos de inspección fronterizos terrestres, lo que indica una mayor probabilidad de éxito en la detección y decomiso en estos puntos. Por consiguiente, las medidas de observancia deben enfocarse principalmente hacia estos puntos.

xxi) El 61% de los envíos ilegales decomisados contenían solo tortugas terrestres y galápagos; estos envíos ilegales representaban el 77% de los ejemplares vivos decomisados.

xxii) Internet se ha convertido en un punto de venta excelente para anunciar y coordinar la compraventa de tortugas terrestres y galápagos, tanto legales como ilegales.

Problemas de aplicación de las leyes

xxiii) Con frecuencia las iniciativas para aplicar las leyes con el fin de combatir el comercio ilegal de tortugas terrestres y galápagos tropiezan con la capacidad limitada de los funcionarios de aplicación para identificar las especies a las que pertenecen los ejemplares encontrados en el comercio y para determinar si son especies protegidas o incluidas en los Apéndices de la CITES.

xxiv) La eficacia de las medidas de aplicación de las leyes para combatir el comercio ilegal de tortugas terrestres y galápagos también se ve limitada por la falta de datos precisos y detallados, por lo que resulta difícil evaluar la magnitud del comercio, los decomisos, las tendencias y las características cambiantes del mismo en el tiempo. Otra limitación es la falta de intercambio de información entre autoridades.

24. Tal y como se informó durante la 66ª reunión del Comité Permanente, los resultados, la información y los análisis incluidos en el informe sobre el comercio legal e ilegal de ejemplares de tortugas terrestres y galápagos deben ser tenidos en cuenta por el Grupo de tareas especiales sobre tortugas terrestres y galápagos de la CITES, que se debe convocar de conformidad a la Decisión 16.119, párrafo b). La Secretaría opina que el estudio ha sido oportuno y que contiene información valiosa que contribuirá de forma significativa al trabajo del Grupo de tareas y ayudará a desarrollar estrategias para luchar contra el comercio ilegal de tortugas terrestres y galápagos.

Materiales de identificación y capacitación: Decisión 16.122, párrafo b)

25. El resumen ejecutivo del informe sobre materiales de identificación y capacitación relativos a tortugas terrestres y galápagos encargado por la Secretaría, de acuerdo con lo previsto por la Decisión 16.122, párrafo b), está disponible en español, francés e inglés y figura en el Anexo 3 del presente documento. El informe completo solo está disponible en inglés y se adjunta al presente en el Anexo 4.

26. La Secretaría quisiera señalar a la atención de la Conferencia de las Partes los siguientes resultados clave del estudio:

Tortugas terrestres y galápagos

i) Existen guías precisas, detalladas y fáciles de utilizar, así como otros materiales para la identificación de la gran mayoría de tortugas terrestres y galápagos, que se pueden descargar libremente y fácilmente de Internet.

ii) Aunque la mayoría de los materiales de identificación de tortugas terrestres y galápagos están en inglés, también hay buenas guías globales disponibles (en formato pdf) en chino, español, francés y turco. Asimismo, hay guías regionales disponibles, entre otros idiomas, en bahasa indonesia, bahasa malay, birmano, español, francés, japonés, jemer, laosiano, tailandés y vietnamita.

iii) Se puede comprar una aplicación precisa y fácil de usar para *smartphones* que incluye todas las especies conocidas de tortugas terrestres, galápagos y tortugas marinas, con varias imagenes en color de cada especie. La aplicación está actualizada hasta el año 2011 y tiene un precio de unos 10 dólares de los EE.UU.

iv) La taxonomía de las tortugas terrestres y los galápagos, incluso de las especies incluidas en los Apéndices de la CITES, cambia con cierta frecuencia. Muchas de las referencias disponibles utilizan una nomenclatura antigua o contienen información obsoleta sobre la inclusión de la especie en los Apéndices de la CITES. Puede ser necesario consultar la base de datos SpeciesPlus[8] para verificar el nombre válido actual de una especie y el Apéndice en el que está incluida.

v) En el caso de tortugas terrestres y galápagos de algunas regiones, especialmente África Subsahariana (excluyendo África meridional y Madagascar), el Caribe, Centroamérica y Nueva Guinea, los materiales de identificación disponibles son relativamente antiguos y obsoletos, o difíciles de conseguir. Existen guías regionales y globales que incluyen todas o casi todas las especies de estas regiones; no obstante, es recomendable que se verifique la nomenclatura actualmente vigente de las especies de estas regiones.

vi) A pesar de existir buenos materiales para la identificación de ejemplares vivos de tortugas y galápagos, en ocasiones puede resultar difícil utilizarlos con precisión debido al aspecto tan diferente que puedan presentar muchas especies según la edad y por la variabilidad entre ejemplares. Es probable que el desarrollo de un mecanismo que permita a los inspectores confirmar sus identificaciones iniciales resulte más provechoso que la creación de más materiales de identificación que presenten la misma información de una forma ligeramente diferente.

vii) Los materiales de capacitación específicamente relativos al comercio de ejemplares vivos de tortugas y galápagos incluyen orientaciones sobre la formulación de dictámenes de extracción no perjudicial (DEnP), así como orientaciones para determinar si los ejemplares en el comercio son silvestres o criados en cautividad, además de algunas orientaciones más generales sobre la aplicación de la Convención.

viii) Existen orientaciones sobre los DEnP para tortugas y galápagos; no obstante, todavía se puede hacer mucho más para recopilar información y proporcionarla a las Autoridades Científicas de la CITES y a otras entidades. Sería de especial interés que se prestase mayor atención a las técnicas de evaluación y seguimiento de las poblaciones, así como a la dinámica y estructura de las mismas, concretamente a las tasas brutas y netas de reclutamiento de población con respecto a las tasas de extracción para el comercio y otros impactos sobre las poblaciones.

[8] http://speciesplus.net/species

ix) Todavía hay un campo considerable de acción para ampliar, mejorar y perfeccionar el proceso de evaluación de los sistemas de reproducción en cautividad de tortugas terrestres y galápagos (sobre todo en cuestión de inspección, verificación y registro de establecimientos de cría en cautividad). También se pueden mejorar bastante los materiales y conocimientos expertos disponibles para identificar si los ejemplares encontrados en el comercio son nacidos en cautividad, criados en cautividad o silvestres.

Partes y derivados de tortugas terrestres y galápagos

x) En comparación con la gran diversidad de materiales que existen para la identificación de ejemplares vivos de tortugas y galápagos, los que sirven para la identificación de partes y derivados son escasos, incompletos o difícilmente accesibles.

xi) Aún disponiendo de los mejores materiales de identificación, algunos ejemplares son muy difíciles de identificar y con frecuencia, es necesaria una segunda opinión, normalmente basada en el envío de imágenes de los ejemplares correspondientes por correo electrónico o por teléfono móvil. Los cráneos, huesos y caparazones sueltos o rotos son difíciles de identificar de una forma fiable hasta el nivel de especie y casi siempre tendrán que ser examinados por especialistas con amplia experiencia en anatomía, morfología, paleontología o arqueología relativa a tortugas. También existe la opción de recurrir a análisis de ADN.

xii) Probablemente suponga un reto importante desarrollar materiales de identificación precisos para todos los huesos, fragmentos y productos que puedan aparecer en el comercio internacional; incluso si fuese posible crear tales materiales, es posible que la utilidad práctica que tuviesen para el usuario final no compensaría el trabajo que supone la creación de los mismos. Probablemente resulte más provechoso desarrollar materiales de identificación para las partes y derivados de tortugas y galápagos que se encuentran en el comercio con el fin de que los inspectores sean conscientes del comercio de este tipo de especímenes y puedan reconocerlos. Teniendo en cuenta que la identificación definitiva de ejemplares va a seguir siendo difícil, los inspectores deberían tener acceso a información que les oriente sobre otros recursos de identificación y conocimientos expertos que puedan consultar.

Otras cuestiones

xiii) A fin de ayudar a las autoridades a evaluar la legalidad de los especímenes comercializados, sería recomendable que se tuviese mejor acceso a los textos actualizados de las leyes y normativas nacionales relativas a tortugas terrestres y galápagos.

xiv) Sería útil que las Partes pudiesen informar de sus necesidades específicas de capacitación sobre tortugas terrestres y galápagos a través de algún canal apropiado, por ejemplo, en los informes anuales o bienales, o a través de encuestas sobre las necesidades de capacitación realizadas por la Secretaría de la CITES o a través de los comités permanentes de la CITES.

27. El informe concluye con una serie de recomendaciones. La Secretaría opina que la aplicación de algunas de estas recomendaciones podría mejorar enormemente la observancia de las disposiciones de la CITES relativas al comercio de tortugas terrestres y galápagos. Por consiguiente, la Secretaría ha preparado los proyectos de Decisión que figuran en el Anexo 5 del presente para someterlos a la consideración de la Conferencia de las Partes. Las implicaciones presupuestarias y de carga de trabajo correspondientes se tratan en el Anexo 6.

28. Igual que el informe sobre el comercio legal e ilegal de ejemplares de tortugas terrestres y galápagos, el informe sobre identificación y capacitación contribuirá de forma valiosa a las deliberaciones del Grupo de tareas especiales sobre tortugas terrestres y galápagos de la CITES.

Grupo de tareas especiales sobre tortugas terrestres y galápagos de la CITES: Decisión 16.119, párrafo b)

29. Se han preparado dos versiones del informe sobre comercio legal e ilegal de tortugas terrestres y galápagos. La versión pública se encuentra en el Anexo 2 del presente. La segunda es una versión restringida para uso exclusivo de los funcionarios responsables de la aplicación de las leyes y se presentará durante la reunión del Grupo de tareas especiales sobre tortugas terrestres y galápagos de la CITES.

30. En la fecha de redacción del presente documento, la Secretaría estaba preparando la reunión del Grupo de tareas especiales sobre tortugas terrestres y galápagos de la CITES. Durante la reunión se presentarán y

se debatirán los dos informes antes mencionados. La Secretaría tiene intención de convocar la reunión del Grupo de tareas especiales antes de la 17ª reunión de la Conferencia de las Partes a fin de permitir que los resultados de la reunión se tengan en cuenta en los debates y deliberaciones sobre tortugas terrestres y galápagos durante la presente reunión. La Secretaría informará verbalmente sobre la actualidad de esta cuestión durante la 17ª reunión de la Conferencia de las Partes.

Recomendaciones

31. Se invita a la Conferencia de las Partes a que:

    a) tome nota de este documento y sus Anexos;

    b) adopte los proyectos de Decisión que figuran en el Anexo 5 del presente documento;

    c) tenga en cuenta, según proceda, las estrategias y propuestas de acciones que surjan de la reunión del Grupo de tareas especiales sobre tortugas terrestres y galápagos de la CITES, de las que informará la Secretaría en un anexo al presente documento; y

    d) acuerde la supresión de las Decisiones 16.109, 16.110, 16.111, 16.112, 16.113, 16.114, 16.115, 16.116, 16.117, 16.118, 16.119, 16.120, 16.121, 16.122, 16.123 y 16.124, ya que han sido cumplidos los requisitos de las mismas.

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Comercio ilegal de tortugas terrestres y galápagos

Decisión CITES 16.122, párrafo a)

Resumen ejecutivo

En este estudio se informa de los resultados del análisis de los datos sobre decomisos que documentan el comercio ilegal de tortugas terrestres y galápagos en todo el mundo. Los registros de decomisos correspondientes al período 2000-2015 se recopilaron de varias fuentes de datos, principalmente de la base de datos de la ONUDD relativa a los decomisos de especímenes de vida silvestre y los datos complementarios obtenidos de los registros de decomisos del Boletín de TRAFFIC, el boletín *On The Trail* de la Asociación Robin des Bois y una serie de notas de prensa, informes de prensa e informes técnicos. Los datos sobre decomisos de ejemplares vivos de tortugas terrestres y galápagos, así como de sus partes y derivados, fueron incluidos en un conjunto de datos combinados que engloba 3.562 eventos de datos únicos de especie-localización-fecha. Estos datos incluyen 2.561 registros de decomisos de especímenes vivos correspondientes a 303.774 ejemplares vivos de tortugas terrestres y galápagos, además de 1.001 registros de decomisos correspondientes a partes y derivados, representando un total de 2.113 kg de materiales y 78.818 artículos.

Se calcularon las cantidades totales de ejemplares vivos de tortugas terrestres y galápagos comercializados legalmente e ilegalmente durante el período 2000-2014. Se registró un promedio anual de aproximadamente 865.000 ejemplares vivos de especies incluidas en los Apéndices de la CITES en el comercio. La mayoría de ellos procedían de establecimientos de cría en cautividad o en granjas; se extraen aproximadamente 138.000 ejemplares silvestres anualmente. El volumen total de comercio anual de Estados Unidos, el mayor exportador mundial de tortugas terrestres y galápagos, fue de unos 7,3 millones de ejemplares (en su mayoría, criados en cautividad), además de la importación de una media anual de 249.000 tortugas terrestres y galápagos. Durante el mismo período, se decomisaron un promedio anual de 26.442 ejemplares vivos de tortugas terrestres y galápagos, casi todos silvestres, Por lo tanto, el comercio ilegal de tortugas terrestres y galápagos detectado y decomisado es ínfimo y representa una cuarta parte del uno por ciento de todo el comercio registrado, aunque es importante señalar que equivale al 19 % del volumen del comercio legal de tortugas terrestres y galápagos silvestres.

Los registros disponibles de decomisos de ejemplares vivos de tortugas terrestres y galápagos a lo largo del tiempo indican un número cada vez mayor de decomisos y un número creciente de ejemplares decomisados, con una disminución puntual durante los años 2007-2011, después de los cuales el número de decomisos fue mayor que en todos los años anteriores.

La especie decomisada en mayor cantidad es la tortuga estrellada de la India (*Geochelone elegans*, Apéndice II), con 34.080 especímenes decomisados, seguida de la tortuga de nariz de cerdo (*Carettochelys insculpta*, Apéndice II) con 29.692 especímenes, la tortuga de caja malaya (*Cuora amboinensis*, Apéndice II) con bastante más de 20.000 ejemplares vivos, la tortuga del Ganges (*Nilssonia gangetica*, Apéndice I) con más de 16.428 ejemplares, y el galápago de Hamilton (*Geoclemys hamiltonii*, Apéndice I) con bastante más de 11.451 ejemplares registrados como decomisados en el período 2000-2014. En conjunto, unas 145 especies de tortugas terrestres y galápagos aparecieron en los registros de decomisos de ejemplares vivos; de las 21 especies decomisadas en mayores cantidades, cuatro son del Apéndice I, y quince del Apéndice II de la CITES.

Desde una perspectiva geográfica, las tendencias son diferentes y hay un número relativamente grande de decomisos de cantidades relativamente más pequeñas de ejemplares por decomiso en Europa y América del Norte. En comparación, con un número relativamente menor de decomisos en Asia, la cantidad de ejemplares decomisados resultó ser mucho mayor en términos globales. Un total de 87 países y jurisdicciones informaron de decomisos de ejemplares vivos de tortugas terrestres y galápagos; las mayores cantidades de ejemplares vivos fueron decomisadas por varios países asiáticos, el conjunto de los 28 países de la Unión Europea, Colombia y los Estados Unidos de América. Las cantidades mayores de tortugas terrestres y galápagos decomisados estaban destinados a países asiáticos, los Estados Unidos de América y la Unión Europea. En términos generales, los envíos ilegales procedían de diversos lugares y estaban destinados a distintos países, creando una red mundial extendida. Basándose en la cantidad de especímenes decomisados, los mayores flujos comerciales se registraron dentro de Asia. En el caso específico de decomisos de especies de tortugas terrestres y galápagos incluidas en el Apéndice I de la CITES, se desprenden patrones claros de un comercio ilegal extendido de: galápagos de Hamilton, tortugas del Ganges y galápagos tricarenados (*Melanochelys tricarinata*, Apéndice I) procedentes del sur de Asia y transportados al sureste y este de Asia; varias especies de tortugas

terrestres que son introducidas ilegalmente en Asia y, en menores cantidades, en Europa desde Madagascar; y tortugas egipcias (*Testudo kleinmanni*, Apéndice I) desde el norte de África hacia Europa y otros países. El transporte de tortugas terrestres y galápagos comercializados ilegalmente parece evitar las rutas específicas, directas o congestionadas. En cambio, hay indicios consistentes de que los envíos ilegales se transportan intencionadamente por las rutas más diversificadas posibles por las redes aéreas, marítimas y de carretera, desviándose grandes distancias y transitando por otros países.

Cuando se disponía de información sobre el lugar específico y las circunstancias de los decomisos, se pudo determinar que muchos de los decomisos ocurren en los puestos de inspección fronteriza (aeropuertos, puertos marítimos y pasos fronterizos terrestres); en este caso, hubo 897 decomisos que contenían más de la mitad de todos los especímenes vivos decomisados registrados (161.054 ejemplares) durante todo el período analizado. En comparación, los decomisos que tuvieron lugar en situaciones claramente "domésticas", tales como en tiendas, mercados, almacenes, locales privados, zoológicos y exposiciones, representaron menos de 9.000 ejemplares vivos; por otra parte, unos 6.000 ejemplares fueron decomisados *in situ* después de haber sido cazados ilegalmente. Es probable que las proporciones indicadas puedan variar debido a los diversos sistemas de registro, informe e intercambio de datos utilizados por las distintas autoridades responsables. No obstante, también se puede interpretar que los puestos de inspección fronteriza son los sitios principales de aplicación de las leyes y que, una vez pasados la frontera, no es probable que se puedan detectar y decomisar los ejemplares de tortugas terrestres y galápagos obtenidos o importados ilegalmente una vez introducidos en el comercio o en posesión de algún particular dentro del país. También se determinó que el número de ejemplares vivos (147.024) pertenecientes a especies autóctonas del país en que fueron decomisados (por tanto, probablemente protegidas por las leyes nacionales de conservación de la vida silvestre, además de por las leyes para la aplicación de la CITES) fue más del doble que el número de ejemplares no autóctonos decomisados (69.216). Esto podría indicar una mayor probabilidad de detección cuando se trate de especies autóctonas comercializadas ilegalmente o a un mayor conocimiento sobre la ilegalidad de los ejemplares, según las leyes vigentes, justificándose así el decomiso de los especímenes.

La información sobre decomisos de partes y derivados de tortugas terrestres y galápagos en el comercio es bastante menos completa que la información disponible sobre especímenes vivos. Además, parece que el patrón de los decomisos puede variar según la calidad de los datos registrados y transmitidos por los países para su inclusión en la base de datos de la ONUDD. El número de decomisos anuales parece relativamente estable en los años en que los registros llevados están completos, con una media anual de 50 registros detallados, aunque esta cifra es baja con respecto del número de ejemplares vivos decomisados durante el mismo período. Aproximadamente un tercio de todos los decomisos fue declarado por Nueva Zelandia y otro tercio por los Estados Unidos de América, debido principalmente a una combinación de inspecciones intensivas de mercancías y viajeros que llegaban a la frontera, la inexistencia de exenciones por uso personal y la preparación diligente de los informes. El mayor número de envíos decomisados procedía de la China. Por otra parte, las mayores cantidades fueron decomisadas por China, Indonesia y Estados Unidos. Debido a las dificultades para convertir cantidades y unidades de partes y derivados a la cantidad correspondiente de ejemplares de tortugas terrestres y galápagos, no es posible hacer una estimación cuantificada del volumen de este comercio; como mínimo, se trataría de bastante más de 10.000 ejemplares y probablemente sea un múltiple de esta cifra.

Los decomisos de tortugas terrestres y galápagos abarcan muchas especies y muchos países, coincidiendo con los flujos comerciales conocidos que van desde los establecimientos de cría en cautividad y en granjas o puntos de extracción del medio silvestre en muchos de los países del área de distribución y países en los que los ejemplares se mantienen en cautividad, hasta los países de destino donde se comercian para consumo, como mascotas y para la acuicultura. De esta manera, los diversos flujos de comercio ilegal se van entrelazando con los cauces mayores del comercio legal. La mayoría de los decomisos (61% de los casos, 77% de los especímenes) de ejemplares vivos de tortugas terrestres y galápagos vienen de envíos compuestos exclusivamente por estos animales. En otros casos, los especímenes decomisados forman parte de un envío que contiene otros reptiles o anfibios, u otras especies de vida silvestre como mamíferos, aves, peces o invertebrados. En contraste, hubo muy pocos casos en los que se encontraran en envíos mezclados con armas y municiones, narcóticos, productos falsificados o envíos exentos del pago de impuestos y aranceles.

Parece que muchos de los decomisos de tortugas terrestres y galápagos son de cantidades pequeñas de ejemplares llevados como mascotas personales o recuerdos turísticos. No obstante, la existencia de una cantidad menor de decomisos de envíos grandes o muy grandes es indicativa de la existencia de redes organizadas formadas por recolectores, comerciantes locales, mayoristas, exportadores e importadores. Se dispone de escasa información basada en evidencias sobre las cadenas de comercio ilegal pero según los indicios, la extracción de tortugas terrestres y galápagos del medio silvestre es una práctica extensiva y difundida que moviliza a un gran número de recolectores locales mientras, por otra parte, opera una red de tamaño mediano (o varias redes de este tipo), compuesta por personas que actúan como compradores, mayoristas, exportadores e importadores regionales. A pesar del núcleo aparentemente reducido de personas implicadas en

estas redes, son lo suficientemente fluidas y dinámicas para seguir funcionando aún cuando falte alguno de sus componentes.

El auge de Internet ha facilitado enormemente la comunicación y el comercio entre personas e instituciones a escala mundial e Internet se ha convertido en un punto de venta excelente para anunciar y coordinar la compraventa de tortugas terrestres y galápagos, tanto legales como ilegales. Además, con las mejoras de los medios para transportar mercancías por todo el mundo, en muy poco tiempo y a precios asequibles, es posible, si así se desea, realizar ventas internacionales, incluso sin preocuparse mucho por la legalidad de las mismas. No obstante, tanto vendedores como compradores tienen la obligación de cumplir las leyes específicamente aplicables a su localidad y a sus actividades, y las autoridades de control pueden aprovechar las posibilidades de búsqueda que ofrece Internet para detectar el comercio ilegal de ejemplares, de la misma manera que la utilizan los vendedores y compradores potenciales. Las transacciones individuales son difíciles de detectar e interceptar, igual que las ventas por correo, por lo que sería necesaria una mayor cooperación internacional entre las autoridades de control para poder actuar de forma efectiva en las jurisdicciones de vendedores y compradores.

Existe una serie de factores que impiden que se puedan aplicar las leyes de forma eficaz para combatir el comercio ilegal de tortugas terrestres y galápagos, entre ellos:

- La capacidad para identificar los especímenes objeto del comercio y determinar su situación legal conforme a las leyes de protección de la vida silvestre, tanto en el país donde se efectúa el decomiso como en el país de origen y el país de procedencia.
- El destino de los ejemplares vivos decomisados, incluyendo la repatriación, colocación a largo plazo en cautividad o destrucción, como medida de último recurso.
- La percepción de que los delitos relacionados con tortugas terrestres y galápagos sean menos importantes que otros delitos contra la vida silvestre u otros tipos de delito.
- El ámbito y alcance de la legislación nacional para la aplicación de la CITES.
- Los datos sobre el comercio legal e ilegal y sobre los decomisos se registran y se intercambian de una forma parcial o incompleta, por lo que resulta difícil hacer una evaluación del volumen del comercio y de los decomisos.

El informe principal concluye con una lista de temas que deben ser examinados más a fondo, la lista de las referencias bibliográficas citadas en el informe y una serie de Anexos con tablas.

Illegal Trade in Tortoises and Freshwater Turtles

CITES Decision 16.122, paragraph a)

Indian star tortoise, *Geochelone elegans*. Juvenile individual photographed in habitat in Tamil Nadu, India. The species is included in CITES Appendix II, and occurs in India, Pakistan and Sri Lankha (possibly in Bangaladesh and Myanmar). *Geochelone elegans* is legally protected India, Pakistan and Sri Lanka, and specimens from the wild cannot be collected or exported. Nevertheless, this species appears frequently in illegal international trade, and has been seized in greater numbers than any other tortoise or freshwater turtle over the past 15 years.

Prepared by IUCN SSC's Tortoise & Freshwater Turtle Specialist Group (TFTSG)
Lead writer: Peter Paul van Dijk, with input from members of the TFTSG and staff of the United States Fish and Wildlife Service, the IUCN Species Program, Education for Nature Viet Nam, and TRAFFIC. All contributors and reviewers are cordially thanked for their time, efforts and contributions to improve earlier versions and are in no way responsible for errors or omissions.

Illegal trade in Tortoises and Freshwater Turtles – an overview to implement CITES Decision 16.122, paragraph a)

Prepared by IUCN SSC's Tortoise & Freshwater Turtle Specialist Group (TFTSG)

Executive Summary

This study reports the findings of an analysis of seizure data documenting illegal trade in tortoises and freshwater turtles around the world. Seizure records were compiled for the period 2000-2015 from a variety of data sources, primarily the UNODC database of wildlife seizures, supplemented with seizure records in the *TRAFFIC Bulletin*, Robin des Bois' *On The Trail*, and a variety of press releases, media reports and technical reports. Data on seizures of live tortoises and freshwater turtles as well as their parts and derivatives were included, for a combined dataset covering 3562 unique species-location-date events. These include 2561 seizure records for live specimens, encompassing 303,774 live tortoises and freshwater turtles, as well as 1001 seizure records for parts and derivatives amounting to a total of 2113 kg of materials plus 78,818 items.

Total legal and illegal trade quantities of live tortoises and freshwater turtles were calculated for the period 2000-2014. About 865,000 live animals of CITES-listed species were recorded as traded on average per year, the majority from captive breeding and ranching sources, with about 138,000 animals sourced from the wild annually. Total annual trade volumes for the world's largest exporter of tortoises and freshwater turtles, the Unted States, amounted to about 7.3 million animals (largely captive-bred), as well as 249,000 tortoises and freshwater turtles imported annually on average. During the same period, on average 26,442 live tortoises and freshwater turtles were seized annually, nearly all originating from the wild. Detected and seized illegal trade in tortoises and freshwater turtles thus represents a minimum of a quarter of one percent of total recorded trade, but more significantly equates to some 19% of the volume of legally traded wild-sources tortoises and freshwater turtles.

The available records for seizures of live tortoises and freshwater turtles over time indicate increasing numbers of seizures and numbers of specimens seized, with a temporary decline during 2007-2011, after which seizures exceeded all preceding years.

The species seized in greatest overall quantity is the Indian Star Tortoise (*Geochelone elegans*, Appendix II), accounting for 34,080 specimens seized, followed by the Pig-nosed turtle (*Carettochelys insculpta*, App.II) at 29,692 individuals, the Asian Box Turtle (*Cuora amboinensis*, App.II) at well over 20,000 live specimens, the Indian Softshell Turtle (*Nilssonia gangetica*, App. I) represented by over 16,428 animals, and the Spotted Pond Turtle (*Geoclemys hamiltonii*, App.I) at well over 11,451 live specimens recorded seized during 2000-2014. Overall, some 145 species of tortoises and freshwater turtles featured in live seizure records, with 4 species listed in Appendix I and 15 Appendix-II listed species representing the 21 most voluminously seized species.

Geographically, there appear different trends of relatively large numbers of seizure events involving relatively smaller numbers of specimens seized per event in Europe and North America, whereas a smaller number of seizure events in Asia resulted in much greater total quantities of specimens seized. A total of 87 countries and jurisdictions reported seizures of live tortoises and freshwater turtles, with several Asian countries, the European Union' 28 countries combined, Colombia and the United States seizing the greatest numbers of live specimens. Asian countries also dominated the list of countries from which seized live specimens were shipped. The greatest quantities of seized tortoises and freshwater were destined for countries in Asia, the European Union, and the United States. Overall, illegal shipments have originated from numerous locations and were destined for numerous countries, creating a diffuse global network; greatest trade flows based on numbers of seized specimens were documented within Asia. When focusing on seizures of tortoise and freshwater turtle species listed in CITES Appendix I, clear patterns emerge of extensive illegal trade in Spotted Pond Turtles, Indian Softshell Turtles and Three-keeled Hill Turtles (*Melanochelys tricarinata*, App.I) originating from South Asia shipped to Southeast and East Asia, several tortoise species from Madagascar smuggled to Asia and in lesser quantity to Europe, and Egyptian Tortoises (*Testudo kleinmanni*, App.I) from north Africa to Europe and elsewhere. Transport of illegally traded tortoises and freshwater turtles appear to minimize use of specific, direct routes or transport bottlenecks; instead, there are consistent indications that illegal shipments are intentionally routed through the widest possible range of shipping routes permitted by airline, shipping and road networks, including extensive detours and transits through other countries.

Where information on the specific location and circumstances of seizures were available, it was determined that many seizures occurred at border inspection points (such as airports, maritime ports and land border crossings), accounting for 897 seizure events involving more than half of all live specimens (161,054 animals) recorded seized in the entire analysis. In contrast, seizures at clearly 'domestic' situations such as shops,

markets, warehouses, private premises, zoos and exhibits amounted to fewer than 9000 live specimens seized, while some 6000 animals were recorded as seized from in-situ poaching activities. It is likely that these propotions are affected by differential recording, reporting and sharing of seizure data by different responsible authorities, but it can also be interpreted that border inspections are the primary enforcement location and that once past the border, illegally-sourced or illegally-imported tortoises and freshwater turtles are not likely to be detected and seized once in domestic commerce or possession. It was also determined that the number of live specimens (147,024) seized that were native in the country of seizure (and thus likely protected under domestic wildlife conservation laws in addition to CITES implementing legislation) was more than double the number of non-native specimens seized (69,216), indicating either a higher detection probablility of illegally traded native animals, or a higher confidence in the illegal status of the specimens under legislation in force, and thus justification for seizure.

Information on seizures of parts and derivatives of tortoises and freshwater turtles in trade is substantially less comprehensive than for live specimens, and patterns in such seizures appear significantly influenced by the quality of data recorded and transmitted by countries for inclusion in the UNODC database. The number of seizures per year appears relatively stable among years where records appear complete, averaging around 50 detailed records, which is low compared to numbers of live seizures during the same period. About a third of all seizures were reported by New Zealand, and another third by the United States, resulting from a combination of intensive inspections of incoming goods and travellers, an absence of personal use exemptions, and diligent reporting. The greatest number of seized shipments originated from China, while the greatest quantities seized originated from China, the United States and Indonesia. The challenges of converting quantities and units of parts and derivatives to the number of individual tortoises and freshwater turtles from which they originated preclude a quantified assessment of the size of this trade; a minimum is well over 10,000 individual animals, and likely a multiple of this.

Seizures of tortoises and freshwater turtles occur of many species in many countries, corresponding to the known trade flows from captive production facilities, ranching operations and wild collection efforts in many range countries and countries where specimens are maintained in captivity, to consumption, pet trade and aquaculture destination countries. Different strands of Illegal trade thus are entwined with the broader flows of legal trade. The majority of seizures (61% of cases, 77% of specimens) of live tortoises and freshwater turtles occur as shipments consisting exclusively of these animals. Other seizures occur as part of mixed shipments with other reptiles or with amphibians, or with other wildlife species such as mammals, birds, fish or invertebrates, while ver few cases were associated with seizures of arms and ammunition, narcotics, counterfeit goods, or shipments avoiding taxes and duties.

Many seizures of tortoises and freshwater turtles appear to involve small numbers of animals carried or kept as personal pets or souvenirs. However, a smaller number of seizures of large to very large shipments demonstrate organized networks of collectors, local traders, wholesellers, exporters and importers. Little hard evidence-based information is available on illegal trade chains, but indications are that collection efforts from the wild can be extensive and diffuse by mobilizing a large number of local collectors, while a modest-sized network (or several sets of networks) of individuals act as regional buyers, wholesellers, exporters and importers. Despite the apparently small number of core individuals involved, these networks appear fluid and dynamic enough to compensate for the absence of one or another individual.

The growth of the internet has greatly facilitated communication and commerce between individuals and institutions at a global scale, and has become a prime outlet to advertize and arrange sales of tortoises and freshwater turtles, legal as well as illegal. Combined with improvements of facilities to ship goods around the globe at affordable rates and at very short transport times, international sales can be arranged, including with little regard for legality if so desired. Nevertheless, sellers and buyers remain bound by the laws in effect for their particular location and actions, and enforcement authorities can use the internet's capacity to search for and detect illegally trade specimens as well as prospective buyers and sellers can. Detecting and intercepting individual transactions does pose challenges, just as detecting and intercepting mail order shipments does, and warrants increased international cooperation by enforcement authorities to take effective action in both the seller and buyer's jurisdictions.

Effective enforement action against illegal trade in tortoises and freshwater turtles is constrained by a range of factors, including

- Ability to identify specimens in trade and determine their status under protective legislation, in the country of seizure as well as in the country of origin and provenance.
- Placement of seized live specimens, including repatriation, long-term placement in captivity, or destruction as a measure of last resort.
- The perceived lower significance of tortoises and freshwater turtles compared to other wildlife crime, and other forms of crime.

- The scope and extent of domestic conservation legislation to implement CITES
- Partial or incomplete recording and record-sharing of legal and illegal trade, and trade seizures, making it difficult to evaluate the significance of trade and seizures.

A list of topics for further consideration concludes the main report, followed by literature cited and a series of Annex Tables.

Decision 16.122, paragraph a): Illegal trade in Tortoises and Freshwater Turtles

1. Background

At its 16th meeting (CoP16; Bangkok, 2013), the Conference of the Parties to CITES adopted Decisions 16.109 to 16.124 on *Tortoises and freshwater turtles (Testudines spp.)*, directed to the Secretariat, the Animals Committee, the Standing Committee and the Parties.

At the 65th meeting (SC65; Geneva, 2014) of the CITES Standing Committee, the Secretariat introduced document SC65 Doc. 45[9] on *Tortoises and freshwater turtles*, giving an overview of the status of the implementation of Decisions 16.109 to 16.124. The Secretariat noted that there were few responses from Parties to requests for data or reports in the context of these Decisions, recognizing that the considerable reporting requirements in different Decisions may have been to some extent dissuasive or confusing. The Secretariat expressed concern that this might impede the successful implementation of the Decisions on *Tortoises and freshwater turtles*.

The Secretariat reported that the activities and studies called for in Decision 16.119 paragraph b), and Decision 16.122 paragraphs a) and b), would be particularly important as they could complement or partially replace the progress reports and information that Parties are expected to submit in accordance with the Decisions on *Tortoises and freshwater turtles*, and consequently noted that the implementation of these Decisions could enhance the initiation of targeted activities. Strong support was expressed for the recommendation by the Secretariat to implement Decisions 16.119 paragraph b), and 16.122 paragraphs a) and b).

The purpose of this report is to assist the Secretariat in the implementation of Decision 16.122 paragraph a), which states as follows:

> ***Directed to the Secretariat***
>
> *16.122 The Secretariat shall:*
>
> *a) recognizing the ongoing prevalence of an illegal trade in live tortoises and freshwater turtles for the medicinal, food, and pet trades which is threatening the survival of some species in the wild and impacting the integrity of the Convention, seek external funding and, subject to its availability, hire a consultant to analyse reported data, identify species prevalent in illegal trade, and document illegal trade incidents, trade routes (including the Internet-based trade), methods of concealment, and other aspects relevant to enforcing CITES provisions concerning trade in tortoises and freshwater turtles;*

2. Objectives

The objective of this report is to support the implementation of CITES Decision 16.122 paragraph a) on *Tortoises and freshwater turtles*, through the completion of a wildlife trade study on the legal and illegal trade in specimens of tortoises and freshwater turtles, in accordance with the provisions of CoP Decision 16.122 paragraph a).

It is anticipated that the findings of the work will feed into the CITES Tortoises and Freshwater Turtles Task Force to be convened pursuant to Decision 16.119 paragraph b), and documentation that will be prepared for the 17th meeting of the Conference of the Parties to CITES (CoP17, Johannesburg, September 2016).

3. Wildlife trade study: Illegal trade in Tortoises and Freshwater Turtles

Activities conducted in accordance with CITES Decision 16.122, paragraph a)

[9] *https://www.cites.org/sites/default/files/eng/com/sc/65/E-SC65-45_0.pdf*

- Analyse reported data on legal and illegal trade in specimens[10] of tortoises and freshwater turtles for different types of trade, in particular medicinal, food and pet trades. The analysis should include data available in the CITES trade database and data submitted in accordance with the provisions of paragraph m) in Resolution Conf. 11.9 (Rev. CoP13)[11] on *Conservation of and trade in tortoises and freshwater turtles* and in periodic reporting under Article VIII paragraph 7 b) of the Convention submitted by range States of tortoises and freshwater turtles that authorize trade in these species.
- Identify species and specimens prevalent in different types of illegal trade.
- Examine and document illegal trade incidents, including internet-based trade, and the locations of seizures (e.g. ports, airports, markets). Maps that visually indicate where some of the biggest seizures took place, and how trade routes may operate, should be included.
- Examine illegal trade routes for different types of trade, in particular medicinal, food and pet trades, and including live animals as well as tortoise and freshwater turtle shell, bones, cartilage (calipee), and other parts and derivatives.
- Document methods of concealment used for illegal trade in tortoise and freshwater turtle specimens.
- Provide a general overview of the scale and nature of the illegal trade in specimens of tortoises and freshwater turtles in Asia.
- Document any enhanced and increased enforcement efforts especially by range States and exporting and importing States of Asian tortoises and freshwater turtles, including any international cooperation that could serve as best practice examples.
- Consider the adequacy of national legislation to effectively control the unsustainable harvest of and trade in tortoises and freshwater turtles, and to effectively conserve and manage these species.

Datasets used

Data used for this analysis originated from several sources:

- An extract of illegal trade records involving tortoises and freshwater turtles from the United Nations Office of Drugs and Crime (UNODC) Worldwide Wildlife Seizures (WorldWISE) database, made available on 30 October 2015. This comprised 2692 records, including records from national CITES Authorities and customs databases from various countries. The available UNODC dataset used spans the period from August 1998 to May 2015, but it should be noted that the great majority of records (1929) are from the period between 2005 and 2015 (inclusive). For practical reasons it was decided to restrict use of the UNODC dataset for seizures of live specimens to records from January 1st, 2000 to 2015, which resulted in the removal of 43 records, all from the United States.
  The UNODC dataset thus restricted comprises seizures of live specimens (1646 records), skeletons, shells, carapaces, plastra, skulls and other bone pieces (307 records), medicinal preparations (230), derivatives (204), bodies (46), meat (29), shell products (20), powders (18 records), eggs (17), trophies (11), soup (9), dead-on-arrival specimens (7), carvings (6), extracts (6), scientific specimens (3), calipee (2), claws (2), scales (2), jewelry (2), feet (1), leather (1), and unspecified (52 records).
  Analysis of the UNODC dataset was complicated by different data formats and near-duplicate submissions contained therein, as may be expected for an aggregated dataset combining numerous data submissions, and required significant evaluation of records. The UNODC dataset proved to be incomplete in the sense that several known large seizures are not included. This may be a result of the time period for which records were available, and/or of countries' comprehensiveness of submitting records or otherwise making records available in a manner that could be captured by the database. To address this, additional seizure records were compiled and added to create a combined dataset, which was used for an updated analysis (see below for details)
- The UNEP-WCMC CITES Trade database.
- The United States' LEMIS database, providing a total of 70,103 records of legal and 19 illegal tortoise and freshwater turtle imports into, and exports from, the United States of America during the period January 1999 to December 2015, encompassing over 191 million specimens of tortoises and freshwater turtles.
- The Wildlife Crime Incident Tracking database maintained by Education for Nature Vietnam (ENV), contributing 211 data instances from 134 separate seizures (often involving several tortoise and

[10] *"Specimens" includes live tortoises and freshwater turtles, and their parts and derivatives (e.g. turtle shell, bones, cartilage)*

[11] *https://www.cites.org/eng/res/11/11-09R13C15.php*

freshwater turtle species per seizure) during the 6 calendar years 2010 to 2015. The ENV database contributed 6 records of parts and derivatives seizures.

- The compilations of Seizures and Prosecutions reports in the TRAFFIC Bulletin from March 1997 to October 2015, adding up to several hundred data instances for live seizures and 12 seizure records for parts and derivatives.
- The 11 issues of the quarterly 'On the Trail' report published by Robin des Bois, spanning the 30-month period from April 2013 to December 2015, providing a comprehensive compilation of another several hundred seizure and prosecution records concerning over 115,000 specimens of tortoises and freshwater turtles based on press and media sources worldwide. The *On The Trail* data contributed another few hundred live seizure and 28 Parts & derivatives seizure records, several of which corresponded to UNODC and/or TRAFFIC Bulletin records.
- Additional information scattered in reports and other communications by the IUCN Tortoise and Freshwater Turtle Specialist Group (TFTSG) members, in most cases providing more detailed information on seizures already recorded by UNODC or *TRAFFIC Bulletin*.

In these databases, a 'record' or 'data point' is defined as a combination of species, event location and event date. Thus, a seizure of one specimen of Spur-thighed Tortoise (*Testudo graeca*) at a border post is a single seizure record (with a quantity of one specimen), a seizure of one hundred Spur-thighed Tortoises at a single border post in a single day is also a single seizure record but with a quantity of 100 specimens (even if it clusters several separate seizures from separate traffickers; the database resolution rarely provides this level of detail). Meanwhile, a single seized shipment containing ten different tortoise and/or freshwater turtle species represents ten different seizure records (at quantities reported for each respective species). This approach increases the number of seizure records per country compared to the actual number of seizure events that occurred; however, the greatly increased accuracy of species-specific seizure information generated this way outweighs the possible perception that countries carry out more seizures than actually occur. Moreover, the UNODC database records are at species level, and identifying possible multi-species seizures and merging those into single seizure event records would introduce uncertainty and similarly affect the perception of number of seizures actually made.

The combined dataset used for most of this analysis is formed by the UNODC WorldWISE database made available on 31 October 2015, which was then augmented by seizure data from the TRAFFIC Bulletin for the period January 2000-October 2015, the seizure data contained in the 11 issues of On The Trail (Robin des Bois) covering the period April 2013-December 2015, the ENV seizure records for Viet Nam, and turtle seizure records accumulated from various sources by the TFTSG. For practical purposes, the period of analysis was restricted to seizure events occurring between 1st January 2000 to 31st December 2015 .

The core for the combined dataset are the UNODC WorldWISE's 2692 records of tortoise and freshwater turtle seizures. Seizure records from additional sources were sequentially added to the combined dataset, by comparing for existing records on or near the same date; if additional information emerged from additional data sources this was added to the existing record, with annotation. Where discrepancies were found in quantities of specimens seized, the UNODC-reported quantity was used; where other data sources disagreed, and verification was not possible by contacting persons closely involved in the seizure, the lowest number reported was used (most conservative). Consistency checks were then carried out again to identify and delete, where necessary, duplicate records, by sorting the combined data set by species, by date, or by country. This allowed consolidation of seizure event records that were variously recorded by the exact date or by month or (part of) year only, or in some cases had no or erroneous date coding in the UNODC dataset[12]. These consistency checks also allowed elimination of a suite of duplicate records within the UNODC dataset when it became evident that two different national authorities had effectively submitted records of the same seizures, but with the country of seizure variously coded as 'destination' or 'transit', creating non-identical parallel records in the UNODC database. In a number of cases, the Management Authorities of Parties were consulted by email to clarify 'odd' records, and their responses are greatly appreciated.

Incomplete reporting of the numbers of specimens per species in mixed-species seizures posed challenges for data analysis. An example would be "seizure by Country X of a shipment arriving from Country Y, consisting of 500 live turtles, including tortoise species A, freshwater turtle species B, and 3 other freshwater turtle species." To maximize accuracy in subsequent analyses by species or country, such confiscations were coded as 500 live specimens of "unidentified Tortoises & Freshwater Turtles", with separate line records of "Species A: [part of 500]" and "Species B: [part of 500]". This coding ensured that no double-counting occurs (as Excel does not recognize or count "part of 500" as a number), ensures that the total number of live specimens seized is included in the analyses for countries X and Y, and shows the seizure when examining seizures of Species

[12] *such as a seizure on 27 November 2013 being coded as having occurred on 13/11/2027.*

A and Species B. While the actual number of Species A in the shipment cannot be determined, it allows indication whether the total number of seized live specimens for Species A is the sum of quantified records only (i.e., 5+8+12=15 specimens), or whether the quantified total is a minimum (i.e., 5+8+12+'part of 20'= > 15 specimens). For species or countries where a large number of unknown-quantity seizures occur, or where unknown-quantity seizures are part of very large shipments (100s to 1000s of specimens), are indicated with ">> xxx specimens".

In the cases of live specimen seizures, the great majority of records provided the number of individual animals as quantity, but for a number of records only a total weight was given (bulk seizures concerning Lao PDR, Thailand and Viet Nam, of turtles shipped as part of the consumption trade). Where possible, such records were not combined in the analysis, but in a limited number of situations they were combined. In such cases, one kilogram of weight was equated to one individual tortoise or freshwater turtle, which is approximately the average weight of the most frequently traded turtle species, the Asian Box Turtle (*Cuora amboinensis*) and a reasonable median between the largest individual freshwater turtle or tortoise specimens (*Manouria emys*, *Orlitia borneensis*, or large softshells) which may exceed 40 Kg, and the 15-50 gram weight of hatchling turtles.

The final combined, 'cleaned' and year-restricted dataset amounted to 3562 records, comprising 2561 live specimens seizure events (including counts for specimens that died during transport), and 1001 records concerning seizures of parts and derivatives.

An overview of tortoise and freshwater turtle smuggling cases concerning Asian jurisdictions and Asian tortoise and freshwater turtle species during the period 2000-2009 was presented in Annex C of Doc CoP15 Inf. 22.

Species were coded as listed in CITES Appendix I, II, III, or not listed; codings were assigned based on the CITES Appendix status in force at the date of seizure (so that a single species may feature in different data subsets for Appendix I or II, or other).

An original goal of this study was to examine trade of tortoises and freshwater turtles for different purposes, specifically as pets, for food and for medicinal purposes. However, this proved not feasible in practice. For one, the vast majority of trade and seizure data do not specify the ultimate purpose of the specimen to be traded, only whether trade is for commercial, scientific or other purposes. Moreover, the decision on what to do with a specimen rests with the individual purchasing that specimen: an aquaculture facility operator may well decide to acquire a shipment of hatchling turtles from a production facility primarily supplying the pet trade, but rear those hatchlings to a larger size and supply them to a consumption-oriented retailer or market, or supply the reared specimens to a processing facility using tortoise or freshwater turtle as an ingredient in medicinal preparations. Thus, the dividing lines between pet, food or medicinal trade can not be drawn with any reliability, and instead the analysis differentiates between live trade for all purposes, and trade in parts and derivatives which obviously excludes the pet sector but encompasses parts of the food, medicinal, trophy, ornament, curio, and scientific trade sectors.

Another worthwhile inquiry would be to compile observations of likely illegally sourced or traded specimens of tortoises and freshwater turtles, as recorded in market survey reports, pet shop visits and published pricelists, and the internet. However, while this remains worth doing, it quickly became clear that such an inquiry would be exceedingly laborious, and thus not feasible as part of the present study: because of the multitude of protective regulations governing possession and trade of tortoises and freshwater turtles, almost every instance would need to be verified whether the specimens concerned were recently collected specimens from the wild or pre-convention/ pre-listing wild-collected specimens (particularly pertinent to Appendix I specimens), whether they were wild-collected or captive-bred (again significant for Appendix I specimens, but also for Appendix II specimens with zero wild quota), whether they were collected and traded with valid permits or without (any Appendix, as well as domestic legislation), and in the case of captive-bred specimens whether the parental stock was legally acquired. While in many cases assumptions can safely be made (a shipment of five hundred adult Elongated Tortoises (*Indotestudo elongata*, App.II), which take 8-15 years to reach maturity and produce 3-6 eggs per female per year, displaying burn scars and tick infestations, is unlikely to originate from a genuine captive breeding facility; Palawan Pond turtles (*Siebenrockiella leytensis*, App.II) are fully protected from exploitation under Philippines legislation and have not been legally exported since the species' rediscovery in 2004), a large degree of uncertainty affects some of the records and precludes reliable analysis without detailed investigation of every single instance. In some cases, a decisive practical evaluation of whether a specimen or shipment was legal or illegal can only be made long after the trade occurred, by evaluating whether permits for trade in the observed species or quantities were issued by the country of origin and accepted and recorded by the destination country.

Definitions and Terminology used:

Taxonomy of tortoises and freshwater turtles follows the CITES Standard Reference, Fritz & Havas (2007), and additions as listed in CoP16 Doc.43.1 Annex 6 (Rev.1) (2013). At present, about 327 valid species of living turtles are generally recognized (Fritz & Havas, 2007; TTWG, 2014). Of these, 32 are listed in CITES Appendix I, about 126 in Appendix II, about 22 in Appendix III, while the remainder are not included in the CITES Appendices. These species are taxonomically separated into 14 families: two familes (Cheloniidae, with 6 species, and Dermochelyidae with a single species, all in Appendix I) are primarily marine and excluded from this analysis; one family (Testudinidae, over 40 species, all in Appendix II or I) is primarily terrestrial; and the remaining 11 families (with about 280 species, variously in Appendices I, II, III or not listed in CITES) predominantly inhabit freshwater habitats.

Vernacular group names for turtles and tortoises differ by language and region and unfortunately rarely match taxonomic classification. For example, the words 'turtle' and 'terrapin' have different meanings and species content in the United Kingdom and the United States, while 'tortoise' refers to primarily terrestrial turtles in the UK and US but is used for the side-necked, freshwater-inhabiting species in Australia. The French language uses 'tortue' as the noun for all shelled reptiles and specifies marine, terrestrial or freshwater species with the adjectives 'marine', 'terreste' and 'd'eau douce', while Spanish uses 'tortuga' for most species, with some use of 'galapago' for tortoises. For the purposes of this report, the word 'turtle' is used for any shelled reptile belonging to the order Testudines, and encompassing freshwater, terrestrial and marine species; where categorization is appropriate, the terms 'freshwater turtle', 'marine turtle' and 'tortoise' are used to separate species groups. The word 'tortoise' is specifically used for any terrestrial turtle attributable to the Family Testudinidae; a few species classified in the generally freshwater-inhabiting families Emydidae and Geoemydidae have a primarily terrestrial lifestyle, and where necessary are referred to as 'terrestrial turtles'. Species of the Family Trionychidae are referred to as 'Softshelled Turtles' (or 'softshells') and all inhabit fresh (or brackish and inshore) water.

Turtles are anatomically unique in being the only tetrapod vertebrates to possess a bony shell surrounding their body, incorporating ribs and other bones, thus having in effect evolved to move their limb girdles inside the rib cage (as opposed to e.g. armadillos and glyptodonts, whose bony body armour consists of dermal ossifications separate from the ribs). The entire bony covering of a turtle is referred to as a shell; the upper (dorsal), generally domed, part of the shell is termed the carapace, while the lower (ventral), normally flat part of the shell is called the plastron (plural: plastra).

In this study, the words 'seize' or 'seizure' are consistently used when animals or goods are taken under legal authority, and is understood to include cases of confiscation and forfeiture. 'Parts' refers to parts of tortoises or freshwater turtles that are still recognizable as such, for example shells, carapaces, plastra/plastrons, skulls, skeletons, trophies, artifacts and some shell products. 'Derivatives' is used to mean items originating from tortoises and/or freshwater turtles but no longere readily recognizable as such, for example powders, extracts, meat, tissue samples or claws. The distinction between parts and derivatives is vague as it may depend on the degree of working or processing whether an item is still recognizable as having originated from a tortoise or freshwater turtle, and whether the packaging accurately lists its contents; examples of such ambiguity are packaged medicinal preparations purporting to contain turtle, as well as packaged soup and meat, eggs, shell products, jewelry, carvings loose and broken bones. This study primarily used the terms as entered in the UNODC database without evaluating their appropriateness or (re-)assigning records to product categories.

Where appropriate, this study uses the terms 'origin' and 'provenance' to mean the same as the UNODC WorldWISE database employs these terms. Thus, 'provenance' is used to designate the location from which a specimen was shipped before being seized, such as the airport at which a smuggler boarded a flight before any tortoises carried in his/her luggage were seized at an airport of transit or disembarkation. Where apropriate, the term 'origin' is used for the original location at which the seized specimen was originally collected from the wild or bred in captivity, or processed and produced in the case of some products and derivatives.

Illegality – when is a tortoise, freshwater turtle, or tortoise/turtle product traded illegally, and why is it seized?

Tortoises and freshwater turtles are traded domestically and internationally for a variety of purposes that can be broadly categorized as for human consumption or as pets, with a small but occasionally significant trade in curios and artefacts derived from tortoise and/or freshwater turtle shells. Large captive production facilities to supply the pet freshwater turtle trade exist in North America, and captive production and rearing facilities to meet consumption demand for freshwater turtles have been in operation in Asia for decades or longer for a few species. Smaller facilities, including private individuals and small commercial operations, additionally produce a wide range of species of tortoises and freshwater turtles in captivity for the niche collector-keeper trade, while ranching operations supply the pet trade as well. In addition, large quantities of tortoises and

freshwater turtles continue to be collected from the wild and traded internationally for as pets, for consumption, and as additional stock for captive production facilities. Thus, tortoises and freshwater turtles are traded from almost anywhere to almost anywhere.

The approximately 320 species of tortoises and freshwater turtles, including 168 CITES-listed species, are native to 163 nations or territories; nearly all these tortoise and freshwater turtle range states are CITES signatories. In addition, almost every country, state, region or other administrative unit has its own laws and regulations protecting native species of tortoises and freshwater turtles, or managing their offtake and utilization. A few countries' domestic laws also regulate possession and trade of non-native species within their jurisdiction. Beyond these, adherence to industry standards like the IATA Live Animals Regulations may be required by law, or as the carrier's condition of acceptance of a shipment. Collectively, these laws, rules and regulations create a plethora of conditions governing turtle collection, production systems, and trade.

With such a wide array of countries, species and regulations concerned, opportunities abound for unknowingly or deliberately breaching applicable regulations. The result is an act of illegal possession or trade, and the detection by responsible authorities of such breaches of regulations may lead to seizure of the specimens involved and may result in judicial prosecution. This study takes as its starting point the available data set for cases where the responsible authorities have determined that collection, possession or trade regulations in force were sufficiently breached that they seized the specimens. The factors that were specifically considered at the time to represent an illegal act or situation are beyond the scope of this study. While potentially useful, it would be challenging to analyse these factors, because the UNODC WorldWISE database extract for tortoises and freshwater turtles does not provide this information, and it is provided only in some instances when seizures are reported in press releases by authorities or in the media (including subsequent compilations such as *TRAFFIC Bulletin* and *On The Trail*). Where such details were provided, they document that a wide range of conditions may lead to seizure of tortoises and freshwater turtles, for example the absence of valid CITES permits, exceeding quantities allowed to be collected, transported or traded under permit, incorrect documentation of the shipment (different species, presumed wild-sourced instead of captive-produced), collection from closed areas, collection during closed seasons, collection of specimens outside legally permitted size limits, and inappropriate or inhumane shipping conditions. This kind of information, as well as information on prosecution, conviction and sentencing of offenders, deserves compilation and analysis in a future study.

For the purposes of this analysis, a tortoise or freshwater turtle is deemed to have been collected, possessed or traded illegally when it has been seized by the responsible authorities. This study aims to elucidate patterns of species, trade routes and merchandise associations associated with seized tortoise and freshwater turtle specimens. Patterns in the rationale for seizure of the specimens must await a later data compilation and analysis.

4. Findings, part 1: Illegal Trade in live Tortoises and Freshwater Turtles

Context: the volumes of legally traded and seized illegally traded live tortoises and freshwater turtles.

No comprehensive dataset is available documenting all international trade in tortoises and freshwater turtles. However, to get some indication of the scale of legal and illegal trade, available records for the period 1 January 2011 to 31 December 2014 were compiled and compared. As the available records on dead turtles, parts and derivatives are complex, scattered and difficult to quantify to numbers of individual animals involved, this analysis was restricted to international trade in live specimens only.

At present the UNEP-WCMC database does not make it possible to query it at taxonomic levels higher than genus, so a complete tabulation of net exports of all tortoise and freshwater turtle species recorded in the UNEP-WCMC database was arrived at by adding the recorded net exports during 2011-2014 for all countries for live specimens of all 64 tortoise and freshwater turtle genera containing CITES-listed species. A total of 3,457,703 live specimens were recorded as traded in the four-year period: 584 Appendix I-listed specimens, mainly repatriations and other transfers of confiscated specimens; 2,213,729 tortoises and freshwater turtles of species listed in Appendix II, and another 1,243,390 live specimens listed in Appendix III, an annual average of about 865,000 tortoises and freshwater turtles. The large majority of these legally traded specimens originated from captive breeding and ranching facilities; an approximated 552,000 animals originated from wild sources (138,000 animals per year).

During the same period 2011-2014, the world's largest exporter of turtles, the United States, recorded a total of 11,548 live tortoise and freshwater turtle export transactions, encompassing 29,181,468 individuals (of which 4 species, *Trachemys scripta*, *Chelydra serpentina,* '*Pseudemys* species' and *Apalone ferox*, represented over 25.5 million animals). A large percentage of these exported animals were produced in

registered aquaculture and captive breeding facilities. In addition, 2941 transactions of live tortoise and freshwater turtle import were recorded, representing 997,007 animals, as well as 55 transaction records of live turtles in transit concerning 3,982 animals. Thus the United States alone accounts for an annual average of 7.3 million tortoises and freshwater turtles legally exported, and nearly a quarter million tortoises and freshwater turtles imported annually. In the same four-year period, the US LEMIS database recorded 5 illegal attempts at importing live tortoises or freshwater turtles, concerning 842 animals, and no illegal exports were entered into the LEMIS database. It will be noted that there is some overlap in the numbers reported by the US LEMIS database and the UNEP-WCMC CITES Trade database, amounting to over 840,000 specimens of CITES-listed species being exported from the USA, and a significant proportion of US imports of tortoises and freshwater turtles concerning CITES-listed species whose trade is also captured in the UNEP-WCMC Cites trade database.

No figures were available at the time of analysis to quantify the volume of domestic and international trade in the widely cultured Chinese Softshell Turtle (*Pelodiscus sinensis* group) and other freshwater turtle species produced by aquaculture facilities in China; an indication can be gleaned from the reported production capacity in Chinese aquaculture operations in 2002, indicating some 30 million breeding adults producing about 285 million hatchlings per year (Shi & Fan, 2002; Shi *et al*., 2004). Nearly all of China's turtle aquaculture production is traded domestically and thus does not enter international trade, nor does it feature in seizure statistics; but it helps to understand the enormous quantities involved in global turtle aquaculture and trade.

On balance, the order of magnitude of global, international trade in live tortoises and freshwater turtles each year amounts to approximately 865,000 individuals of CITES-listed species (of which an estimated 138,000 originated from the wild), and well over 7 million animals of species not listed in the CITES Appendices, for a global minimum estimate of 8 million per year, and likely to be at 10 millions or higher once more comprehensive data for trade in non-CITES-listed species from Asia and Africa become available.

For the same four-year period 2011 to 2014, the UNODC WorldWISE database in isolation recorded 620 seizures of live tortoise and freshwater turtle species, representing 13,315 animals, an average of 3329 tortoises and freshwater turtles seized per year. The combined dataset for this study recorded a total of 1056 seizure cases, but comprising a minimum of 105,768 live specimens, or an annual average of 26,442 live animals seized. This calculates to a tiny fraction, around one-quarter of one percent, of total annual global live tortoise and freshwater turtle trade, or of total international turtle trade transactions.

However, despite the very small proportion of global turtle trade that is found to be illegal and seized, this illegal component of the trade has a disproportionate impact on tortoise and freshwater turtle conservation in the wild. The annual average of over 26,000 tortoises and freshwater turtles seized originates largely from wild populations, and compares substantively (19%) to the estimated total of 138,000 legally collected and traded wild specimens per year. Clearly, the estimate of illegal trade volume equating to some 19% of the volume of legally traded wild-sources tortoises and freshwater turtles is a minimum, as it does not include the illegal trade volume that is not detected and seized. Moreover, significant segments of the illegal trade focus on poaching and trade of the rarest and most threatened species of tortoises and freshwater turtles. Thus, while the challenges are great to detect and enforce the small proportion of tortoise and freshwater turtle trade that is illegal, against the backdrop of voluminous legal trade, there is a clear conservation imperative to act, in addition to society's fundamental need to act against illegality.

Trends in seizures over time

The number of reported seizure events per year during the period 2000-2015 is graphed in Figure 1, while the number of live specimens seized per year during the same period is graphed in Figure 2. The actual numbers are tabulated in Annex Table 1.

Figure 1. Number of seizure records for live tortoises and freshwater turtles by year, based on the combined dataset of seizures during 2000-2015.

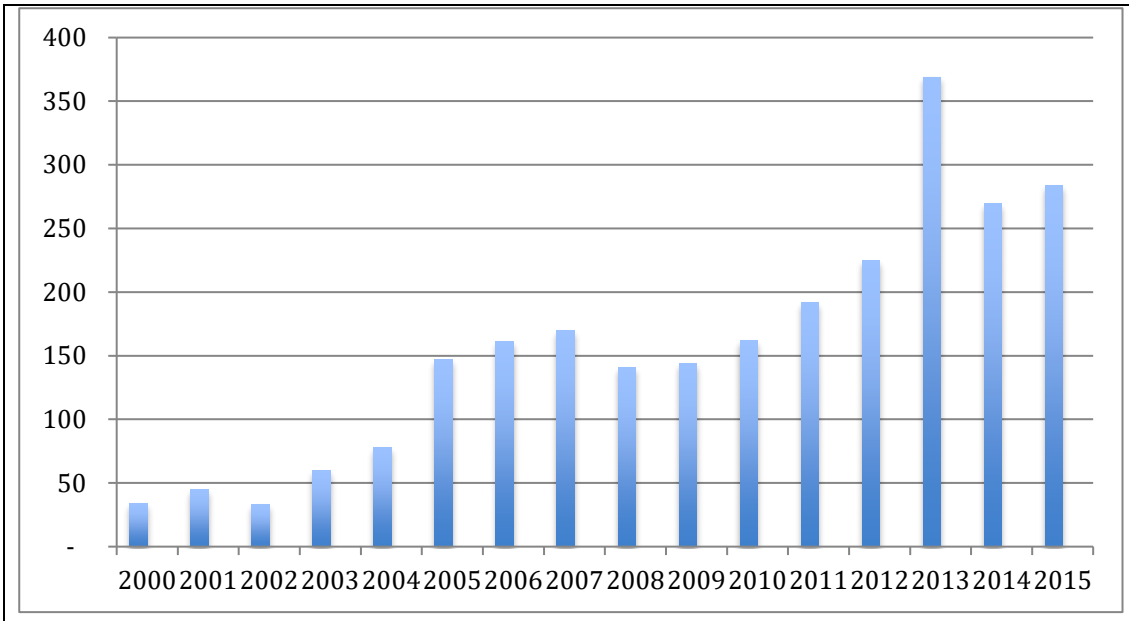
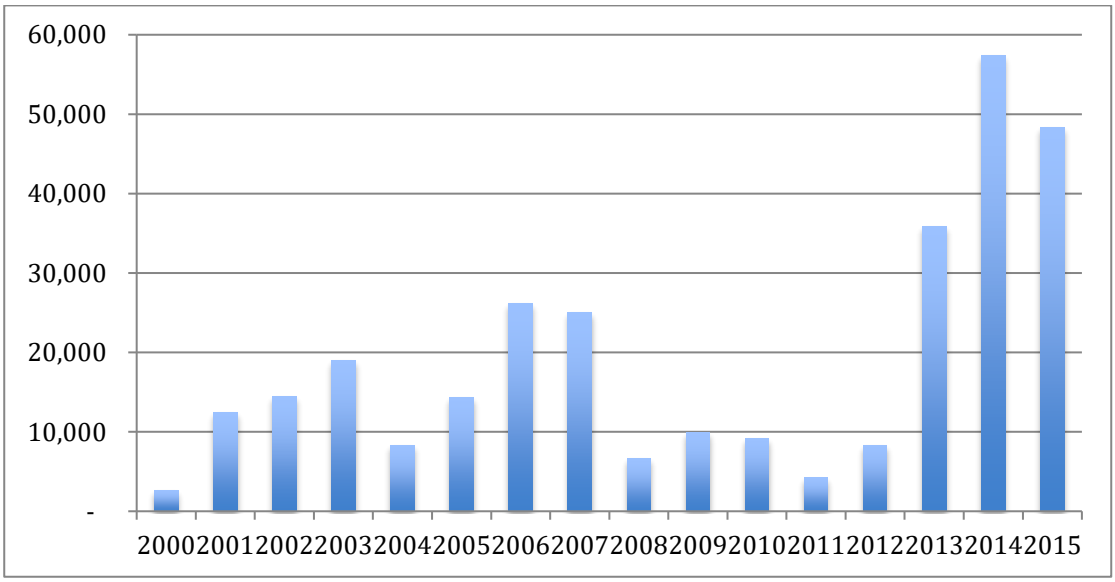


Figure 2. Number of individuals of live tortoises and freshwater turtles seized by year, based on the combined dataset of seizures during 2000-2015.



The data indicate a slight bell curve of both number of seizures and number of seized specimens during the period from 2000 to about 2010, followed by an increase in the number of seizures, and a steep increase in the number of specimens seized, from about 2010-2013 onwards. No clear explanation can be provided for these trends; but several factors likely interacted to create these trends. One factor must be the fact that during the period concerned, additional freshwater turtle species were progressively added to the CITES Appendices, thus bringing more species under the regulatory umbrella, with increased potential for shortcomings of documentation requirements. Correspondingly, Parties and State jurisdictions have over the years evaluated and updated their domestic regulations regarding wildlife offtake and trade, and in the case of tortoises and freshwater turtles such updates have frequently resulted in reduction of legal offtake volumes. Another factor conceivably could be the depletion of wild tortoise and freshwater turtle populations in traditional offtake areas supplying the trade in adult wild-collected tortoises and freshwater turtles for the retail consumption trade. The increase in particularly the number of seizures reported from 2005 onwards is likely partly an effect of the consolidated reporting by European authorities in a format that was incorporated into the UNODC database. Uneven submission of seizure events by Parties, particularly in the earlier years of the analysis period, and uneven coverage of seizure events by media, may well be contributing factors. It is possible that the dip in seizures for several years from 2008 onwards is related to reduced overall economic activity and consumers' disposable income as a result of the 'Great Recession'. The spike in trade seizures from 2012 onwards appears

largely driven by the scaling up of illegal trade, and corresponding awareness and enforcement by authorities, in protected tortoise and freshwater turtle species for the pet trade in Asia, with repeat seizures of very large shipments (hundreds or thousands of animals per shipment) of hatchlings and juveniles of Indian Star Tortoises (*Geochelone elegans*, II), Pig-nosed turtles (*Carettochelys insculpta*, II), Spotted Pond Turtles (*Geoclemys hamiltonii*, I) and Radiated Tortoises (*Astrochelys radiata,* I).

At this point in the analysis it is worth reflecting on the scale of the documented seizures in recent years. Annual seizure totals in the years since CoP16 of 35,000 to 57,000 live tortoises and freshwater turtles, many of them listed in Appendix I, and nearly all poached from the wild, represent a remarkable quantity.

Species of tortoises and freshwater turtles in illegal trade

Based on records in the combined dataset for the period 2000-2015, a total of 145 species (or species groups) of live tortoises and freshwater turtles have been recorded in seizures from illegal trade or possession. Predictably, a few species constitute the majority of cases and number of specimens seized, and many species feature only occasionally in seizures. These 145 species represent substantial percentages of the world's total number of species (320, i.e. nearly 45%) and of the number of species included in the CITES Appendices (124 of 168, thus about 74%). Clearly, these numbers are minimum numbers, as additional species and specimens may have been traded illegally but not detected, and thus not seized and not included in the data set. The 21 most frequently seized tortoise or freshwater turtle species (or genera of highly similar species subject to recent taxonomic changes) are listed in Table 1; the full species list is presented in Annex Table 2.

Table 1. Tortoise and freshwater turtle species most frequently seized as live specimens during 2000-2015, according to the combined dataset. Species are colour-coded by CITES Appendix: pink-tan = App. I, yellow = II, no colour = not listed.

Family	**species**	Number of live specimens seized	Number of live seizure cases	Number of seizure cases of parts and derivatives
Testudinidae	Indian Star Tortoise *Geochelone elegans*	> 34,080	118	2
Carettochelyidae	Pig-nosed Turtle *Carettochelys insculpta*	29,692	26	2
Geoemydidae	Asian Box Turtle *Cuora amboinensis*	>> 20,772	37	8
Trionychidae	Indian Softshell Turtle *Nilssonia gangetica*	> 16,428	19	1
Geoemydidae	Spotted Pond Turtle *Geoclemys hamiltonii*	>> 11,451	70	3
Testudinidae	Central Asian Tortoise *Testudo horsfieldii*	10,587	48	7
Emydidae	Colombian Slider Turtle *Trachemys callirostris*	10,329	3	2
Testudinidae	Radiated Tortoise *Astrochelys radiata*	> 7,973	72	6
Trionychidae	Asiatic Softshell Turtle *Amyda cartilaginea*	7,704	14	16
Podocnemididae	Yellow-spotted River Turtle *Podocnemis unifilis*	> 6,265	27	7
Chelydridae	Common Snapping Turtle *Chelydra serpentina*	6,026	2	-
Geoemydidae	Yellow-margined Box Turtle *Cuora flavomarginata*	5,232	7	-
Testudinidae	Spur-thighed Tortoise *Testudo graeca*	4,286	570	37
Geoemydidae	Palawan Pond Turtle *Siebenrockiella leytensis*	> 4,276	11	-
Testudinidae	Hermann's Tortoise *Testudo hermanni*	4,162	200	12
Geoemydidae	Black Marsh Turtle *Siebenrockiella crassicollis*	>> 3,375	12	4

Family	**species**	Number of live specimens seized	Number of live seizure cases	Number of seizure cases of parts and derivatives
Geoemydidae	Snail-eating Turtles *Malayemys macrocephala + M. subtrijuga*	> 2,707	25	2
Trionychidae	Flapshell Turtle *Lissemys punctata*	>> 2,308	13	1
Geoemydidae	Yellow Pond Turtle *Mauremys mutica*	> 2,111	7	-
Geoemydidae	Asian Leaf Turtles *Cyclemys sp.*	>> 2,048	38	-
Geoemydidae	Three-keeled Hill Turtle *Melanochelys tricarinata*	>> 1,979	15	-
Total Tortoises & Freshwater Turtles (145 species)		> 303,774	2561	1001

As Table 1 presents, the most numerously seized live species are the Indian Star Tortoise, the Pig-nosed Turtle and the Asian Box Turtle, with over 20,000 live specimens seized of each species. Remarkable in particular is that of the 21 most seized species, 15 are native to tropical Asia, including each of the five most seized species. Noteworthy in particular is that of the 21 most seized species, four are on CITES Appendix I, and have been included in that Appendix since the early years of the Convention.

Remarkable is the high number of seizures concerning the Mediterranean Spur-thighed Tortoise (*Testudo graeca*), whose 570 seizure reports represent 22 percent of all tortoise & freshwater turtle seizure events, even when the total number of individuals seized represents 'only' 1.4% of all individuals seized. A similar pattern is shown by the European Mediterranean Hermann's Tortoise (*Testudo hermanni*), accounting for 7.8% of seizures and 1.4% of specimens seized. These numbers result from the extensive traffic of persons, vehicles and goods across the Mediterranean, combined with intensive inspection and enforcement at external border crossings into the EU, at domestic shops and trader facilities, and the EU's stricter domestic measures governing private possession and trade of tortoises, against a historical / pre-CITES background of large numbers of mainly Mediterranean tortoises being privately kept, bred, and moved along as pets. Overall, tortoises occupy five of the top spots of most frequently seized species (Table 1), including the single most voluminously seized species, the Indian Star Tortoise (*Geochelone elegans*); moreover, 30 of the 45 existing tortoise species feature among seizures (Annex Table 2).

Table 2. Total numbers of live tortoise and freshwater turtle specimens seized during 1998-2015, grouped by family, based on records in the UNODC WorldWISE dataset (as of 30 October 2015), and in the combined dataset for the years 2000-2015.

	UNODC dataset 1998-2015		Combined dataset 2000-2015	
	Number of specimens	Number of seizure cases	Number of specimens	Number of seizure cases
Tortoises -- Testudinidae	31,207	1,452	> 72,296	1,663
Eurasian freshwater turtles and neotropical wood turtles -- Geoemydidae	10,805	125	>> 62,364	430
Soft-shelled Turtles -- Trionychidae	10,096	21	> 30,035	85
Pig-nosed Turtle -- Carettochelyidae	548	11	29,692	26
American freshwater turtles plus Eurasian Emys -- Emydidae	643	77	> 12,822	106
Snapping Turtles -- Chelydridae	661	5	6894	9
Side-necked River Turtles -- Podocnemididae	645	20	> 6878	45
Big-headed Turtle -- Platysternidae	30	1	1112	37
Mud Turtles -- Kinosternidae	0	0	> 1006	7
Austro-American side-necked turtles -- Chelidae	26	2	> 398	9
African Side-necked Turtles -- Pelomedusidae	0	0	50	1

Central American River Turtle -- Dermatemydidae	8	3	8	3
Unidentified tortoises or freshwater turtles			> 75,000	116
All Tortoises & Freshwater Turtles -- Order TESTUDINES minus Families Cheloniidae and Dermochelyidae	54,669	1,717	> 303,774	2,561

Table 2 summarizes the numbers of individual live tortoises and freshwater turtles seized, and number of seizure events, when combining all species within each of the different families, based on the full UNODC dataset as well as the combined dataset. In both sets of results the numerical dominance of tortoises is again apparent, particularly for the number of seizure events (65 to 85%) but also for the total number of animals seized (24 to 57%).

When comparing these percentages against legal declared trade in the UNEP-WCMC CITES trade database, the preponderance of tortoises in seizures is disproportionate: Of the total number of live traded tortoises and freshwater turtles (3,457,703), the number of tortoises (987,542) represents only 28%. This corresponds approximately to the proportion of seized individuals in the combined dataset, but is significantly lower than the percentage of seizure events (both datasets) and of the proportion of seized individuals in the UNODC dataset. Part of the explanation for this disproportionate number of tortoise seizures may be found in the two interlinked conditions that all tortoises have been included in the CITES Appendices for some 40 years, and that all tortoise species that are native to the European Union have been trade-regulated for several decades; as such, wildlife and customs inspectors are well aware that any shipment of tortoises must be accompanied by permits, and such shipments warrant detailed inspection. In contrast, freshwater turtles are subject to a wide variety of protective and regulatory statuses varying from nearly unregulated to limited by permit to banned from commercial trade; matching the correct regulatory status to the species is challenging. Moreover, additional measures concerning protection or trade regulation of various species of freshwater turtles have been enacted in recent years, whose implementation by authorities may take some time.

Trade routes and seizures

Numbers of seizures of live tortoises and freshwater turtles by country

By examining seizure records for illegally traded tortoises and freshwater turtles, key points and routes can be identified that connect source, transit and destination countries most affected by this illegal trade. The number of seizures or confiscations occurring in a particular jurisdiction is often closely linked to the level of illegal trade and enforcement effort. The more effective the enforcement measures are, the more it would deter illegal tortoises and turtle trade. Criminal groups tend to avoid places where effective enforcement measures have been implemented, because this increases the risk of detection. For this reason even the most intensive enforcement efforts would sometimes generate no or only a limited number of seizures of illegally traded tortoises or freshwater turtles. On the other extreme, where enforcement is weak, illegal tortoises or freshwater turtle trade might be rampant, but illegal consignments will likely not be detected because enforcement effort is lacking. In this case it is likely that no or only a limited number of seizures would also take place, despite the fact that the problem might be much more severe. Where good enforcement practices are in place, more seizures and confiscations are likely to be made despite the fact that illegal trade in tortoises or turtles might not be that severe, whilst where enforcement effort is weak the problem might be much more severe, but seizures and confiscations are likely to be limited and likely do not reflect the true scale of the problem. The following summary of seizure cases and specimen numbers by country therefore reflects the interplay between illegal trade levels and enforcement effort and effectiveness, and can not be interpreted as any particular country doing a 'good' or 'sub-standard' job.

Based on the UNODC WorldWISE dataset, a total of 63 countries reported confiscating live tortoises and/or freshwater turtles from illegal trade or possession; the combined dataset documented live turtle seizures occurring in a total of 87 countries and jurisdictions. Table 3 presents the ten countries, plus the 28 European Union member countries combined, reporting the largest numbers of seized live tortoise and freshwater turtle specimens. The complete list of all countries for which seizures were reported, and the number of cases and number of specimens on record, is provided in Annex Table 3.

Table 3. Countries seizing the greatest numbers of live tortoises and freshwater turtles, arranged by number of live specimens reported seized during 2000-2015, based on the combined dataset.

	Number of live seizure cases	**Number of live specimens seized**	**Average seizure size (live specimens)**
India	189	> 74,029	401
Hong Kong	88	> 39,805	452
Indonesia	34	35,457	1043
Viet Nam	242	> 24,638	102
Thailand	85	> 19,498	229
European Union [28 Member States combined]	1,099	15,382	14
China	37	14,374	388
Colombia	10	10,122	1012
Bangladesh	25	> 8,392	336
Taiwan	25	8,006	320
United States of America	342	> 7,227	21

A tabulation was made of the largest seizures reported during the period 2000-2015, and these are listed in Table 4. Despite the great diversity of species involved and trade routes reported, it is evident that the great majority of very large seizures occur in Asia; the two very large seizures outside Asia occurred in South America. With the exception of the period 2010-2012, very large seizures have been reported nearly every year. The timing of very large seizures (December to August) may relate to collection seasonality or feasibility with regard to the wet season in much of tropical Asia, hatching season of particular species traded mainly as hatchlings for the pet trade (*Carettochelys insculpta*, *Podocnemis unifilis*), or increased demand for consumption during the cool season in East Asia.

Table 4. Summary of very large seizures (3000 animals, or 3000 Kg, and larger) of live tortoises and freshwater turtles reported world-wide during 2000-2015, based on records in the combined dataset, arranged in chronological order.

Date	Country and location of seizure	Seizure contents:	Place and trade route:
11 Dec. 2001	Hong Kong: Yau Ma Tei public cargo working area	10294 live and dead adult tortoises and freshwater turtles. Alive: 5 *Batagur baska* (I), 1 *Batagur borneoensis* (II), 1798 *Cuora amboinensis* (II), 200 *Cyclemys* sp., 38 *Heosemys annandalii*, 503 *H. grandis*, 524 *H. spinosa*, 15 *Malayemys subtrijuga,* 73 *Manouria emys* (II), 34 *Notochelys platynota*, 1381 *Orlitia borneensis*, 2972 *Siebenrockiella crassicollis*; 2750 unidentified dead specimens	Shipping container; arrived from Singapore, destined for China
11 March 2002	China: off Po Toi island	about 9000 live freshwater turtles, species not reported	Seized from a ship's cargo hold; shipment reportedly arrived as air cargo from Thailand into Hong Kong, shipment was handled in Wan Chai, HK, then transferred to a local vessel, then onto another vessel offshore, with reported destination Huiyang, Guangdong. Thailand issued veterinary certification, but no Hong Kong export documentation was issued.
March 2003	Viet Nam: Hanoi airport	4889 Kg of live freshwater turtles, including *Cuora amboinensis* (II), *Heosemys grandis* (II), *H. annandalii* (II), and *Siebenrockiella crassicollis* (II)	Air cargo shipment originating from Kuala Lumpur, Malaysia, declared as 1800 softshell turtles, shipment was found to contain softshells and other species; most specimens dies and were incinerated
10 July 2003	Hong Kong	10,260 *Cuora amboinensis* (II) and 17 unspecified tortoises (II), shipped alive but died in transit except 4 specimens	Container cargo shipment arriving from Malaysia
27 June 2004	Hong Kong: Kwai Chung terminal	3580 dead turtles, originally shipped alive, died in transit; included unspecified numbers of *Cuora amboinensis* (II), *Heosemys grandis* (II) and *Siebenrockiella crassicollis* (II)	Unclaimed container in port; shipped from Malaysia, destination unknown
14 March 2005	Indonesia: Surabaya, Java	7275 live *Carettochelys insculpta* (II)	Seizure of live freshwater turtles from a ship arriving from Merauke, West Papua, Indonesia; destination not stated
5 April 2005	Viet Nam: Thanh Hoa	about 3000 Kg of live and dead tortoises or freshwater turtles (species not reported), plus 2000 Kg of monitor lizards, snakes, and pangolins	seizure; 400 kg of healthy turtles released in protected areas, remainder sold locally; driver detained for questioning. Shipment reportedly originated from Long An, Viet Nam, and destined for China.

Date	Country and location of seizure	Seizure contents:	Place and trade route:
March 2006	Colombia: Sucre	about 10,000 live freshwater turtles, *Trachemys* sp. (likely the native *T. callirostris*)	Seizures from poachers and traders during concerted enforcement campaign during Easter peak consumption season; 218 persons detained; freshwater turtles captured domestically, released into suitable habitat after seizure
30 June 2006	Hong Kong	7000 live *Amyda cartilaginea* (II)	Shipment originated from Indonesia, destined for Hong Kong
24 Jan. 2007	Viet Nam: Hai Phong port	6000 kg of live freshwater turtles, including *Heosemys annandalii* (II) and *Cyclemys* sp., and 2000 kg of snakes	Live turtles being transferred from truck into container; animals stated to have originated from Thailand and transported by road through Lao PDR; container destined for China
30 Aug. 2007	Hong Kong: Lantau: Siu Ho Wan, Pak Mong	7242 live turtles: 220 *Apalone ferox,* 6020 *Chelydra serpentina*, 1002 *Sternotherus carinatus*; also counterfeit computer discs	Sea port: animals and goods being transferred from truck to speedboat, provenance not stated, destination reportedly China
22 Jan. 2009	India: Allahabad, Uttar Pradesh	3000 live freshwater turtles and/or tortoises, weighing over 5 tonnes, including *Nilssonia gangetica* (I), *Geoclemys hamiltonii* (I) and *Lissemys punctata* (II)	Seizure whlle being transported on truck; thought to have been sourced in Uttar Pradesh, destination not recorded.
7 Feb. 2009	India: Barachatti, Gaya, Bihar	about 3000 Kg of live tortoises or freshwater turtles, species not reported	Seizure of live TFT from a vehicle at a forest checkpoint; animals reportedly originating from Uttar Pradesh, destined for Kolkata
18 July 2013	India: Kolkata airport, West Bengal	10,043 hatchling turtles of different species, including freshwater turtles and sea turtles	Shipment apparently originated from Guangzhou, China, and was destined for Singapore after transit through Kolkata, India.
7 Jan. 2014	Indonesia: West Papua airport	5400 live *Carettochelys insculpta* (II)	Air cargo shipment from West Papua
3 Feb. 2014	India: Bongaon, West Bengal, near Bangladesh border	4980 live *Nilssonia gangetica* (I)	Shipment on truck, in boxes underneath crates of fish, reportedly originating from Visakhapatnam (Andhra Phradesh) and destined for Bangladesh
March 2014	India: Chennai airport	9000 live hatchling turtles, species not reported	Shipment arrived from Kuala Lumpur, Malaysia
24 Dec. 2014	Thailand: Chachoengsao	7171 live unidentified turtles and 64 pythons	Seizure from trader's premises; no information given on provenance or destination
22 Jan. 2015	Indonesia: Denpasar airport, Bali	5284 live *Carettochelys insculpta* (II)	Air cargo shipment from Timika, West Papua,
May 2015	Peru: Ucayali	3000 live *Podocnemis unifilis* (II)	Seizure from private home following tipoff; 350 animals had died, surviving animals brought to refuge and released

Date	Country and location of seizure	Seizure contents:	Place and trade route:
17 June 2015	Philippines: Bataraza, Palawan	4100 live freshwater turtles: 3907 *Siebenrockiella leytensis* (II), 168 *Cyclemys* sp.(II), 25 *Cuora amboinensis* (II)	Seized at warehouse; illegally collected on Palawan, intended for export to China

Provenance of illegally traded live tortoises and freshwater turtles

The countries in which a species is native are logically the countries of origin of specimens collected from the wild, but because a wide variety of turtle species and specimens are held and bred in captivity in a variety of countries, range countries are not necessarily the countries of origin of all traded tortoise and freshwater turtle specimens. In addition, the nature of global transport networks, with regional hubs serving a range of airports and seaports, means that shipments originating in one country do not always travel direct to their destination country, but often arrive via stop-over or transit in a third country. The origin, i.e. the location or country where a shipment of tortoises and/or freshwater turtles was originally collected or produced in captivity, is thus often difficult to establish with certainty; but the provenance, i.e. the last point of departure, of a shipment is normally available from the shipping documentation and unloading records, and is often recorded for seizures of trade shipments. For a very large number of live specimen seizures in the UNODC database, the country of provenance is not available; this includes a substantial number of seizures occurring at private collections and holdings, and other situations that do not represent commercial or personal shipments transported from provenance to destination. Similar considerations and data shortcomings apply to the seizure records in the *TRAFFIC Bulletin* and *On The Trail*. Nevertheless, with due consideration the results from analysing the records for which provenance data is available are informative. Countries of provenance for seizures in the combined dataset are provided in Table 5.

Table 5: Countries of provenance of shipments of live tortoises and freshwater turtles seized during 2000-2015 based on records in the combined dataset and arranged by approximate total number of live specimens seized.

	number of seizures	number of specimens	average number of specimens per seizure
India	88	38,018	432
Indonesia	44	32,166	731
Malaysia	24	31,556	1314
China	32	> 11,034	345
Singapore	26	10,462	402
Colombia	4	10,005	2501
Hong Kong	31	9,882	319
Thailand	48	1383, + 6000 Kg	approx. 150
Viet Nam	34	2767, + 3000 Kg	approx. 170
Philippines	13	5,272	405
Madagascar	21	> 5,017	239
Bangladesh	17	> 3,146	185
Unknown / not recorded	1,066	98,290	92

The straightforward analysis of countries of provenance of seized shipments or holdings clustered international trade shipments from known source countries for (illegal) international trade seized at the country of transit or destination, as well as seizures of domestically sourced specimens, i.e. anti-poaching enforcement activities. Further analysis would be required to tease out these different categories, (successful domestic enforcement of anti-poaching measures, failure to detect poaching and export shipments in the source country followed by seizure during transit or import at another country) and their significance for law enforcement efforts, as well as their seizures based on species protection regulations versus administrative issues with the shipment that led to seizure (for example, non-compliance with IATA regulations, or exceeding permitted shipment weight).

Destinations of illegally traded live tortoises and freshwater turtles

The intended destination of tortoise and freshwater turtle specimens shipped illegally and seized should give indications of the countries attracting shipments of illegally sourced tortoises and freshwater turtles, as it could indicate that a demand exists there for the particular species, or that such countries might be selected as a

transit country for illegal shipments as a result of possible low risk of detection and/or prosecution if detected. Thus, reported destinations of shipments of live tortoises and freshwater turtles in the combined dataset were analysed, and the results presented in Table 6.

Table 6: Reported destination countries for shipments of live tortoises and freshwater turtles seized during 2000-2015, arranged by number of specimens seized, based on records in the combined dataset.

	number of seizures	**number of specimens**	**average number of specimens per seizure**
China	78	53,459	685
Hong Kong	45	14,402	320
Bangladesh	10	11,275	1,127
Malaysia	31	11,059	357
Singapore	7	10,059	1,437
Thailand	31	8,062	260
European union [28 countries]	725	7,297	10
United States	306	6,199	20
India	12	4,270	356
Japan	18	2,175	121
Indonesia	8	2,164	271
Myanmar	7	1,851	264
Russia	1	1,500	1,500
Unknown / not recorded	1,121	155,245	138

Similar to the uncertainty associated with the pathways that illegally traded tortoises and freshwater turtles may be transported along (from country of origin or provenance) before they are detected and seized, the intended destination of live shipments is often unclear or unavailable, and consequently is not recorded for a large number of cases. And logically, 'destination' is not applicable to seizures of illegally held specimens at collections or facilities. Table 6 indicates that large numbers of seized specimens are recorded as destined to the food and pet trade destination markets and transport hubs of countries in East and Southeast Asia. Meanwhile, a significant number of seizure events appears to be associated with relatively small individual shipments into the countries with extensive hobbyist communities, specifically the European Union and United States, and apparently including a significant 'living souvenir' flow of tortoises from northern African countries into the European Union. As with the compilation of countries of provenance, the analysis of reported destination countries of seized live specimens is complicated by combining the numbers for domestic seizures during anti-poaching actions and domestic pet and consumption trade with numbers of seizures of import shipments of exotic tortoise or freshwater turtle specimens intended for the local pet or food trade, as well as seized shipments in transit. Regardless of purpose and ultimate destination of seized shipments, Table 6 provides potentially useful focus for continued and intensified enforcement action.

Overall geographic patterns of seizures of live tortoises and freshwater turtles

Overall, based on where and how often live tortoises and freshwater turtles are seized, at the surface no strong patterns are evident of ilegal tortoise and freshwater turtle trade moving from one country or region to another. Instead, illegally traded live specimens are seized in most countries, originating from across the globe and destined for countries on all continents. This extensive global network of provenance and destination is Illustrated in Figure 3.

Most seizure events occur in the United States and the European Union, and many or most of these seizure cases originate from inbound travel into the US and EU from nearby countries (Mexico and North Africa, respectively, largely matching the voluminous tourist and personal travel flows between these regions). In contrast, as documented in Tables 3 and 4, when evaluating the total numbers of specimens seized, the greatest numbers are seized in Asia, where most of the very large seizures have occurred. While the available data do not provide a complete picture of illegal tortoise and freshwater turtle trade movements around the world, it appears to provide a reasonable approximation based on multiple complementary and parallel data sources; it is likely that records of smaller seizures in Africa, Asia or Central and South America have been missed for the overall dataset, but it is highly unlikely that large seizures in Europe or North America were omitted. With those caveats, the diffuse nature of global routes for illegally traded tortoises and freshwater turtles appears to be real: seized shipments originate from around the world and are destined for much of the

globe, as transit or final destination. The only indication of large-volume illegal trade trunk pathways are for Indian Star Tortoises (*Geochelone elegans*, App.II) and Spotted Pond Turtles (*Geoclemys hamiltonii*, App.I) primarily for the pet trade from South Asia to Southeast Asia, Pig-nosed Turtles (*Carettochelys insculpta*, II) from West Papua destined for East and Southeast Asia, and for Asian Softshell Turtles (*Amyda cartilaginea*, App.II), Asian Box Turtles (*Cuora amboinensis*, II) and accompanying species within and from Southeast Asia to East Asia. There do not appear to be critical trade route bottlenecks where enforcement action can be focused; illegal trade shows every indication of using the full range of transport options by land, sea and air, including the selection of indirect routes between origin and ultimate destination by transiting through one or more (air)ports.

Figure 3A. Map of transport routes, where recorded, of seized live tortoises and freshwater turtles during the period 2000-2015, based on the combined dataset. Where information is available, shipments are mapped from country of origin, to country of provenance before seizure ('exporter'), to country where the seizure occurs (coded as 'transit' in the legend), to intended country of destination ('importer'). Width of lines indicates the quantity of live specimens seized. Image prepared using TradeMapper.

Figure 3B: Zoom-in of the Asian region from Figure 3A.

Figure 3C: Zoom-in of the European region from Figure 3A.

The pattern of large numbers of relatively small seizures in the EU and US, and fewer but larger seizures in Asia, reappears even more strongly when examining the provenance, site of confiscation, and intended destination of live specimens of tortoises and freshwater turtle species included in CITES Appendix I (Fig. 4). Of particular note are the voluminous seizures of Spotted Pond Turtles (*Geoclemys hamiltonii*; see case study on later page) and to a lesser extent Three-Keeled Hill Turtles (*Melanochelys tricarinata*) in transfer between India and Bangladesh, and onwards to Southeast Asia. Also showing in the map is the generally low-volume (see Annex Table 2) smuggling of Egyptian Tortoises (*Testudo kleinmanni*, App. I) from North Africa to Europe and elsewhere.

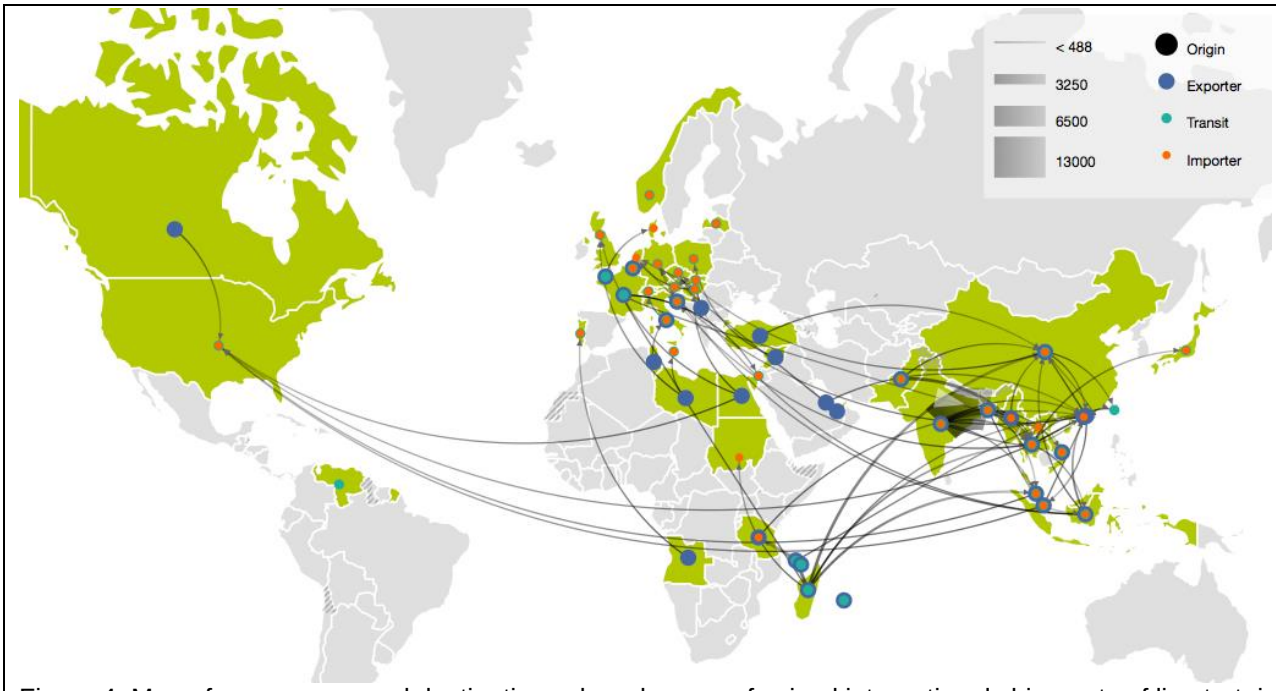


Figure 4. Map of provenance and destination, where known, of seized international shipments of live tortoises and freshwater turtles of species species listed in CITES Appendix I during the years 2000-2015, based on the combined dataset. Country where seizure occurs is listed as 'transit', intended destination is listed as 'importer'. [in cases where the country of destination seized the shipment, the orange 'importer' dot covers most of the blue-green 'transit = seizing country dot].

Place of Seizures

An analysis was made on the UNODC dataset of the types of places where live seizures of tortoises and freshwater turtles were made; results are presented in Table 7:

Table 7: Location types at which seizures of tortoises and freshwater turtles occurred during the period 2000-2015, based on the combined dataset.

	Number of seizure cases	**Number of live specimens seized**
Air traveller luggage	167	51,557
Air cargo (unaccompanied)	29	25,793
Airport (unspecified)	278	9,059
Border crossing (land)	121	5,860
Mail center / mail parcel	30	462
Maritime port (including cargo, container, fishing, and ferry ports)	291	58,523
At sea (high seas and coastal waters)	11	10,262
River boat	3	355
Railways, railway station	24	5,207
Road, road inspection point, bus stop, bus station, public parking area	159	41,283
Markets, shops including pet shops	50	1,158

	Number of seizure cases	Number of live specimens seized
Premises: warehouse	5	5,759
Premises: internet trader	16	257
Premises: zoo or wildlife institution	24	235
Fair, exhibition	6	16
Premises: private	98	1,035
Inland (unspecified)	30	501
In-situ poaching	29	6,063
Miscellaneous and unrecorded	1,190	80,389

The fact that no clear place category was recorded for nearly half of all seizures introduces a large margin of uncertainty to any analysis; but for the records where seizure place was listed, it is noteworthy that the great majority (897 cases, concerning 161,054 live specimens) of seizures occurred at (implied) border locations such as at airports, in maritime ports and at sea, and at land borders. Moreover, seizures at mail centers and railway stations may also concern points of entry into or departure from a country, or shipment from or towards a border crossing. The same is valid for seizures made from vehicles using roads and highways.

In contrast, the number of reported seizures (in the UNODC dataset as well as the combined dataset) at 'domestic' places that are not directly related to points of entry to or departure from a country, such as shops, markets, warehouses, fairs and exhibitions, zoological gardens and animal parks, and private residences, amount to 229 cases involving 8961 live tortoise and freshwater turtle specimens.

Noteworthy also is the relatively low number of reported seizures from poachers caught in the act or soon thereafter; considering that the great majority of illegally traded tortoises and freshwater turtles were initially poached from the wild (as it makes no sense for a legitimate wild offtake program or licensed captive production facility to jeopardize their merchandise by trading or shipping illegally), the low numbers of cases and specimens seized directly from poachers is remarkable: some 6000 poached animals compared to 161,000 illegally imported or exported animals detected and seized at border crossings, or over 46,000 animals detected during domestic road and rail transport. However, reporting of poaching seizures into the UNODC database or press releases may be limited, and the large number of miscellaneous and unspecified seizures contribute to the tentative nature of these proportions.

Relationship between species being illegally traded and country of seizure.

An analysis was run on the combined dataset for seized live specimens to evaluate whether seizures of live tortoises and freshwaer turtles are more likely to occur in countries in which a species is native (i.e., detection and seizure during poaching, domestic transport and holding, or prepartion for export) versus in countries where a species is not native (i.e., transit and destination countries detecting and seizing illegal shipments or illegally held exotic animals). Detailed species identity was available for 2020 seizure cases concerning 216,240 live tortoises and freshwater turtles; the results of this analysis are presented in Table 8.

Table 8: Native or non-native status of tortoises and freshewater turtles in relation to the country where the seizure occurs. Data are restricted to live specimen seizures during the period 2000-2015 for which identification to species level was provided.

	Species is <u>not native</u> to country of seizure		Species is <u>native</u> to country of seizure	
	# specimens	# cases	# specimens	# cases
Appendix I	9,132	139	30,965	112
Appendix II	45,273	616	93,995	931
Appendix II with zero quota from wild for all Range States	381	32	4,144	32
Appendix III	574	16	627	11
Not CITES-listed	13,856	46	17,844	83
Total	69,216	849	147,024	1,171

Table 8 documents that the majority of reported specimens were seized in the country in which the species was native; around two-thirds (68%) of all specimens seized were native, and about 58% of seizure cases concerned native turtle species. These trends hold across different categories of CITES Appendix listings, and are even more extreme when looking at Appendix-I listed species, where 45% of seizure actions occur in range countries while accounting for 77% of seized specimens.

Another trend emerging from Table 8 is that the average size of seizures in range countries (127 live animals) tends to be larger than in non-range countries (82 live animals); again this trend is most extreme among Appendix I species, where seizures in range countries concern on average 276 live animals while seizures of Appendix I species outside of range countries average 66 live animals. Part of the explanation for this trend could perhaps be found in the nature of illegal trade and enforcement action, where large collected quantities of poached animals are held or shipped together in the range countries, and while large seizures occur at points of entry into non-range countries, much enforcement also occurs at retail level in destination countries, where quantities of specimens held in stock tend to be modest, thus reducing the average number of specimens seized per seizure event.

It must be emphasized that this analysis and its results in Table 8 are indicative at best, as determined enforcement effort by a few countries (and associated diligent efforts to report seizure data) may drive the total numbers for particular categories. For example, the total number of non-CITES-listed specimens seized by non-range countries (13,856 live tortoises and freshwater turtles) is greatly driven by two separate, large, multi-species seizures in Hong Kong, accounting for 12,909 live animals.

Case studies: Patterns of seizure of selected high-profile species of tortoises and freshwater turtles in international illegal trade.

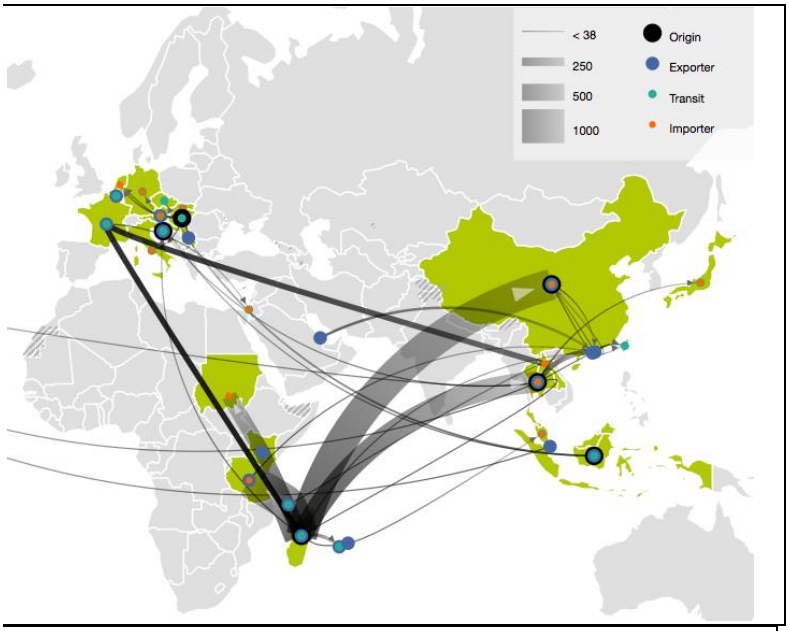
Three high-profile tortoise and freshwater turtle species that are prevalent in international trade seizures provide interesting perspectives on the challenges of detecting and addressing illegal trade, deliberately using all available transport routes to avoid detection and seizure.

Radiated Tortoise, *Astrochelys radiata*
Seizure records 2000-2015

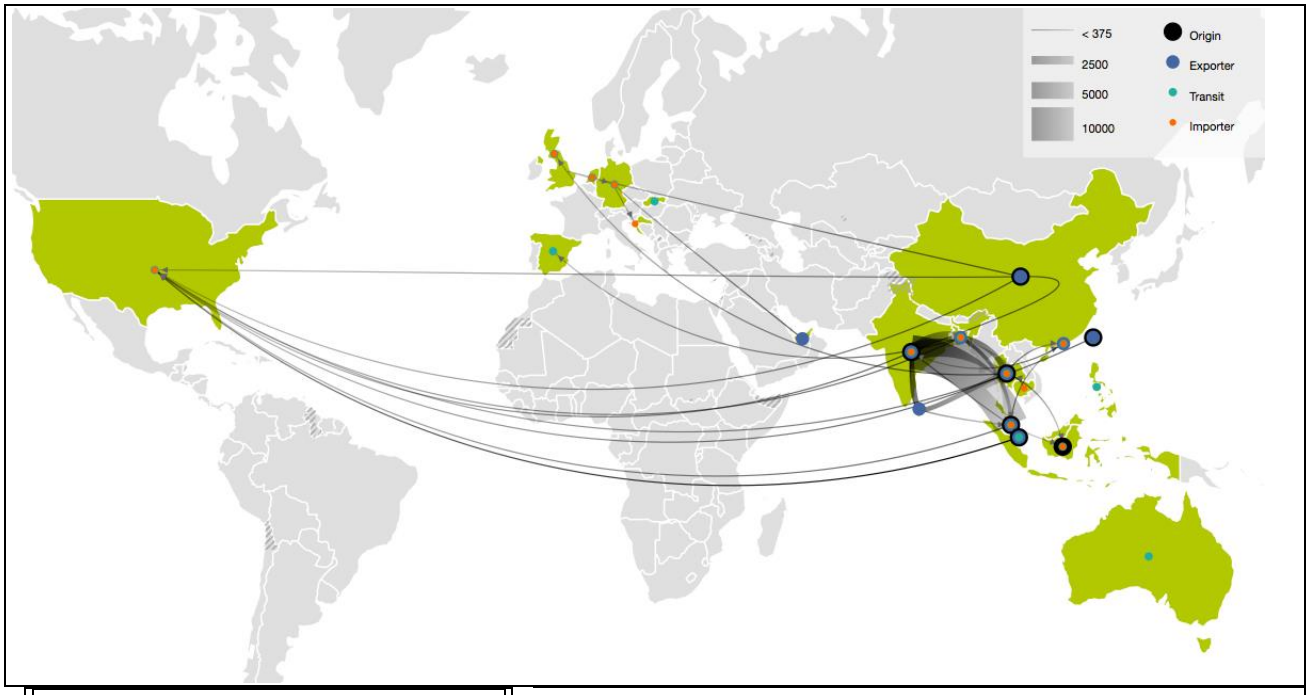
Native to Madagascar

CITES Appendix I

	specimens	cases
Total recorded	7,973	68
Madagascar	3,489	10
Thailand	1,225	8
Comoros	1,014	1
Malaysia	806	3
China	493	2
Hong Kong	277	8
France	172	2
Réunion	127	2
United States	35	8
Other countries	335	24



The Radiated Tortoise, *Astrochelys radiata*, has been listed in CITES Appendix I since 1975. It is endemic to Madagascar, where it is protected by domestic laws and community regulations and taboos. Nevertheless, exploitation of adult tortoises for bushmeat has increased in recent years (O'Brien *et al.,* 2003; Castellano et al., 2013), and so has the collection and trade of juvenile tortoises for the international pet trade. Relatively small seizures of this species have occurred for as long as seizure records are available, but large seizures of over 100 individuals per shipment have only been recorded from 2010 onwards. Medium to large shipments (over 50 live animals) have been seized in Madagascar itself, as well as in China, the Comoros, Czech Republic, France (Paris CDG airport), Réunion, Hong Kong, Malaysia, and Thailand, with seized shipments transiting through, or destined for, Indonesia, Kenya, Mauritius, Qatar, Sudan and Tanzania. The great majority of specimens were seized from the luggage of air travellers, but shipments by boat from Madagascar to the Comoros are on record, as are live specimens being express mailed from and to a wide range of locations. Thus, a diverse range of airline routings and other transport methods are used to move live specimens out of Madagascar, primarily to Asia based on the seizure records, with some animals transported onwards to Europe and North America. In the case of the Radiated Tortoise, the Party to which it is endemic, Madagascar, accounts for 44% of specimens seized at only 15% of seizure actions regarding the species; the other seizures occur at the transit or destination airports, ports and mail centers after illegal shipments have left Madagascar undetected, and in some cases in another, third, country after passing (undetected) through a transit country.



Indian Star Tortoise, *Geochelone elegans* Seizure records 2000-2015		
Native to India, Pakistan, Sri Lanka		
CITES Appendix II; no range state allows exports		
	specimens	cases
Total recorded	34,080	118
India	21,316	67
Pakistan	-	-
Sri Lanka	-	-
Thailand	5,008	13
Singapore	2,400	4
Malaysia	2,265	5
Bangladesh	1,859	4
United States	426	13
Germany	364	1
Hong Kong	314	2
Other countries	128	9

The Indian Star Tortoise, *Geochelone elegans*, has been included in CITES Appendix II since 1975. It inhabits India, Pakistan and Sri Lanka; none of the range countries have permitted or recorded legal exports of commercial quantities of live, wild-collected specimens since 1999. While some captive breeding occurs at zoos and private keepers, few of these are traded internationally; no large-scale commercial captive production facilities have been documented.

The Indian Star Tortoise is the single most frequently seized tortoise or freshwater turtle species during the period 2000-2015. Efforts to collect it from the wild reportedly are focused on central India (D'Cruze et al., 2015), from where they are moved to a wide spread of points of export from the country. Seizures of shipments intended for export have been seized at Mumbai airport, Bengaluru airport (Karnataka), Cochin and Thiruvanathapuram airports (Kerala), and Chennai and Madurai airports (Tamil Nadu). Detained traffickers have confirmed that they selected certain airports to avoid known enforcement efforts at other airports. In addition, large numbers of Indian Star Tortoises have been seized domestically, being transported as railway luggage or cargo, and from vehicles on the national highways. Large seizures have occurred near the land border with Bangladesh, and seizures have been reported from Dhaka airport of specimens hidden in luggage of travelers destined for Southeast Asia. Seizures have been extensive in Hong Kong, Malaysia, Singapore and Thailand, with air shipment routings either originating directly from India or Bangladesh, or after transit through Sri Lanka. Additional seizures of Indian Star Tortoises occurred in Germany, Indonesia, the Netherlands, the Philippines, Slovakia, Spain, the United Kingdom and the United States, in most cases from air travellers arriving from Asia, as well as some from express mail parcels sent from Asia. Noteworthy is that nearly two-thirds of all seized live individuals were detected and seized within India, and over half of all seizure events occurred in India.

Spotted Pond Turtle, *Geoclemys hamiltonii* Seizure records 2000-2015		
Native to Bangladesh, India, and Pakistan		
CITES Appendix I		
	specimens	cases
Total recorded	11,451	70
Bangladesh	3,186	7
India	3,557	30
Pakistan	1,082	5
Hong Kong	1,620	10
Thailand	1,372	11
Singapore	396	2
China	229	3
Other countries	9	2

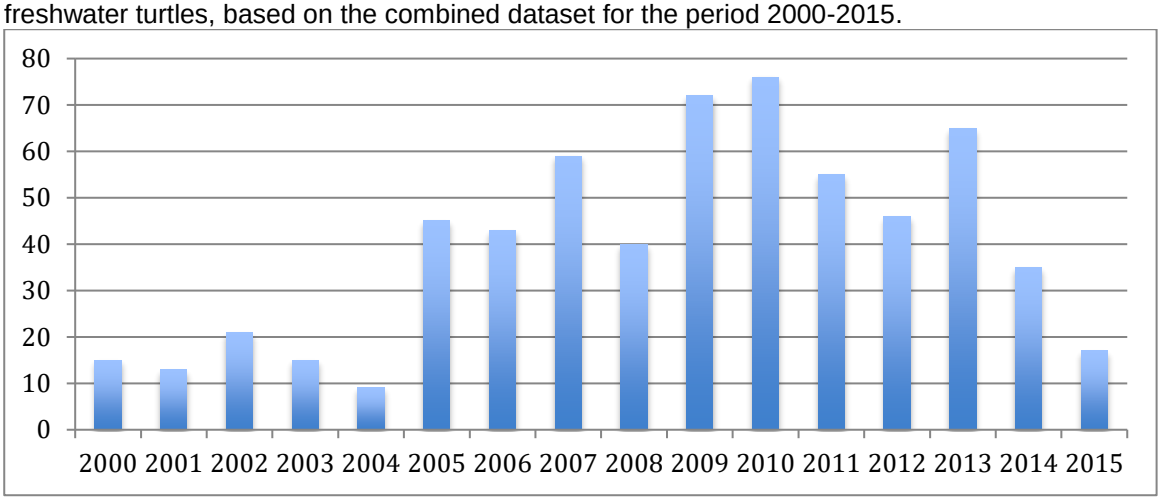
The illegal trade situation of the Spotted Pond Turtle, *Geoclemys hamiltonii*, shows extensive parallels with that of the Indian Star Tortoise. It also was included in CITES in 1975, but in Appendix I, and while pre-convention specimens have been kept and bred in zoos and private collections, these quantities do not account for anything like the numbers of illegally traded animals; legal, declared international trade during 1975-2015 amounted to about 293 live animals, of which 252 were recorded as illegally traded animals being repatriated or transferred to other countries' captive facilities. Very few seizures of the species occurred before 2009, after which the species rapidly became frequent and voluminous in seizures in the range countries Bangladesh, India, and Pakistan, as well as the main destination countries China, Hong Kong, Singapore and Thailand (see also Chng, 2014). Most specimens have been seized from the luggage of air travellers, but seizures have also occurred from cars and trucks using highway networks to move animals, most notably the seizure of over 200 specimens from Pakistan seized and repatriated by China. Similar to seizure patterns for the Indian Star Tortoise, about two-thirds of Spotted Pond Turtle specimens have been seized by the range countries Bangladesh, India and Pakistan, accounting for over half of all seizure actions involving the species since 2000.

5. Findings, part 2: Illegal Trade in Parts and Derivatives of Tortoises and Freshwater Turtles

The initial analysis of seizures of parts and derivatives of tortoises and freshwater turtles was carried out based only on the approximately 1000 records in the UNODC data set for the period 1998-2015. Compilation of the combined dataset, by adding records from the TRAFFIC Bulletin, On The Trail, and other sources added about 60 additional records. It proved not feasible to re-run all analyses of parts and derivatives seizures for this modestly expanded dataset, given the already exceeded intended submission date of the overall report. Species-specific data on tortoise and freshwater turtle parts and derivatives is much more complicated to analyse due to the wide variety of products traded, the different units of items seized, and the large proportion of cases that are reported only to family level.

Annual level of reported seizures of Parts and Derivatives involving Tortoises and Freshwater Turtles

Figure 5. Number of reported seizure cases worldwide concerning parts and derivatives of tortoises and freshwater turtles, based on the combined dataset for the period 2000-2015.



The number of seizure cases of parts and derivatives is graphed in Figure 5. The figure indicates the significantly improved recording of seizures (or at least their incorporation into the UNODC dataset) following establishment of the EU-TWIX database in 2005; assuming that record submissions for 2014 and 2015 had not been completed at the time the dataset was made available for analysis, it appears that parts and derivatives seizures are fairly stable at between 40 and 76 records per year world-wide.

Species of Tortoises and Freshwater Turtles reported seized as Parts and Derivatives

As regards the specific tortoise and freshwater turtle species involved in seizures of parts and derivatives, it should be recognized that substantial uncertainty surrounds some of the reported identifications in the data set, as at least some of the identifications make little biological sense[13]. Thus, parts and derivatives are analysed at family level only. A summary of the data is presented in Table 9. While not necessarily quantatively comparable or accurate, the sum total of parts and derivatives seized, 2113 kg plus 78,818 items, gives a remarkable perspective on the scope and extent of the trade in parts and derivatives. At a minimum, one shell, one skeleton, or one plastron OR carapace translates to one individual animal; the quantities for these in Table 9 exceed 11,000 specimens. The total quantities of parts and derivatives, in comparison with the 54,669 live tortoises and freshwater turtles recorded as seized in the UNODC dataset over the same period, hints at the trade in parts and derivatives affecting comparable numbers to the live trade. Considering the highly uneven distribution of recorded seizures of parts and derivatives (see Table 10 and associated discussion) and the relatively small quantities of turtle parts and products recorded in the UNEP-WCMC trade database, it is likely that much of this trade goes unreported and undetected, and thus any illegal component is unlikely to be seized and recorded.

[13] *Examples of questionable identifications include records of carapaces of the North American Wood Turtle (Glyptemys insculpta) reportedly brought in from Angola to Portugal, or a kilogram of meat of the South African endemic small Geometric Tortoise (Psammobates geometricus) arriving from Guinea-Bissau.*

Table 9. Number of seizure cases and summary of seized parts and derivatives of tortoises and freshwater turtles by family, based on records for the period 1998-2015 in the UNODC WorldWISE dataset (as of 30 October 2015).

	Number of cases	**Summary of seized specimens**
Testudinidae Tortoises Appendix I & II	627 cases	Derivatives: 23.5 kg + 23,453 items; medicinal preparations: 13.6 kg + 5,082 items; powder: 3.54 kg + 8 items; carapaces: 5.4 kg + 758 items; 25 shells; 4 skeletons; 3 skulls; 16 shell products; 35 bodies; 510 scientific or museum specimens; 8 trophies; 11 carvings; 7 claws; meat: 7.8 kg + 8 items; eggs: 1 kg + 72 items; soup: 1 kg + 33 items; 15 dead arrivals; 1429 unspecified items.
Geoemydidae Eurasian freshwater turtles and neotropical wood turtles App. I, II, III & not listed	168 cases	Derivatives: 1.2 kg + 1783 items; medicinal preparations: 10 kg + 16,794 items; 8.2 kg powder; shells, carapaces plastrons, or skeletons: 3.91 kg + 10,384 items; 54 bodies; 11,466 unspecified items.
Emydidae Western Hemisphere freshwater turtles plus Eurasian *Emys* App. I, II, III & not listed	86 cases	
Trionychidae Soft-shelled turtles App. I, II, III & not listed	34 cases	Derivatives: 1.5 kg; medicinal preparations: 2 kg + 1416 items; 3 kg meat; 10 bodies; 44 shells, skeletons, skulls, or carapaces; 3500 unspecified items
Podocnemididae Side-necked river turtles. App. II.	32 cases	11 carapaces, 4 skulls, 1 shell product, 3 bodies, 2 kg meat, 243 eggs, 2 scientific specimens, 2 trophies.
Dermatemydidae Central american river turtle. App. II.	21 cases	2 bodies, 7 shells or carapaces, 50 eggs, 11 kg meat
Chelydridae Snapping turtles App. III & not listed	6 cases	4 bodies, 1 shell, 14 dead arrivals
Chelidae Australian-South American side-necked turtles. App. I, II & not listed	3 cases	3 carapaces, 3 shell products
Carettochelyidae Pig-nosed turtle App. II.	2 cases	9 dead arrivals of live-shipped specimens
Platysternidae Big-headed turtle App II; App.I since 2013	1 case	1 unspecified

Countries seizing Parts and Derivatives

Available UNODC data on seizures of tortoise and freshwater turtle parts and derivatives document that distribution of seizures by country is significantly different from the pattern of live seizures made. Only 31 countries were involved in the 971 cases in the analysis; the twelve countries reporting the greatest number of seizures are listed in Table 10.

Table 10. Seizures of tortoise and freshwater turtle parts and derivatives, by country, arranged by the number of seizure cases, based on records for the period 1998-2015 in the UNODC WorldWISE dataset (as of 30 October 2015).

	# cases	**Kg**	**# items**
New Zealand	372	48	28,332
United States	365	55	17,314
European Union [28 States]	190		
Germany	33	1	125
Portugal	29	2	55

Netherlands	24	1	289
Italy	20	1	140
Spain	19		22
United Arab Emirates	16		662
Belgium	15	1	5,024
France	13		17
China	12	1	12,187
India	7		3,735

Noteworthy are the numbers of seizures made by New Zealand and the United States: their 372 and 365 respective reported seizures together represent 75% of the total number of reported seizure cases of tortoise and freshwater turtle parts and derivatives. In consultation with the MA of New Zealand (in litt, 11 Feb 2016) it was established that their remarkably high reported quantities of seized parts and derivatives were the result of a combination of factors, being a) New Zealand customs carrying out very thorough luggage checks of persons entering the country, b) the absence of 'personal exemption' regulations under New Zealand law leading to a very high number of instances at which often small quantities, intended for personal use, are seized; and c) comprehensive record-keeping and reporting of seizures into the UNODC database. This being the case, and considering that the human population size and their international travel movements, as well as gross trade volumes, are not exceptional in New Zealand's case, it suggests that many other countries may detect only a small fraction of the total quantities of parts and derivatives of tortoises and freshwater turtles entering their jurisdiction.

Provenance of seized Parts and Derivatives of Tortoises and Freshwater Turtles

Regarding countries of provenance of seized shipments, Table 11 documents that for the records where provenance information was available, Asian countries were most frequently recorded. This trend is borne out by mapping the quantities of seized parts and derivatives along the trade routes used, illustrated in Figure 6. The substantial number of cases lacking data on the country of provenance of seized tortoise and freshwater turtle parts and derivatives complicates the recognition of major source countries or other patterns. Nevertheless, the great number of seizures of item arriving as shipments from China is remarkable; closer examination of the data indicates that the great majority of these cases (293 of 356) concerns derivatives and medicinal parts or products.

Table 11. Countries and regions of provenance of seized shipments of tortoise and freshwater turtle parts and derivativess, ranked by number of seizures, based on records for the period 1998-2015 in the UNODC WorldWISE dataset (as of 30 October 2015).

	# of cases	Kg	# items
China	356	53.6	24,118
[not recorded]	82	1.53	16,968
Hong Kong	56	16.3	4,456
Viet Nam	44	5.8	8,693
Mexico	39	1.0	46
Peru	30		234
United States	27		12,236
Belize	17	12.0	55
Indonesia	14	2,000.0	10,053
Lao PDR	14	2.0	14
Taiwan	12	4.8	248
Malaysia	12	1.0	72
Thailand	12		21

Another notable feature of the Parts and derivatives seizure data is the relatively large number of countries from which a few, and usually relatively small-sized, shipments are seized: most countries of Central and South America, the Caribbean, Africa, and Asia are recorded as countries of provenance in Figure 6. While the UNODC database extract did not provide much information on the circumstances of these seizures, their predominant occurrence at international airports and relatively small quantities (a few items, or a kilogram or

less of meat or other item) indicates that a large proportion of these seizures likely concern bushmeat or other items for personal consumption brough along on travel, or souvenirs and other items involving turtle parts.

Figure 6. Map of routes by which parts and derivatives of tortoises and freshwater turtles arrived in the country of seizure (represented in this map as orange dots, labeled 'importer') as documented by data from the UNODC WorldWISE dataset for the period 1998-2015 (up to 30 October 2015). Image prepared using TradeMapper.

Under general commercial practices and regulations it can be expected that the country of production or manufacture is documented on the retail packaging of medicinal products and other prepared and processed derivatives. Thus, the UNODC dataset on parts and derivatives was analysed to examine declared origin of seized parts and derivatives. This identified that no country of origin was listed for any seized derivative, while country of origin was only listed for 69 of 230 seized shipments of medicinal parts or products. These were composed of 55 seizures of medicinal products (7,820 items) originating in China (and seized from shipments arriving from China, Hong Kong SAR, Taiwan and Viet Nam), 10 seizures of medicinal products originating from Viet Nam (1,456 items), and one case each of products originating from Hong Kong, Taiwan, Malaysia, and the Philippines. This indicates that tortoise and/or freshwater turtle-based medicinal preparations are produced primarily in mainland China and in Viet Nam.

Seizures of parts and derivatives reportedly occured largely at inward border checkpoints, and the distribution of countries of destination for seizure cases largely conforms to the distribution of countries making seizures. In other words, those countries making the most diligent inspection, enforcement and reporting efforts score highest as destination countries for illegal tortoise and freshwater turtle parts and derivatives, as exemplified by the highest-ranked destination countries being New Zealand and the United States. Even so, the observation that a large part of New Zealand's seizures concern products arriving from the United States suggests that only a part of the incoming shipments into the US, and few if any outgoing shipments of illegally traded parts and derivatives, are detected at the points of import and export.

6. Findings, Part 3: Insights into the illegal trade of tortoises and freshwater turtles.

Seizures of illegally traded live tortoises and freshwater turtles and their parts and derivatives broadly conform to the various types of known trade in these species:

- The large-volume trade of homogenous-sized tortoises and freshwater turtles produced in captive or ranching facilities, either as animals raised to marketable size for the consumption trade within Asia, or as hatchlings (from the United States and increasingly from Asia) for the global pet trade, or to stock Asian aquaculture rearing operations. Other than occasional problems with veterinary certification or invasive species issues, this trade segment appears not to be associated with criminally illegal tortoise and freshwater turtle trade.
- The large-volume trade of wild-collected adult tortoises and/or freshwater turtles from tropical Asia, North America and Africa to East Asia for the consumption trade and medicinal use, as live specimens as well as parts and derivatives; while legal to a large extent, a significant illegal component occurs in the form of illegally acquired protected species being mixed in with legal

specimens, animals being collected from protected areas or during closed seasons, quotas being exceeded, or shipments being traded with incomplete permits or documentation. In particular, it appears that a very large volume of tortoise and freshwater turtle shells (whole, plastrons, carapaces), bones and dried cartilage is traded for the medicinal trade with minimal adherence to CITES or other declaration and permitting requirements.

- The diffuse global trade of 'unusual' pet tortoises and freshwater turtles, wild-collected or captive-produced, supplied from numerous countries to many countries, but with demand centered on the European Union, United States, east and Southeast Asia. Much of this trade is legal, but significant illegal trade issues occur in the forms of protected species being traded, wild-caught animals being claimed to have been captive-bred, or animals being collected in breach of local regulations (protected areas, closed seasons, size limits, etc.) and being transported without export or import permits, veterinary certification or other documentation.
- The trade in packaged medicinal preparations, derived from tortoises and/or freshwater turtles originating from wild-collection or captive production systems. Its legal international trade component is little documented, but this product type numerically dominates the global seizures of tortoise and freshwater turtle parts and derivatives, indicating that its international trade is widespread and warrants attention with regard to effective permitting, reporting and oversight.
- The entirely illegal trade in attractive yet domestically and/or internationally protected tortoise and freshwater turtle species that are in demand as pets. Taking advantage of poverty, imperfect governance and limited enforcement capacity in some countries of origin, and imperfect legislation that allows no scope for enforcement of CITES regulations after the act of importation into the country, apparently highly organized networks have been established to collect Radiated Tortoises in Madagascar and Indian Star Tortoises and Spotted Pond Turtles from the wild in India, Pakistan and Bangladesh, and transport these by air or sea to major Southeast Asian cities and beyond to the rest of Asia and occasionally to Europe or North America.

Convergence: other species and commodities associated with illegal tortoise and freshwater turtle trade shipments.

Understanding whether illegal trade in tortoises or freshwater turtles is a species-specific trade segment or is part of a broader trade in illicit goods requires information on the other items that are part of a seized shipment containing tortoises or freshwater turtles. Unfortunately this information was not available in the data extract from the UNODC database that was made available, and only a part of the records from the *TRAFFIC Bulletin*, *On The Trail* and media and other seizure reports provided useable information about associated illicitly traded goods alongside tortoises and freshwater turtles. This information is summarized in Table 12. In the majority of cases where information is available on the total contents of a seized shipment, illegal trade of tortoises and/or freshwater turtles is primarily about these animals, and the entire shipment consists of one or several species of tortoise and/or freshwater turtle. In other cases, tortoises and/or freshwater turtles are shipped alongside other species or other products, as mixed shipments of various illegal items, or when using legally traded items as a means of concealment (Table 12; see also next section).

Table 12. Associations of seized live tortoises and freshwater turtles with other species or goods that are part of the same seized shipment.

	Seizure cases	**Number of live TFT involved**
Turtles only in shipment	388 (61%)	159,203 (77%)
Turtles with other reptiles or amphibians	97 (15%)	19,603 (9.5%)
Turtles with other animal wildlife (mammals, birds, reptiles, amphibians, fish, invertebrates)	137 (22%)	19,618 (9.5%)
Turtles with non-wildlife goods (may include other wildlife)	15 (4%)	8,946 (4.3%)
Total cases with association data	634 (100%)	207,370 (100%)

Species and goods associated with illegal tortoise and freshwater turtle consignments usually relate to the source area or purpose for which the tortoise and/or freshwater turtles are shipped: tortoises and/or freshwater turtles collected from the wild are often shipped alongside other wildlife collected in the same area (such as snakes or pangolins), tortoises and/or freshwater turtles selected for the pet trade tend to be shipped with other pet species such as lizards, frogs, or aquarium fish, while tortoises and freshwater turtles destined for the food trade can occur in mixed shipments accompanied by pangolins, rodents, hedgehogs, birds, snakes,

monitor lizards or other species. Occasionally tortoises and/or freshwater turtles are transported as part of shipments that also contain non-wildlife products: instances of tortoises or freshwater turtles being shipped with restricted or counterfeit goods, or merchandise shipped clandestinely to avoid taxes and duties, have been documented. The 15 seizure events involving non-wildlife goods seized relate to ten enforcement actions (three of which involved multiple tortoise and freshwater turtle species), of which four actions also yielded cannabis, ketamine or other controlled substances, three involved cameras, cell phones and/or counterfeit computer discs, two also involved seizure of firearms and ammunition (one also involving controlled chemicals), and one each involved alcohol and cigarettes.

Methods of Concealment

Methods of concealment of illegal tortoise and freshwater turtle shipments fall into two distinct categories:

1. Concealment that the shipment consists of tortoises and/or freshwater turtles, and

2. Concealment that a (declared or acknowledged) tortoise and/or freshwater turtle shipment includes specimens subject to additional trade limitations or restrictions.

Numerically, the first category includes the great majority of reported cases and concerns the greatest total number of specimens.

Commercial shipments of processed tortoise and freshwater turtle parts, such as carapaces, plastra/plastrons, mixed and broken bones, dried cartilage strips, or chilled or frozen meat, any unrestricted commodity resembling the actual parts being shipped may be claimed to be traded.

A particularly challenging situation exists with extracts and medicinal preparations containing tortoises and/or freshwater turtles, where the only apparent source of information on species composition would be the packaging label. At the present, DNA analysis of such preparations appears to be the only way to evaluate species content with some degree of certainty.

Traders shipping tortoise or freshwater turtle species or specimens that are subject to species-specific trade restrictions, often conceal illegal animals by 'hiding them in plain sight', in the sense that they are mixed in with shipments of similar-looking freshwater turtles that are legal to trade, or the entire shipment is declared on the accompanying documentation to contain look-alike Species A when in fact they are Species B (shipments of regulated freshwater turtle species declared as *Mauremys sinensis* [CITES III] or *Trachemys scripta* [not CITES-listed] are on record). Another option is to arrange for correct export documentation for captive-bred specimens, when in fact the shipment consists of wild-collected specimens (see review in Outhwaite et al., 2014, CITES AC27 Doc.17 (Rev.1) Annex 1[14]). In such cases, traffickers count on the high likelihood that any inspecting officers would not be able to differentiate Species A from Species B, or captive-bred from wild-collected tortoises or freshwater turtles, at least not in the short time window available for inspection and determining just cause for any decision to seize a shipment.

Actors in illegal turtle trade: Collectors, Organizers and Couriers.

Few detailed descriptions are available of the structure of illegal turtle trade and its links to legal trade in tortoises and freshwater turtles and other species.

Shepherd (2000) presented a case study of a turtle trade structure in Sumatra in the late 1990s, documenting the transfer of wild-collected tortoises and freshwater turtles from independent, loosely organised groups of field collectors, through village middlemen to several large traders in the main cities. This trade chain focused on wild-collected adult tortoises and freshwater turtles to supply the consumption trade in East Asia; small juvenile tortoises and freshwater turtles that had minimal value in the consumption trade were frequently diverted into the pet trade instead (where value is generally per individual animal regardless of size). These traders accumulated large shipments (several thousand of live tortoises and freshwater turtles, amounting to several tonnes weight) which were shipped regularly (usually once a week) by air freight to importers in Hong Kong and other destinations in East Asia. This was at a time when few Asian turtle species were listed in the CITES Appendices, and shipments were generally shipped without detailed inspection or wildlife permits. Field collectors were unaware of, or at least indifferent to, the protective status of a few turtle species, and any turtle encountered was collected and entered into commercial trade. Wholesellers, middlemen, exporters and

[14] http://cites.org/sites/default/files/eng/com/ac/27/E-AC27-17.pdf

shipping agents likewise cared little about protective status of one versus another turtle species. Collectors and traders did consider different prices per turtle and different rates of survival during transit and shipment. For example, softshell turtles (mainly *Amyda cartilaginea* and *Dogania subplana*) commanded higher prices and die much more quickly after capture than tortoises or hardshelled freshwater turtles, and thus were usually shipped separately by air freight. Thus, mixed-species shipments were commonly observed within the trade, with species usually sorted in the destination markets. The most illustrative observation of such a mixed shipment was the seizure of some 9300 live tortoises and freshwater turtles in Hong Kong, which comprised 12 species including CITES Appendix I-listed *Batagur baska* (now *B. affinis*) and Appendix II-listed *Callagur* (now *Batagur*) *borneoensis*, *Cuora amboinensis*, and *Manouria emys*, as well as (then) non-listed *Cyclemys* sp., *Heosemys annandalii*, *H. grandis*, *H. spinosa*, *Malayemys* sp., *Notochelys platynota*, *Orlitia borneensis*, and *Siebenrockiella crassicollis*. Other large mixed-species shipments destined for East Asian consumption trade have been detected and seized as well (see Doc CoP15 Inf. 22, page 26).

D'Cruze and colleagues (2015) built upon earlier analyses (Shepherd et al., 2004; Anand et al, 2005) of trade in the Indian Star Tortoise (*Geochelone elegans*), a CITES Appendix II-listed species that is subject to possession and trade bans in its main range country India and whose trade from the other range countries (Pakistan and Sri Lanka) is also strongly restricted. Nevertheless, it has been widely offered for sale, mainly in southeast Asia but also elsewhere, and while modest captive breeding of pre-convention animals occurs with hobbyists, the observed trade volumes greatly exceed known captive breeding. The largely illegal scope of its international trade is not only confirmed by the fact that it is the single most numerously seized turtle (9,638 specimens in 42 seizures recorded in the UNODC wildlife seizures database; 34,080 specimens in 118 seizures in the combined dataset), but also by the detailed description of organized collecting and trade networks in India and beyond (D'Cruze et al., 2015). Rural villagers collect mainly juvenile Star Tortoises from the wild, which are then traded to a regional trade hub in Andhra Pradesh, from where they are transported by road or rail to export locations and domestic retail trade hubs. Exports were documented from Kolkata (Calcutta) by sea cargo to Malaysia, Singapore and Thailand, and by air from Begaluru (Bangalore), Chennai (Madras), Kolkata and Mumbai (Bombay) to Bangkok, Thaiand, or Kuala Lumpur, Malaysia, as well as by land into Bangladesh followed by air transport from Dhaka to Bangkok. From Bangkok, onward transports were documented to Hong Kong, Japan, Taiwan and other destinations. These trade routes are clearly reflected in the UNODC wildlife seizures database and other sources, which documents substantial seizures of Indian Star Tortoises in India, Malaysia, Singapore, Thailand, Germany and the United States (D'Cruze et al., 2015; Doc CoP15 Inf. 22 Annex C; see also case study in preceding pages).

Based on information associated with seizures, media reports and other available information sources, it is apparent that a large number, possibly the majority, of turtle seizure cases concern small-scale, casual smuggling cases of private persons traveling between countries and bringing a locally purchased pet or souvenir home with them. While such cases collectively add up to significant numbers of illegally moved animals, they represent arguably less of a priority for additional investigation and enforcement. Greater focus should be placed on addressing the larger-volume, apparently professionally organized smuggling pipelines of wild-caught adult tortoises and freshwater turtles from Asia, Africa and possibly elsewhere to the consumption trade hubs of East Asia (southern China, Hong Kong, Taiwan), and the large-scale illegal trade in protected turtle species as pets from Madagascar, South and Central Asia and New Guinea to the pet trade hubs of Bangkok, Kuala Lumpur, Jakarta, Hong Kong, Guangzhou and beyond. Indications are that these trades are coordinated by persons who operate remotely, and arrange shipments through third-party freight forwarding agents or arrange for couriers to move suitcases of tortoises and/or freshwater turtles from airport to airport. When detected, couriers are frequently arrested and prosecuted, but rarely does the investigative trail appear to lead to prosecution of the key trade organizers.

The role of the Internet in illegal turtle trade

The Internet has in recent decades become the primary medium of communication and information exchange. In the context of turtle trade, company websites, hobbyist fora [forums] and listserves, Facebook Groups and other such platforms offer extensive opportunities to offer or seek animals for sale. Predictably, some of the specimens on offer are illegal or in the 'grey area where legal status is difficult to ascertain. Internet thus has become a primary means by which to arrange trade, or at least check stock available at 'brick and mortar' stores. In that respect, internet is the logical successor to earlier mimeographed or photocopied pricelists mailed out in envelopes, and small ads in the back of specialist magazines and newsletters. As with earlier pricelists, not every mention of a species is based on actual specimens in hand available for sale; inclusion in offer lists was sometimes used to gauge interest from potential buyers, and there is no reason to assume that all internet trade offers are genuine (at times, internet offers of rare turtle species have more in common with emailed offers to share in lottery winnings or unclaimed inheritances than with genuine animal trade). The astounding abilities of the internet to search for items, and display search results from around the world within

seconds, has certainly made it easier to source unusual or rare animals of sometimes doubtful legality. Daily news or publication alerts can be set for particular species or key words, alerting interested persons automatically when a particularly rare species is being offered anywhere in the world. For traders, the ability to refresh web pages and delete ads or posts from bulletin boards reduces the risk that trade offers will be used as proof of illegal acts, compared to traditional offers distributed on printed paper. Moreover, steadily improved airline and other transportation networks, global networks of overnight parcel and courier services, and reduced inspection rates of outgoing and incoming parcels (partly due to increased overall parcel volumes, partly due to free-trade agreements) have made shipping tortoises and freshwater turtles and other species relatively easy, cheap, efficient, and with a low risk of detection of illegal transits.

The same search and communication qualities that make the internet an effective tool to offer, source and trade (illegal) turtle specimens can equally assist wildlife authorities to monitor trade and act to enforce laws and regulations where necessary. Alerts when certain species of interest are offered for sale are just as effective to inform enforcement networks. Illegal trade still takes the form of a financial transaction between two entities and the transfer of physical assets between two entities. Illegal turtle trade is not fundamentally changed by the internet; it is facilitated by it, just as much as enforcement should be and is facilitated by it. While the available data are too scattered and incomplete to allow reliable analysis at this time, it is evident from particularly the seizure and prosecution compilations in the *Traffic Bulletin* and *On The Trail* that internet traders are investigated, their premises have been searched, and where appropriate people have been indicted, tried and convicted of illegal trade in tortoises and freshwater turtles via the internet. Nevertheless, given the great volume of information on the internet, the large number of internet-mediated trade transactions, and the sometimes unclear legality of transactions where the seller and buyer are located in different jurisdictions (and legality of shipping methods employed), further consideration is warranted by key stakeholders, including Internet Service Providers, owners and moderators of internet community platforms, and wildlife regulatory authorities. Amazon and Ebay regulations prohibit vendors from offering items concerning protected species, and Facebook is working with TRAFFIC to eliminate illegal trade offers, but other platforms exist and some can easily offer a new contact venue for the semi-legal and illegal wildlife trade, alongside marketplaces for pharmaceuticals, narcotics, pirated software, music and video, and more.

7. Potential constraints to enforcement action to combat illegal turtle trade

Ability to identify specimens in trade and determine their status under protective legislation

Accurate species identification is fundamental for determining the legality and permit requirements for tortoises and freshwater turtles in trade or private possession. There is no doubt that live tortoises and freshwater turtles are often difficult to identify accurately, particularly in the case of similar and look-alike species. A wide range of identification materials exists for live tortoises and freshwater turtles, and much is available in digital format; this is reviewed in detail in the companion study commissioned under Decision 16.122 paragraph b). The same study concluded that parts and derivatives of turtles can be very difficult to identify, few identification materials are known to beavailable, and laboratory genetic analysis may be required for identification of some specimens.

Experience has learnt that even with the best identification materials at hand, some specimens are very difficult to identify, and a second opinion is often necessary, usually based on pictures of the specimens concerned shared via email or mobile phone image. Many inspecting officers can rely on extensive support and expertise from individuals within their national Scientific, Management and Enforcement Authorities. In other cases, officers may decide to reach out by contacting subject-matter experts at universities, zoos, rescue centers or other institutions. The IUCN SSC Tortoise and Freshwater Turtle Specialist Group membership is always willing and almost always able to assist with identification. In cases where there is any doubt about a specimen's identification, enforcement officers should not hesitate to seek outside expertise.

A possible approach to connect law enforcement officers to outside species identification expertise without compromising confidentiality might be to develop a confidential identification assistance network. Enforcement officers can post pictures and tag them with group or descriptive label ("turtle", "possible turtle shell ornament"). The system would then send a message (email, sms) to one or more previously-vetted and approved specialists in the species or product category, alerting them to log in and assist with identification. Such a system could provide reliable identifications within minutes or hours (taking into account time zones and other practicalities) and assure confidentiality and greatest possible quality of evidence to be collected. Obviously such a system should not be developed for just tortoises and freshwater turtles, but could work for many wildlife species in trade, live and possibly parts and derivatives as well. Development of such a network could be led by an existing secure enforcement network such as INTERPOL or the World Customs Organization's CENComm Environet, by adapting their existing facilities to establish a closed user group for tortoise and

freshwater turtle issues or similar mecahnism. Alternatively, a network for specialized identification assistance could be developed by an existing network of species specialists (such as IUCN's Species Survival Commission) although this would require significant input on the technical end to guarantee a secure communications network.

Another significant identification challenge is posed by the trade of specimens of species that have a zero quota for wild-collected specimens or other restriction/prohibition on trade in specimens from the wild, but which are known to be produced in captive production facilities. Ongoing processes in CITES are evaluating the regulatory framework for trade in captive-bred specimens following concerns that wild-collected specimens may be claimed to have originated from captive production facilities and have presented suggestions for improvement (see e.g. documents AC28 Doc.13.1[15], AC 28 Doc.13.2[16], SC66 Doc.41.1[17] and SC66 Doc.41.2[18]). Concerns about wild-collected specimens being traded as captive-bred have been documented for a range of tortoises and freshwater turtles (Outhwaite et al., 2014) and while guidance to differentiate wild from captive-bred specimens is available for some species (Benyr, 2014;), determining wild versus captive origin remains challenging and continues to offer an opportunity for illegal trade in species that are in high demand as pets and remain challenging to breed in captivity in great numbers, such as the Palawan Pond Turtle (*Siebenrockiella leytensis*), the Roti and Timor Snakenecked turtles (*Chelodina mccordi mccordi* and *C. m. timorensis*, respectively), and Pancake Tortoises (*Malacochersus tornieri*). Further work on both the evaluation and verification of captive production facilities for tortoises and freshwater turtles is needed, as is further guidance and development of additional tools to differentiate captive-bred from wild-collected specimens.

Placement of seized specimens

Seizure of illegally traded turtle specimens obliges the confiscating authority to adequately maintain and dispose of the specimens. While this is manageable for one or a few specimens in countries with adequate rescue and rehabilitation facilities and protocols, the challenge of dealing with hundreds or thousdands of live, often weakened, sick or injured, tortoises or freshwater turtles at short notice can be almost insurmountable. The perception exists that on occasion, wildlife or customs inspectors choose to disregard possible illegal aspects of live turtle (or other wildlife) trade and allow a questionable shipment to pass, rather than facing the obligation to deal with a large quantity of live animals. Thus, the availability of adequate rescue facilities to hold seized animals, and adequate guidelines and protocols to move the animals onwards, are critical to effective and comprehensive enforcement.

Guidelines for the disposal of seized live specimens of CITES-listed species are provided in the Annex of Res. Conf. 10.7 (Rev. CoP15)[19], describing the options, conditions and constraints for repatriation of the animals to their country of origin, long-term placement in captivity, sale, and/or humane killing. Similarly, IUCN is currently updating its guidelines for the placement of confiscated specimens[20], and these may be consulted as well.

With regard to tortoises and freshwater turtles, it is of particular importance to realize that many turtle species are in steep decline in the wild and that active assurance colonies are managed in captivity through networks of zoos, NGOs and dedicated private individuals. In keeping with CITES Notification 2011/029[21] on the disposal of seized live tortoise and turtle specimens, every reasonable effort should be made to contact studbook keepers or other key persons for the species to facilitate repatriation, reintroduction or suitable long-term captivity for seized tortoises and freshwater turtles.

Availability of rescue and holding facilities varies by country and species. In most cases, officers are well aware of what facilities are locally available. In addition, facilities may be available elsewhere, and logistic support and necessary funding may be available from external sources to move seized specimens to suitable facilities or reintroduction sites in the wild. The Species Survival Network maintains a global database of rescue

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[15] https://cites.org/sites/default/files/eng/com/ac/28/E-AC28-13-01.pdf

[16] https://cites.org/sites/default/files/eng/com/ac/28/E-AC28-13-02.pdf

[17] https://cites.org/sites/default/files/eng/com/sc/66/E-SC66-41-01x.pdf

[18] https://cites.org/sites/default/files/eng/com/sc/66/E-SC66-41-02.pdf

[19] https://cites.org/eng/res/10/10-07R15.php *; likely to be revised at CoP17, as indicated by Document SC66 Doc.32.2,* https://cites.org/sites/default/files/eng/com/sc/66/E-SC66-32-02x.pdf

[20] https://portals.iucn.org/library/efiles/edocs/2002-004.pdf

[21] https://cites.org/sites/default/files/eng/notif/2011/E029.pdf

facilities[22], which can be accessed online, and additional directories of such facilities may be available within closed enforcement information networks.

Perceived lower significance of tortoises and freshwater turtles compared to other wildlife and other crime.

Resources for wildlife trade inspection, enforcement and prosecution are rarely adequate to inspect every shipment, verify every identification, and investigate every indication of possible illegal trade. Choices are unavoidable and priorities are explicitly or implicitly set. Tortoises and freshwater turtles do not rate highly on the alert scale for agricultural, livestock and aquaculture inspectors, as they are generally perceived as having little inherent economic value, and are known to transmit only a few diseases of economic significance (e.g., as intermediate hosts for the ticks transmitting heartwater disease to cattle). Turtle trade is also generally perceived to be a relatively low-value trade, such that seizures imply much work for little return, as fines and other penalties imposed after successful prosecution (if any) tend to be low in many jurisdictions. Consequently, enforcement of illegal turtle trade may be less intensive than other wildlife crimes, and reduced enforcement combined with low penalties make the risks insignificant compared to the profits that unscrupulous traders can realize.

Scope and extent of domestic conservation legislation to implement CITES

The purpose of this study is primarily to document and analyse turtle trade that has been found by the relevant authorities to be illegal, as evidenced by their actions to seize the shipment and prosecute the perpetrator where possible. It is appropriate, however, to observe that significant turtle trade occurs that can not realistically be considered legal, yet lacks an adequate evidentiary basis for prosecution. The clearest example is trade in turtle species that are listed in CITES Appendix I, that are not known to have been legally exported from their country of origin (neither from the wild nor from approved captive breeding facilities), and for which no approved commercial breeding facilities exist outside of the range country. Examples include the Madagascar tortoise species (*Astrochelys*[23] and *Pyxis* spp.) and the Spotted Pond Turtle (*Geoclemys hamiltonii*) from South Asia. Tortoise or freshwater turtle species that have been listed in Appendix II, for which no captive production facilities are known outside the range countries, and whose country (countries) of occurrence have not allowed exports of the species also warrant close examination of legal provenance. Examples of this category of species include the Palawan Pond Turtle (*Siebenrockiella leytensis*), endemic to Palawan in the Philippines, which was included in CITES Appendix II in 2002 (at a time that it was only known from a single specimen, collected in 1988, and before its rediscovery in 2003) and for which the Philippines has never issued export permits for live specimens; the Ryukyu Leaf Turtle (*Geoemyda japonica*) endemic to Japan and prohibited from exploitation or export under Japanese domestic laws (see CoP16 Prop. 34); Indian Star Tortoise (*Geochelone elegans*, India, Pakistan, Sri Lanka)(see AC27 Doc.17 (Rev.1) Annex 1); and various South African tortoises. Any trade in commercial quantities of wild-collected specimens of these species would have a high probablility of pertaining to illegally obtained animals, and thus should be scrutinized in great detail. Domestic legislation to implement CITES may empower wildlife and/or customs authorities to seize shipments of illegal specimens at the time of export, import or re-export. However, a substantial number of CITES Parties do not have legislation in force to require proof of legal import or acquisition once the specimens are in the domestic marketplace. This poses an enforcement challenge, in particular with regard to non-native CITES-protected species; and in the absence of effective enforcement, domestic trade often flourishes, stimulating demand for additional specimens to be smuggled in.

Numerous market survey reports and other publications by conservation NGOs and academics have highlighted the evident commercial trade in species that are prohibited from commercial trade by being included in CITES Appendix I, or strictly protected from commercial exploitation in all range countries (e.g., Shepherd et al., 2004, 2007, 2008; Cheung & Dudgeon, 2006; Nijman & Shepherd, 2007, 2015; Gong et al., 2009; Chng, 2014). Logically, such specimens should not appear in trade, and their availability is frequently cited as indicating shortcomings in enforcement of the country's obligations under CITES. The complication arises from the way that CITES requires its signatories to implement its provisions through domestic legislation – which is frequently by means of an extension of existing laws which primarily manage and protect native wildlife species. Operational articles of domestic laws normally make the export, import and re-export of CITES-listed species subject to the appropriate permitting processes, but do not regulate domestic possession or trade. As such, once a CITES-listed specimen is inside the country, no applicable law can be enforced to justify seizing specimens that can not have been legally imported and thus could not have been legally

[22] http://www.ssn.org/cites_rescue_intro_EN.htm

[23] *With the exception of a single registered facility for A. radiata in Mauritius.*

acquired. Even when wildlife inspectors encounter specimens that can only have been sourced illegally, their ability to act and enforce is non-existent as a legal basis is lacking.

A further indication of the challenges inherent in enforcement of CITES-listed species is in the contrast between the total of over 160,000 live tortoises and freshwater turtles that were seized at border crossings during 2000-2015, while fewer than 9000 live tortoises and freshwater turtles were seized from shops, markets, warehouses and other 'domestic' locations over the same period. It is unlikely that the great majority of illegal shipments are intercepted at the border, thus it is reasonable to expect extensive retail offerings of illegally imported specimens – an expectation supported by the extensive documentation of observations of likely illegally imported specimens offered for sale (e.g., Shepherd et al., 2004, 2007, 2008; Cheung & Dudgeon, 2006; Nijman & Shepherd, 2007, 2015; Gong et al., 2009; Chng, 2014). Consideration must be given why such specimens of likely illegal origin and provenance are apparently seized in proportionally small quantities while on frequent public display in shops and markets.

Clearly, continued if not increased enforcement capacity and effort at borders and other points of entry, and exit trade may be needed by Parties to address trade in tortoises and freshwater turtles that is known or suspected to include a significant illegal component. Complementary measures are likely needed to effectively address domestic enforcement challenges. Parties may choose to enact stricter domestic legislation to increase requirements for traceability of traded and possessed specimens, recording the entire chain of legal acquisition, collection or captive production, import, export and possession of CITES-listed specimens. Alternatively, countries may wish to consider including all CITES-listed species in their domestic wildlife collection and possession legislation. For example, Thailand recently added the African Elephant as a protected species in its revised domestic wildlife legislation to enable better regulation of domestic ivory trade, and was called on to extend the same coverage to other CITES-listed species (Chng, 2014; Nijman & Shepherd, 2015). Another possible approach is domestic legislation that enables consideration of wildlife laws in effect where the animal was collected or traded, as exemplified by the United States' Lacey Act. The CITES Parties might consider expanding the scope of implementation expected from Parties, by including improved powers of management and enforcement of trade in all native and non-native CITES-listed specimens to be included in domestic implementing legislation. If this approach is chosen, the categorization of implementing legislation under the National Legislation Project will need to be adjusted and re-evaluations will need to be carried out under updated criteria. These are measures that will require extensive deliberation before they can be designed, formulated and adopted by CITES Parties to address challenges inherent in domestic trade and possession of CITES-regulated wildlife specimens.

Challenges in documenting legal and illegal trade in tortoises and freshwater turtles

In the course of this study it has been evident that seizures of illegally traded tortoises and freshwater turtles occur regularly in many of the countries with native turtle populations and countries where tortoises and freshwater turtles are traded. While the large seizures are often reported in press releases, the media and other outlets, a large number of 'small' seizures go unreported other than the official records of the seizure. In a number of countries, accurate integrated information systems are maintained to record and store such records, and making those records available in global datasharing programs (such as the UNODC wildlife trade seizures database), whereas there is little indication of similar consistent record-keeping and international record-sharing for other countries. This risks generating an uneven impression of enforcement efforts and successes that is not reflective of the actual enforcement efforts that occurred.

There are also significant challenges to quantify global trade patterns and volumes for legally traded tortoises and freshwater turtles; the best approximation could be achieved by combining CITES trade records with declared exports of the country generally understood to be by far the largest exporter of (largely captive-produced) freshwater turtles. Updated statistics on turtle aquaculture in Asia, and perhaps elsewhere, were unavailable in the course of this analysis and warrant compilation eventually to place the illegal trade in a reasonably accurate context of legal trade.

Incomplete declaration and recording of legal and illegal trade in parts and derivatives

While it is evident from contrasting market survey data with declared international turtle trade as recorded in the UNEP-WCMC CITES trade database that not all live turtle trade is accurately declared, permitted and recorded in trade statistics, this lack of reporting is staggering in its scale when considering the international trade in turtle shells and bones. Chen et al. (2009) compiled customs statistics from Taiwan during the period 1999 to 2008 and reported a total of 1,989,248 kilos of hard-shelled turtle shells being imported from Cambodia, mainland China, Indonesia, Malaysia, Singapore, Thailand and Viet Nam. These imports consisted for about 75% of *Cuora amboinensis* (CITES Appendix II since July 2000), *Malayemys subtrijuga* (Appendix II

since January 2005) and *Siebenrockiella crassicollis* (Appendix II since February 2003). Thus, while large parts of these shipments should have been traded under CITES permits and thus have been recorded in the CITES trade database, only 1191 kg of *C. amboinensis* carapaces, 374 kg of *S. crassicollis* carapaces, and a single *Malayemys* carapace, have actually been recorded in the database over the same period. Exact conversion rates (i.e. average bony shell weight per individual animal) are not available for these species, but Chen et al noted that medium-sized whole Geoemydid plastra weigh 50 to 200 grams each. Thus a rough estimate would be that these 1989 metric tonnes represented shells from between five and twenty millon adult tortoises and freshwater turtles. Not only does the shell and bone trade represent a significant illegal or at least unpermitted and unreported trade of significant value, it almost certainly also represents a massive impact on wild turtle populations that are not subject to non-detriment findings or other sustainability safeguards.

Associated with incomplete recording of trade, and seizures, of parts and derivatives of turtles is the dificulty of relating quantities and units of such specimens to the number of individual animal specimens that were needed to produce the quantity concerned. Compilation of available 'conversion factors' in an accessible sharing location would be useful, not only for understanding the potential impact of collection for parts and derivatives on population numbers (essential for accurate Non-Detriment Findings), but also when attempting to reconcile imports of specimens with exports of parts or derivatives of that species after processing in a country.

8. Future directions and considerations

While this analysis of illegal trade, based on available seizure records, is of necessity only a stepping stone towards a comprensive strategy to address illegal and unreported trade in tortoises and freshwater turtles, several elements emerged that warrant further consideration by the Task Force and other stakeholders in responsible and legal trade in tortoises and freshwater turtles. These include the following topics that asore in the course of this study, but are by no means limited to these.

Development of a rapid-response, secure identification network for tortoises and freshwater turtles and other wildlife in trade, using email, sms, and/or mobile phone pictures to connect wildlife inspectors to a network of vetted, trusted species identification specialists.

Increased awareness among wildlife and customs inspectors of the protective and regulatory status of freshwater turtles, domestically and under legislation in force in range and ex-situ production countries.

Increased awareness among wildlife and customs inspectors of the scope, and protective and regulatory status, of trade in parts and derivatives of tortoises and freshwater turtles.

Increased awareness among wildlife and customs inspectors of the options available to humanely dispose of seized live tortoises and freshwater turtles.

Legislative improvements regarding chain of custody or traceability documentation requirements for at least CITES Appendix I listed tortoises and freshwater turtles, and possibly Appendix II; inclusion of non-native CITES-listed species under domestic wildlife legislation; consideration of Lacey Act-type legislation.

Consideration of standardized reporting of units for parts and derivatives in a manner that 1). allows quantification of the number of animals involved in these trades (particularly relevant in the case of wild offtake subject to NDF) and 2). enables comparison of import and export volumes of the same species traded as different products.

A wide range of public and propietary sources provide information on legal and illegal turtle trade. However, as found over the course of this study, no single source captures and organizes all relevant data records. Surely combating illegal turtle trade, and wildlife trade in general, would be increased in efficiency by better, comprehensive, quantitative recording of all known and reported instances. To do this properly, however, would require a data prospecting and processing effort comparable to ETIS (Elephant Trade Information System), with dedicate manpower and resources. It is questionable whether the expected increased effectiveness of illegal turtle trade enforcement would justify the allocation of the resources required to establish a centralized, well-maintained Turtle Trade Information System.
Nevertheless, steps can be taken in the right direction with manageable effort and resources. These could include:

- Parties reporting comprehensively on seizures and prosecutions of CITES-listed, and ideally non-listed, species including tortoises and freshwater turtles in their periodic reporting.

- Continued exploration of opportunities to establish turtle-specific 'product codes' in trade and customs databases, including the WCO's Harmonized Customs Codes and the UNCTAD ASYCUDA (Automated System for Customs Data). Such codes do not necessarily need to be at species level (though that would be useful) but should allow at least the separation of tortoise, freshwater turtle, and marine turtle trade from other wildlife and commodity trades.
- The turtle conservation community might evaluate options to establish and maintain a turtle trade database founded on volunteer efforts, capturing media reports of seizures as well as annual downloads of available turtle trade statistics from customs, national wildlife trade supervisory authorities, the UNEP-WCMC CITES Trade database, and other appropriate, accessible sources.

Better understanding is needed of the organization and structure of illegal turtle trade, particularly

- Network analysis of the main organizers.
- The degree of integration and direct facilitation between legal and illegal turtle trade.
- The degree of integration and facilitation between illegal turtle trade and other illegal wildlife trade, such as Asian pangolins.

Better understanding is needed of the trade in medicinal preparations containing (or claiming to contain) turtle powders, tissues, extracts or other derivatives. In particular, independent laboratory analyses of a representative range of such preparations is needed to determine the actual species contained in those preparations, in comparison to the species listed on the packaging label, and including testing of different batches of the same product to determine whether different species are used as ingredients at different times. If such analyses find a significant occurrence of protected or trade-regulated turtle (and other) species, follow-up measures such as sharpened institutional oversight, independent product monitoring, and scheduled and surprise factory inspections, may need to be considered.

Improved evaluation, oversight, and monitoring of captive production facilities, particularly those facilities claiming to breed species that are known in the zoo community to be difficult to breed, and in situations where no records exist that document legal import or existing captive holdings of specimens of non-native, CITES-listed species at the appropriate time period.

An examination of the recommendations contained in Res. Conf. 11.9 (Rev. CoP13) on the *conservation of and trade in tortoises and freshwater turtles*[24], as well as the recommendations from the CITES Workshop the conservation of and trade in tortoises and freshwater turtles (Kunming, March 2002) and the recommendations from the IUCN and WCS co-hosted workshops on Asian turtle trade and conservation (Phnom Penh, December 1999 – van Dijk et al, 2000; Singapore, February 2011 – Horne et al., 2012), is likely to identify additional topics and possible avenues to address the topic of illegal tortoise and freshwater turtle trade in a global context.

Literature cited

Anand, V. D., A. Moses, and S. Varma. 2005. The Fading Star – an investigation into the illegal trade in Indian Star Tortoise in south India. A Rocha India, Bangalore, and Wildlife Trust of India, New Delhi. 38 pp.

Benyr, G. 2014. Die Unterscheidung von Wildfangen und Nachzuchten bei Reptilien: Bedeutung für den Artenschutz. Bundesministerium für ein lebenswertes Österreich, [in German]. 182 pp. http://www.bmlfuw.gv.at/umwelt/natur-artenschutz/cites/berichte/citeswildentnahme.html

Castellano, C.M., J.S. Doody, R. Rakotondrainy, W. Ronto, T. Rakotondriamanga, J. Duchene and Z. Randria. 2013. Long-term monitoring and impacts of human harvest on the Radiated Tortoise (Astrochelys radiata). Pp. 75-85 in: Turtles on the Brink in madagascar: Proceedings of two workshops on the Status, Conservation, and Biology of Malagasy Tortoises and Freshwater Turtles (Castellano, Rhodin, Mittermeier, Randriamahazo, Hudson, & Lewis, eds.). *Chelonian Research Monographs*, No.6. doi: 10.3854/crm.6.a14p75. http://www.chelonian.org/crm-6/

Chen, T.-H., H.-C. Chang, & K.-Y. Lue. 2009. Unregulated Trade in Turtle Shells for Chinese Traditional Medicine in East and Southeast Asia: The Case of Taiwan. *Chelonian Conservation and Biology*, Vol. 8(1): 11-18.

Cheung, S.M., & D. Dudgeon. 2006. Quantifying the Asian turtle crisis: market surveys in southern China, 2000-2003. *Aquatic Conservation: Marine and Freshwater Ecosystems*, Vol. 16: 751-770.

[24] https://cites.org/eng/res/11/11-09R13C15.php

Chng, S.C.L. 2014. Escalating Black Spotted Turtle G*eoclemys hamiltonii* trade in Asia: a study of seizures. TRAFFIC, Petaling Jaya, Selangor, Malaysia. 24 pp. ISBN: 978-983-3393-38-1

CITES CoP16 Doc.43.1. 2013. Standard nomenclature: Report of the Animals and Plants Committees: Annex 6: List of standard references adopted by the Conference of the Parties. https://cites.org/sites/default/files/eng/cop/16/doc/E-CoP16-43-01-A6.pdf

D'Cruze, N., B. Singh, T. Morrison, J. Schmidt-Burbach, D.W. Macdonald, and A. Mookerjee. 2015. A star attraction: The illegal trade in Indian Star Tortoises. *Nature Conservation* 13: 1–19. doi: 10.3897/natureconservation.13.5625

Fritz, U., & P. Havaš. 2007. Checklist of Chelonians of the World (including Appendix). *Vertebrate Zoology*, Vol. 57 (2): 149-368. http://www.senckenberg.de/files/content/forschung/publikationen/vertebratezoology/vz57-2/57-2_fritz_149-368.pdf

Gong S.-P., A.T. Chow, J.J. Fong & H.-T. Shi. 2009. Chelonian trade in the largest pet market in China: scale, scope and impact on turtle conservation. *Oryx*, Vol. 43(2): 213-216.

Horne, B.D., C.M. Poole and A.D. Walde (eds). 2012. Conservation of Asian Tortoises and Freshwater Turtles: Setting Priorities for the Next Ten Years. Recommendations and Conclusions from the Workshop in Singapore, February 21-24, 2011. ISBN 978-981-07-1737-7. http://www.turtlesurvival.org/storage/documents/Singapore_Report_complete.pdf

Jenkins, M.D. 1995. *Tortoises and freshwater Turtles: The trade in Southeast Asia.* TRAFFIC International, United Kingdom. iv + 48 pp.

Kendrick, R.C., & G.W.J. Ades. 2009. Turtle Plastron Study Report, 2006-09. Fauna Conservation Department, Kadoorie Farm & Botanic Garden Publication Series, No. 5: 1-15. http://www.kfbg.org/kfb/introwithreport.xml?fid=167&sid=213

Nijman, V., & C.R. Shepherd. 2007. Trade in non-native, CITES-listed, wildlife in Asia, as exemplified by the trade in freshwater turtles and tortoises (Chelonia) in Thailand. *Contributions to Zoology*, Vol. 76 (3): 207-212.

Nijman, V., and C.R. Shepherd. 2015. Ongoing trade in illegally-sourced tortoises and freshwater turtles highlights the need for legal reform in Thailand. Natural History Bulletin of the Siam Society, 61(1):3-6.

O'Brien, S., E.R. Emahalala, V. Beard, R.M. Rakotondrainy, A. Reid, V. Raharisoa, and T. Coulson. 2003. Decline of the Madagascar radiated tortoise Geochelone radiata due to overexploitation. *Oryx* 37: 338-343.

Outhwaite, W., V. Mundy, K. Kecse-Nagy, and V. Crook. 2014. Concerns regarding trade in specimens claimed to be derived from captive breeding or ranching – Assessment of select examples. Annex 1 of CITES Document AC27 Doc. 17 (Rev.1). http://cites.org/sites/default/files/eng/com/ac/27/E-AC27-17.pdf

Shepherd, Chris R. 2000. Export of live freshwater turtles and tortoises from north Sumatra and Riau, Indonesia : A case study. Pp. 112-119 in *Asian Turtle Trade: Proceedings of a Workshop on Conservation and Trade of Freshwater Turtles and Tortoises in Asia* (van Dijk, Stuart & Rhodin, eds.). Chelonian Research monographs, Number 2. http://www.chelonian.org/crm-2/

Shepherd, C.R., E.A. Burgess, & M. Loo. 2004. *Demand Driven: The Trade of Indian Star Tortoises* Geochelone elegans *in Peninsular Malaysia*. TRAFFIC Southeast Asia, Petaling Jaya, Malaysia. 18 pp. ISBN 983-99246-8-0

Shepherd, C.R., & V. Nijman, 2007. *An overview of the regulation of the freshwater turtle and tortoise pet trade in Jakarta, Indonesia.* TRAFFIC Southeast Asia, Petaling Jaya, Malaysia.

Shepherd, C.R., & V. Nijman. 2008. *Pet freshwater turtle and tortoise trade in Chatuchak Market, Bangkok, Thailand.* TRAFFIC Southeast Asia, Petaling Jaya, Malaysia. 45 pp. ISBN 9789833393077.

Shi H.T., and Fan Z.Y. 2002. Captive breeding of freshwater turtles and tortoises in the People's Republic of China. CITES CoP12 Inf. Doc. 8. https://cites.org/sites/default/files/common/cop/12/ESF12i-08.pdf

Shi H. Z. Fan, F. Yin & Z. Yuan. 2004. New data on the Trade and Captive Breeding of Turtles in Guangxi Province, South China. *Asiatic Herpetological Research*, Vol. 10: 126-128.

Shi H., J.F. Parham, M. Lau & Chen T.-H. 2007. Farming Endangered Turtles to Extinction in China. *Conservation Biology*, Vol. 21 (1): 5-6.

Van Dijk, P.P., B.L. Stuart, and A.G.J. Rhodin (editors). 2000. *Asian Turtle Trade: Proceedings of a Workshop on Conservation and Trade of Freshwater Turtles and Tortoises in Asia*, Phnom Penh,

Cambodia, 1-4 December 1999. Chelonian Research Monographs, No. 2; Chelonian Research Foundation, Lunenburg, MA, USA. 164 pp. August 2000. ISBN 0-9653540-2-4. http://www.chelonian.org/crm-2/

Annexes

Annex Table 1
Annual number of seizures of live tortoises and freshwater turtles, and number of individual live tortoises and freshwater turtles seized. Based on the combined dataset for 2000-2015. Numbers presented are minimum numbers as not all events were recorded, and not all recorded events are dated or have the number of specimens included.

	Number of live individuals of tortoises and freshwater turtles seized	Number of seizure cases concerning live tortoises or freshwater turtles	Number of seizure cases concerning parts and derivatives of tortoises or freshwater turtles
2000	2,649	34	15
2001	12,404	45	13
2002	14,403	33	21
2003	19,003	60	15
2004	8,291	78	9
2005	14,337	147	45
2006	26,121	161	43
2007	22,992	169	59
2008	6,583	141	40
2009	9,874	144	72
2010	9,177	162	76
2011	4,231	192	55
2012	8,333	225	46
2013	35,843	369	65
2014	57,361	270	35
2015	48,293	284	17
no date recorded	4,887	47	375
Total	303,774	2,561	1001

Annex Table 2
Species of tortoises and freshwater turtles recorded seized, as live animals and parts and derivatives, from illegal trade or possession during the period 2000-2015, based on the combined dataset. Species and higher taxa are colour-coded to indicate CITES status when all, or the majority of, seizures occurred: pinkish tan = Appendix I, yellow = Appendix 2, pale green = Appendix III.

Species	Number of live specimens seized	Number of seizure cases: live specimens	Number of seizure cases: parts & derivatives
Family Carettochelyidae - Pig-nosed Turtle			
Carettochelys insculpta	29,692	26	2
Total Carettochelyidae	29,692	26	2
Family Chelidae - Austro-American Side-necked Turtles			
Chelodina colliei	25	2	-
Chelodina longicollis	1	1	-
Chelodina mccordi	26	2	-
Chelodina siebenrocki	unknown	1	-
Chelodina sp.	-	-	2
Chelus fimbriata	346	2	-
Mesoclemmys vanderhaegei	unknown	1	-
Unidentified Chelidae	-	-	1
Total Chelidae	> 398	9	3

Species	Number of live specimens seized	Number of seizure cases: live specimens	Number of seizure cases: parts & derivatives
Family Chelydridae - Snapping Turtles			
Chelydra serpentina	6,026	2	-
Macrochelys temminckii	868	6	4
Total Chelydridae	6,894	8	4
Family Dermatemydidae - Central American River Turtle			
Dermatemys mawii	8	3	20
Total Dermatemydidae	8	3	20
Family Emydidae - American freshwater turtles plus *Emys*			
Clemmys guttata	92	1	-
Emydoidea blandingii	> 10	2	-
Emys orbicularis	400	1	-
Glyptemys insculpta	> 100	9	3
Glyptemys muhlenbergii	-	-	1
Graptemys flavimaculata	1	1	-
Graptemys geographica	3	2	4
Graptemys pseudogeographica	171	8	-
Graptemys sp.	3	2	1
Malaclemys terrapin	> 830	5	-
Terrapene carolina	> 82	12	3
Terrapene coahuila	4	1	-
Terrapene ornata	16	11	4
Terrapene sp.	81	13	57
Trachemys callirostris	10,329	3	2
Trachemys dorbigni	7	2	-
Trachemys scripta	> 642	9	-
Trachemys venusta group	6	4	-
Unidentified Emydidae	45	20	11
Total Emydidae	> 12,822	106	86
Family Geoemydidae - Eurasian freshwater turtles and neotropical wood turtles			
Batagur baska + affinis	139	6	3
Batagur borneoensis	81	2	-
Batagur dhongoka	1	1	-
Cuora amboinensis	>> 20,772	37	8
Cuora flavomarginata	5,232	7	-
Cuora galbinifrons group	> 284	21	-
Cuora mouhotii	> 354	37	-
Cuora sp.	> 21	5	56
Cuora trifasciata	-	-	12
Cyclemys sp.	>> 2,048	38	-
Geoclemys hamiltonii	>> 11,451	70	3
Geoemyda, G. japonica + G. spengleri	144	10	3
Hardella thurjii	7	2	-
Heosemys annandalii	>> 353	22	2
Heosemys grandis	>> 1,292	29	7
Heosemys spinosa	709	7	-
Leucocephalon yuwonoi	26	2	-
Malayemys macrocephala + M. subtrijuga	> 2,707	25	2
Mauremys annamensis	91	7	-
Mauremys japonica	> 1	2	-

Species	Number of live specimens seized	Number of seizure cases: live specimens	Number of seizure cases: parts & derivatives
Mauremys mutica	> 2,111	7	-
Mauremys nigricans	21	2	1
Mauremys reevesii	691	4	61
Mauremys sinensis	14	3	3
Mauremys sp.	12	4	1
Melanochelys tricarinata	>> 1,979	15	-
Melanochelys trijuga	1	1	1
Morenia ocellata	19	1	-
Morenia petersi	24	4	-
Notochelys platynota	>> 58	3	-
Orlitia borneensis	1,385	4	3
Pangshura smithii	92	2	-
Pangshura sylhetensis	2	2	-
Pangshura tecta	> 783	8	2
Pangshura tentoria	> 52	3	-
Rhinoclemmys areolata	70	3	-
Rhinoclemmys sp.	> 1	2	-
Sacalia quadriocellata	54	6	-
Siebenrockiella crassicollis	>> 3,375	12	4
Siebenrockiella leytensis	> 4,276	11	-
Unidentified Geoemydidae	1,003	2	4
Total Geoemydidae	>> 62,364	430	176
Family Kinosternidae - Mud Turtles			
Kinosternon sp.	> 2	4	-
Staurotypus triporcatus	4	2	-
Sternotherus carinatus	1,002	1	-
Total Kinosternidae	> 1,006	7	-
Family Pelomedusidae - African Side-necked Turtles			
Pelusios gabonensis	50	1	-
Total Pelomedusidae	50	1	-
Family Platysternidae - Big-headed Turtle			
Platysternon megacephalum	> 1,112	37	2
Total Platysternidae	> 1,112	37	2
Family Podocnemididae - Side-necked river turtles			
Erymnochelys madagascariensis	8	1	1
Peltocephalus dumerilianus	11	1	2
Podocnemis erythrocephala	18	1	-
Podocnemis expansa	493	10	11
Podocnemis sextuberculata	56	2	1
Podocnemis sp.	22	2	14
Podocnemis unifilis	> 6,265	27	7
Podocnemis vogli	5	1	-
Total Podocnemididae	> 6,878	45	36
Family Testudinidae - Tortoises			
Aldabrachelys gigantea	7	4	1
Astrochelys radiata	> 7,973	72	6
Astrochelys yniphora	146	18	2
Chelonoidis carbonaria	465	50	1
Chelonoidis chilensis	116	7	-
Chelonoidis denticulata	197	21	5
Chelonoidis nigra	-	-	1

Species	Number of live specimens seized	Number of seizure cases: live specimens	Number of seizure cases: parts & derivatives
Chelonoidis sp.	28	1	5
Chersina angulata	160	7	-
Geochelone elegans	> 34,080	118	2
Geochelone platynota	> 39	8	-
Geochelone sp.	22	5	8
Geochelone sulcata	344	31	5
Gopherus agassizii group	103	55	15
Gopherus berlandieri	11	4	1
Gopherus flavomarginatus	-	-	1
Gopherus polyphemus	11	1	-
Gopherus sp.	3	1	1
Homopus areolatus	-	-	1
Indotestudo elongata	> 918	20	4
Indotestudo forstenii	126	4	-
Indotestudo sp.	-	-	4
Kinixys belliana	275	9	2
Kinixys erosa	30	5	2
Kinixys homeana	671	15	3
Kinixys sp.	44	4	7
Kinixys spekii	4	1	-
Malacochersus tornieri	370	13	-
Manouria	-	-	1
Manouria emys	507	7	2
Manouria impressa	47	8	6
Psammobates geometricus(?)	1	1	27
Psammobates tentorius	-	-	1
Pyxis arachnoides	> 208	9	1
Pyxis planicauda	74	3	-
Stigmochelys pardalis	1,825	47	19
Testudo graeca	4,286	570	37
Testudo hermanni	4,162	200	12
Testudo horsfieldii	10,587	48	7
Testudo kleinmanni	93	19	3
Testudo marginata	153	24	1
Testudo sp.	925	15	28
Unidentified tortoises	3,324	237	399
Total Testudinidae	> 74,312	1,664	621
Family Trionychidae - Soft-shelled Turtles			
Amyda cartilaginea	7,704	14	16
Apalone ferox	507	3	-
Apalone sp.	40	3	3
Apalone spinifera	209	4	2
Chitra indica	> 619	5	-
Chitra sp.	-	-	1
Cycloderma frenatum	-	-	1
Lissemys punctata	>> 2,308	13	1
Lissemys scutata	187	2	-
Nilssonia gangetica	> 16,428	19	1
Nilssonia hurum	unknown	1	-
Palea steindachneri	23	3	-
Pelochelys sp.	3	2	2
Pelodiscus sp.	11	3	5
Unidentified softshells	> 1,996	13	4

Species	Number of live specimens seized	Number of seizure cases: live specimens	Number of seizure cases: parts & derivatives
Total Trionychidae	> 30,035	85	36
Unidentified Tortoises and Freshwater Turtles			
Unidentified TFT	about 75,000	116	21
Total Tortoises & Freshwater Turtles	> 305,432	2561	1002

Annex Table 3

Countries reporting turtle seizures, both live and of parts and derivatives, arranged by the total number of seizures during the period 2000-2015 of illegally held or traded tortoises and freshwater turtles, based on the combined dataset.

	Number of live specimens seized	Number of live seizure cases	Number of seizures of parts and derivatives	Number of all seizure cases combined
Argentina	79	4	4	8
Australia	30	5	-	5
Austria	105	13	-	13
Bangladesh	> 8,392	25	-	25
Belgium	744	42	15	57
Benin	34	1	-	1
Bolivia	366	5	1	6
Brazil	> 967	39	2	41
Bulgaria	51	2	-	2
Cambodia	> 932	24	3	27
Cameroon	> 24	3	2	5
Canada	> 432	18	1	19
Chile	97	6	-	6
China	14,374	37	15	52
Colombia	10,122	10	3	13
Comoros	1,014	1	-	1
Croatia	1,207	23	-	23
Czech Republic	174	14	6	20
D.R. Congo	unknown	1	-	1
Denmark	101	6	2	8
Ecuador	33	6	-	6
El Salvador	4	1	-	1
Estonia	1	1	-	1
European Union [28 member states combined]	15,382	1,099	190	1,289
Finland	3	1	-	1
France	1,707	172	13	185
France - French Guiana	1	1	-	1
France - Martinique	10	1	-	1
France - Réunion	122	3	-	3
Germany	749	100	43	143
Greece	170	2	-	2
Guatemala	8	2	-	2
Guinea	61	2	-	2
Guyana	52	1	-	1

	Number of live specimens seized	Number of live seizure cases	Number of seizures of parts and derivatives	Number of all seizure cases combined
Hong Kong SAR	> 39,805	88	4	92
Hungary	2,106	43	1	44
India	> 74,029	188	9	198
Indonesia	35,457	34	3	37
Israel	2	1	-	1
Italy	> 1699	212	20	232
Japan	919	6	-	6
Jersey	1	1	-	1
Jordan	40	1	-	1
Kazakhstan	2,134	2	-	2
Kenya	24	1	-	1
Kuwait	36	3	-	3
Latvia	12	5	-	5
Luxembourg	5	3	1	4
Macao	50	1	-	1
Madagascar	>> 4,681	22	2	24
Malawi	-	-	1	1
Malaysia	6,960	27	3	30
Malta	88	5	-	5
Mexico	> 170	30	1	31
Myanmar	35	1	-	1
Nepal	7	3	-	3
Netherlands	222	50	25	75
New Zealand	-	-	372	372
Norway	28	7	2	9
Pakistan	1,700	9	2	11
Peru	> 5,561	10	2	12
Philippines	6,497	25	-	25
Poland	1,694	17	2	19
Portugal	95	4	30	34
Qatar	3	1	-	1
Romania	2	1	-	1
Russia	> 2,716	3	-	3
Serbia	181	1	1	2
Singapore	5,962	12	-	12
Slovakia	230	9	2	11
Slovenia	61	13	3	16
South Africa	291	45	2	47
Spain	1,503	300	17	317
Sweden	3	2	4	6
Switzerland	23	3	-	3
Taiwan	8,006	25	-	25
Tanzania	201	1	-	1
Thailand	> 19,498	85	2	87
Togo	93	4	1	5
Turkey	2	2	-	2
Ukraine	810	4	-	4
United Arab Emirates	679	20	14	34
United Kingdom	2,746	62	7	69
United States of America	> 7,227	342	348	690
Uzbekistan	2,350	3	-	3
Venezuela	51	8	-	8
Viet Nam	> 24,638	242	10	252
Yemen	1	1	1	2

Annex Table 4

Numbers of seizures of live tortoises and freshwater turtles and numbers of specimens seized during the period 2000-2015, for which a particular country was recorded as the country of provenance, or the destination country, based on the combined dataset.

	as country of provenance		as country of destination	
	# seizures	# specimens	# seizures	# specimens
Albania	22	152	-	-
Algeria	145	457	1	1
Angola	1	1	-	-
Antigua & Barbuda	1	1	-	-
Argentina	2	51	1	100
Armenia	1	1	-	-
Australia	1	24	-	-
Austria	-	-	8	63
Azerbaijan	3	6	-	-
Bangladesh	17	> 3,146	10	11,275
Belarus	1	1	-	-
Belgium	2	21	38	604
Benin	4	129	-	-
Bolivia	1	41	1	41
Bosnia-Herzegovina	5	197	-	-
Brazil	10	532	-	-
British Virgin Islands	1	1	-	-
Bulgaria	1	1	2	51
Burundi	1	1	-	-
Cambodia	8	265	3	19
Cameroon	1	24	-	-
Canada	2	5	13	152
Chile	2	23	3	67
China	32	> 11,034	78	53,459
Colombia	4	10,005	-	-
Croatia	9	80	2	374
Cyprus	1	1	-	-
Czech Republic	3	57	16	224
D.R. Congo	1	50	-	-
Denmark	1	1	10	164
Ecuador	1	1	-	-
Egypt	14	127	-	-
Estonia	-	-	1	1
Ethiopia	1	200	-	-
EU-28 combined	82	667	725	7,297
Finland	1	1	1	3
France	5	205	193	1,281
Georgia	1	2	1	42
Germany	13	42	88	360
Ghana	12	421	-	-
Greece	6	12	-	-
Guyana	16	199	-	-
Hong Kong	31	9,882	45	14,402
Hungary	2	183	2	28
India	87	36,002	12	4,270
Indonesia	44	32,166	8	2,164
Iran	3	5	-	-
Israel	1	1	1	2
Italy	11	64	120	835
Japan	8	61	18	2,175
Jersey	1	1	-	-
Jordan	8	565	-	-
Kazakhstan	4	638	-	-
Kenya	3	22	-	-
Korea (South)	2	2	2	101

	as country of provenance		as country of destination	
	# seizures	# specimens	# seizures	# specimens
Kuwait	-	-	3	36
Lao PDR	15	1047 kg	12	1,268
Latvia	-	-	5	13
Lebanon	7	16	-	-
Libya	3	43	-	-
Luxembourg	-	-	1	2
Macao	5	92	5	375
Macedonia	7	236	-	-
Madagascar	21	> 5,017	-	-
Malaysia	24	31,556	31	11,059
Mali	1	150	-	-
Malta	-	-	5	88
Mayotte	1	10	-	-
Mexico	114	241	3	291
Mongolia	1	29	-	-
Montenegro	1	3	-	-
Morocco	218	1,073	1	1
Mozambique	1	4	-	-
Myanmar	7	433	7	1,851
Netherlands	5	13	54	564
Nicaragua	1	100	-	-
Nigeria	2	2	1	24
Norway	1	14	7	16
Oman	-	-	1	10
Pakistan	4	1,232	2	1,054
Peru	11	2,962	1	3
Philippines	13	5,272	1	14
Poland	1	2	15	847
Portugal	-	-	3	5
Qatar	3	128	1	3
Réunion	2	188	-	-
Romania	4	57	1	2
Russia	11	720	1	1,500
Saudi Arabia	1	1	-	-
Serbia	24	803	1	181
Singapore	26	10,462	7	10,059
Slovakia	-	-	2	12
Slovenia	3	37	1	9
South Africa	4	22	-	-
Spain	10	39	109	394
St. Vincent and Grenadines	1	10	-	-
Sudan	-	-	1	453
Suriname	6	46	-	-
Sweden	1	6	5	19
Switzerland	3	20	9	219
Syria	12	665	-	-
Taiwan	7	2,648	1	4
Tanzania	12	352	2	1,014
Thailand	48	1383 + 6000Kg	31	8,062
Togo	13	477	-	-
Tunisia	128	816	1	710
Turkey	20	80	-	-
Uganda	1	1	-	-
Ukraine	19	2,110	-	-
United Arab Emirates	5	400	3	136
United Kingdom	5	33	50	1,401
United States	61	2,612	306	6,199
Uzbekistan	4	2,357	1	634
Venezuela	10	110	5	44
Viet Nam	34	2767 + 3000Kg	24	946 + 485Kg

	as country of provenance		as country of destination	
	# seizures	# specimens	# seizures	# specimens
Yemen	1	1	-	-
Zambia	12	1,158	-	-
Zimbabwe	1	2	-	-
Unknown / not recorded	1,066	98,290	1,121	155,245

Annex Table 5

Quantities of seizures of turtle parts and derivatives during the period 1998-2015, arranged by the number of cases reported per country, based on the UNODC WorldWISE database as of 30 October 2015.

Country reporting seizure	Number of seizure cases	Kg	Number of items
New Zealand	372	48	28,332
United States	365	55	17,314
Germany	33	1	125
Portugal	29	2	55
Netherlands	24	1	289
Italy	20	1	140
Spain	19		22
United Arab Emirates	16		662
Belgium	15	1	5,024
France	13		17
China	12	1	12,187
India	7		3,735
United Kingdom	6	2	322
Czech Republic	5		7
Hong Kong	5		10,005
Austria	4	1	6
Sweden	4		5
Slovenia	3		4
Denmark	2		2
Norway	2		3
Poland	2		2
Slovakia	2		3
South Africa	2		13
Thailand	2		8
Canada	1		11
Hungary	1		2
Indonesia	1		10
Luxembourg	1		2
Serbia	1		510
Viet Nam	1	2000	
Yemen	1		1
Total	971		

Materiales de identificación y capacitación relativos a tortugas terrestres y galápagos en el comercio internacional
Decisión CITES 16.122, párrafo b)

Resumen ejecutivo

De acuerdo con lo previsto por la Decisión CITES 16.122, párrafo b), el objetivo del presente estudio es identificar y evaluar los materiales disponibles para la identificación de tortugas terrestres y galápagos en el comercio internacional (tanto especímenes vivos como partes y derivados) y examinar los materiales de capacitación disponibles relativos al comercio internacional de estos animales.

Se examinó una selección amplia de los materiales de identificación y capacitación disponibles, centrándose especialmente en aquellos recursos que pueden ser descargados libremente de Internet. Se llegó a la conclusión de que existen materiales fiables, precisos y fáciles de utilizar que están disponibles y accesibles en varios idiomas, para la identificación de tortugas terrestres y galápagos en el comercio internacional, pero que los materiales para la identificación de partes y derivados son escasos, incompletos y difícilmente accesibles. Se recomienda la creación de una guía para facilitar el reconocimiento e identificación de estos especímenes en el comercio y conocer los requisitos de permisos correspondientes, así como la creación de una red de asistencia formada por expertos en la identificación de especies.

Los materiales disponibles de capacitación específica sobre el comercio de tortugas terrestres y galápagos incluyen orientaciones sobre la formulación de dictámenes de extracción no perjudicial y para determinar si los especímenes en el comercio son de origen silvestre o criados en cautividad. Asimismo, incluyen materiales más generales sobre la aplicación de la CITES. No obstante, siempre se pueden ampliar y mejorar los materiales para la evaluación de los establecimientos de cría en cautividad de tortugas terrestres y galápagos e identificación de los ejemplares de tortugas terrestres y galápagos obtenidos de los distintos sistemas de producción; además, existen muchas posibilidades para investigar y recopilar y compartir datos sobre la biología y dinámicas poblacionales que resultarían útiles para la formulación de dictámenes de extracción no perjudicial.

Además, sería recomendable tener mejor acceso a los textos vigentes de las leyes y normativas nacionales sobre tortugas terrestres y galápagos en los países del área de distribución a fin de ayudar a las autoridades de la CITES a determinar la situación legal de los ejemplares en el comercio. Por último, se recomienda que los responsables de capacitación en la Secretaría de la CITES y los Grupos de trabajo sobre capacitación de los Comités estudien las opciones para incluir temas relacionados con tortugas terrestres y galápagos en las encuestas para determinar las necesidades de las Partes en materia de identificación y capacitación.

Identification and Capacity Building Materials for Tortoises and Freshwater Turtles in International Trade – an overview to implement CITES Decision 16.122 paragraph b)

Executive Summary

Based on CITES Decision 16.122, paragraph b), this study aims to identify and evaluate available identification materials for tortoises and freshwater turtles in international trade (live as well as parts and derivatives), and to review available capacity-building materials relevant to the international trade in these animals.

An extensive selection of available identification and capacity building materials were reviewed, with emphasis on freely downloadable resources on the internet. It was concluded that reliable, accurate and easy-to-use identification materials are available and accessible in a variety of languages for live tortoises and freshwater turtles in international trade, but materials to identify parts and derivatives are scarce, incomplete and difficult to access. The development of a guide to recognize and identify such materials in trade and their permit requirements, as well as the development of an expert identification assistance network, are recommended.

Available capacity building materials specific to tortoise and freshwater turtle trade include guidance on making Non-Detriment Findings and guidance on evaluating the wild or captive-raised origin of traded specimens, as well as more general materials on implementation of CITES. There remain opportunities for expansion and improvement of materials to evaluate captive production facilities for tortoises and freshwater turtles, to recognize tortoise and freshwater turtle specimens originating from different production systems, as well as to research, compile and provide data on natural history and population dynamics to assist in making NDFs.

In addition, improved and up-to-date access to the text of domestic laws and regulations concerning tortoises and freshwater turtles in range countries is desirable to assist CITES Authorities in the evaluation of the legal status of specimens in trade. Finally, it is recommended that the Capacity Building team at the CITES Secretariat and Committee Working Groups explore options to incorporate tortoise and freshwater turtle-specific items in surveys of the Parties' needs for identification materials and capacity building efforts.

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Lead writer: Peter Paul van Dijk, with input from members and staff of the TFTSG, the United States Fish and Wildlife Service, and the IUCN Species Program. All contributors and reviewers are cordially thanked for their time, efforts and contributions to improve earlier versions and are in no way responsible for errors or omissions.

Decision 16.122, paragraph b) concerning identification and capacity building materials

1. Background

At its 16th meeting (CoP16; Bangkok, 2013), the Conference of the Parties to CITES adopted Decisions 16.109 to 16.124[25] on *Tortoises and freshwater turtles (Testudines spp.)*, directed to the Secretariat, the Animals Committee, the Standing Committee and the Parties.

At the 65th meeting (SC65; Geneva, 2014) of the CITES Standing Committee, the Secretariat introduced document SC65 Doc. 45[26] on *Tortoises and freshwater turtles*, giving an overview of the status of the implementation of Decisions 16.109 to 16.124. The Secretariat noted that there were few responses from Parties to requests for data or reports in the context of these Decisions, recognizing that the considerable reporting requirements in different Decisions may have been to some extent dissuasive or confusing. The Secretariat expressed concern that this might impede the successful implementation of the Decisions on *Tortoises and freshwater turtles*.

The Secretariat reported that the activities and studies called for in Decision 16.119 paragraph b), and Decision 16.122 paragraphs a) and b), would be particularly important as they could complement or partially replace the progress reports and information that Parties are expected to submit in accordance with the Decisions on *Tortoises and freshwater turtles*, and consequently noted that the implementation of these Decisions could enhance the initiation of targeted activities. Strong support was expressed for the recommendation by the Secretariat to implement Decisions 16.119 paragraph b), and 16.122 paragraphs a) and b). The purpose of this study is to assist the Secretariat in the implementation of Decision 16.122 paragraph b), which states:

> ***Directed to the Secretariat***
>
> *16.122 The Secretariat shall:*
>
> *b) subject to external funding, contract a consultant to identify and evaluate tortoises and freshwater turtle identification and capacity-building materials, and assist with developing additional materials as deemed necessary, including the preparation and distribution of multilingual [Bahasa Indonesia, Bahasa Malaysia (Melayu), Bengali, Burmese, Chinese, English, Hindi, Khmer, Lao, Thai, Urdu, Vietnamese and other languages as appropriate] identification materials focused on the shells and shell pieces of Asian tortoises and freshwater and terrestrial turtles;*

2. Objectives

The objective of this study is to support the implementation of CITES Decisions on tortoises and freshwater turtles, through the completion of a review of identification and capacity-building materials available for tortoises and freshwater turtles, in accordance with the provisions of CoP Decision 16.122, paragraph b).

The findings of the work conducted should feed into the CITES Tortoises and Freshwater Turtles Task Force to be convened pursuant to Decision 16.119, paragraph b) and documentation for the 17th meeting of the CITES Conference of the Parties (CoP17, Johannesburg, September 2016).

3. Activities: Review of identification and capacity-building materials: activities to be conducted in accordance with Decision 16.122 b)

- Identify and evaluate tortoise and freshwater turtle identification materials available at a global level, including identification materials focusing on the shells and shell pieces of Asian tortoises and freshwater and terrestrial turtles. The evaluation should consider issues such as the accessibility, quality and quantity of the materials, and the distribution, uptake and utilization of available materials.
- Identify and evaluate available capacity-building materials at a global level relevant to the international trade in tortoises and freshwater turtles. The evaluation should consider issues such as the accessibility, quality and quantity of the materials, and the distribution, uptake and utilization of available materials.

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[25] https://cites.org/eng/dec/valid16/223

[26] https://www.cites.org/sites/default/files/eng/com/sc/65/E-SC65-45_0.pdf

- Evaluate the need for the development of additional identification materials globally, including the need for the preparation and distribution of multilingual (e.g. Bahasa Indonesia, Bahasa Malaysia (Melayu), Bengali, Burmese, Chinese, English, Hindi, Khmer, Lao, Thai, Urdu, Vietnamese and other languages as appropriate) materials.
- Evaluate the need for the development of additional capacity-building materials, including the need for the preparation and distribution of multilingual (e.g. Bahasa Indonesia, Bahasa Malaysia (Melayu), Bengali, Burmese, Chinese, English, Hindi, Khmer, Lao, Thai, Urdu, Vietnamese and other languages as appropriate) materials.
- Provide recommendations on the development of additional identification and capacity-building materials and/or the enhancement of existing materials as appropriate.

4. Findings: Identification Materials

Available identification materials for tortoises and freshwater turtles: Live specimens

Annex 1 to this report lists the most readily available and recent identification guides for live tortoises and freshwater turtles, broadly grouped by global coverage and CITES geographic region.

On balance, accurate and detailed identification guides and other materials for the great majority of tortoise and freshwater turtle species are freely available by downloading from the internet. All these identification materials are reasonably easy to use by people with basic knowledge of biology in general, and tortoises and freshwater turtles in particular, that could be expected of people working professionally with wildlife trade. While most tortoise and freshwater turtle identification materials are available in English, suitable guides with global coverage are available in pdf format in French, Spanish, Chinese and Turkish, with regional guides available in at least French, Spanish, Bahasa Indonesia, Bahasa Melayu, Burmese, Japanese, Khmer, Laotian, Thai and Vietnamese.

An equally accurate and easy to use smartphone app is available for a modest purchase price (about 10 US Dollars) covering all known species of tortoises, freshwater turtles and marine turtles, up to date to 2011, featuring several colour pictures per species.

Nevertheless, two shortcomings among available identification materials must be noted:

1) Taxonomy of tortoises and freshwater turtles, as well as the species included in the CITES Appendices, change relatively frequently, and many of the available references use outdated nomenclature and/or CITES Appendix listing status. Consulting the SpeciesPlus[27] database may be needed to double-check a species' currently valid name and/or CITES Appendix listing.
2) Available identification materials are relatively old and outdated, or hard to obtain, or both, for the tortoises and/or freshwater turtles of a few regions, particularly Central America, New Guinea, Sub-Saharan Africa (excluding Southern Africa and Madagascar), and the Caribbean. Global and regional guides covering most or all of the species of these regions exist, but double-checking is recommended to determine the current nomenclature of tortoise and freshwater turtle species of these regions.

Available identification materials for tortoises and freshwater turtles: Parts and derivatives

In contrast to the wide range of identification materials for live tortoises and freshwater turtles, identification resources for tortoise and freshwater turtle shells, bones, parts and derivatives are scarce and difficult to access.

Whole shells, carapaces and plastrons / plastra can be identified with reasonable reliability by using identification materials for live tortoises and freshwater turtles, especially if the scutes still adhere to the shells. The colouration and pattern of scutes, particularly of the plastron, is often quite diagnostic for species and many shells, and in some cases even shell pieces and fragments, can be identified to species with a high degree of confidence.

[27] http://speciesplus.net/species

Turtle shells, carapaces (upper shells) and plastrons/plastra (lower shells) without scutes still attached are challenging to identify, and require specialist examination and evaluation. The location and proportions of the lost scutes can usually still be determined by the presence of the sulcus, a distinct groove in the bone where the overlying scutes make contact, and the sutures between the individual bones are visible, which can also be of assistance for identification.

Skulls, limb bones, skulls and individual or broken shell bones are decidedly challenging to identify to species with confidence, and almost always will require examination by specialists with extensive experience with turtle anatomy, morphology, palaeontology and/or archaeology. One or two specialist publications exist for the identification of tortoise and freshwater turtle bones and fragments from archaeological deposits, but these publication are difficult to obtain and likely of limited practical use for officials inspecting wildlife shipments. In most such cases, identification assistance can best be obtained by contacting local or global specialists and sharing pictures of the specimens concerned. An alternative identification method would be to carry out DNA analysis of representative bone specimens if there are no clear indications that any DNA in the specimens has been degraded beyond recovery, by boiling or other heat treatments or by chemical means.

Cartilage from the shell of soft-shelled turtles (family Trionychidae) has come into trade over the past decade or so, being used as an ingredient in the food, traditional medicinal and cosmetics trades as a source of collagen. It is known to be collected and prepared in some countries of South Asia and Africa, and possibly elsewhere; it is normally traded in its dried form, when it appears as twisted hard dark strips of material. It is frequently falsely labelled as buffalo horn, which it resembles. Based on available information, no guidance exists for the identification of turtle cartilage and distinguishing it from look-alike materials.

Tortoises and freshwater turtles feature in the bushmeat trade of West and Central Africa and occasionally are exported beyond this region. Pictorial identification guidance and useful information is provided in the Bushmeat Information and Identification Guide prepared by Switzerland (2015[28]).

Identification of medicinal and other preparations containing tortoise and freshwater turtle materials or derivatives is extremely challenging. At the present, DNA analysis of such preparations appears to be the only way to evaluate and verify species content with some degree of certainty, though not all preparations yield viable DNA (Lo *et al*., 2006[29]).

Additional identification materials and resources needed

Based on the preceding review of available identification materials for tortoises and freshwater turtles, accurate identification materials for live specimens exist for all species world-wide (though noting that taxonomic changes may have occurred after their publication), and adequate identification material for most species can be consulted online, as a smartphone app, downloaded as pdf's, or obtained in book or printed form. With the exponential growth of publishing as a result of digital evolution and increased access to published and online resources on the internet, it is questionable whether there is great merit in updating the traditional CITES identification sheets and materials such as the identification WIKI, or whether external avenues to identification can be developed or adopted for CITES purposes.

In contrast, there is a clear need for guidance on identification of tortoise and freshwater turtle parts and derivatives in trade, such as shells, bone pieces, dried cartilage, meat, eggs, powders and packed processed products. These are product categories where it is unlikely that adequate identification materials will be produced by the usual sources of identification guides for live tortoise and freshwater turtle specimens, i.e. the academic, field conservation and/or hobbyist communities. It will be highly challenging to develop accurate identification materials for all bones, fragments and products, and if such detailed materials could be developed, the effort required may outweigh the practical utility for trade and wildlife inspectors. More likely, identification materials may need to be developed for categories of turtle parts & derivatives in trade, so that inspectors are made aware of the trade in these types of products, recognize such products in trade, and receive guidance for further identification resources and expertise that can be consulted. The Swiss bushmeat guide (Switzerland, 2015[30]) offers a useful model how the trade in tortoise and freshwater turtle parts and derivatives can be presented to wildlife and customs inspectors and officers. The guide could be a stand-alone document, or could be structured as a supplement to the CITES Identification Guide for Turtles and Tortoises

[28] https://cites.unia.es/cites/file.php/1/files/bushmeat-FSVO.pdf

[29] *Lo, C.F., Y.R. Lin, H.C. Chang, and J.H. Lin. 2006. Identification of Turtle Shell and its Preparations by PCR-DNA Sequencing Method. Journal of Food and Drug Analysis 14(2):153-158.*

[30] : https://cites.unia.es/cites/file.php/1/files/bushmeat-FSVO.pdf

prepared by Environment Canada. Preparation of such a guide could be sought from Parties, inter-governmental and/or non-governmental organizations, with input from Parties, species specialists, and the Secretariat throughout the process.

As regards different languages, there is no doubt that identification materials in national languages in East and Southeast Asia have been helpful for many officials, scientists and conservationists. At the same time, the absence of local-language tortoise and freshwater turtle identification materials has not emerged from Periodic Reports, surveys or other feedback to represent a critical impediment to trade management or enforcement. CITES being a treaty implemented in English, French and Spanish, and international tortoise and freshwater turtle trade being largely conducted and documented in these three languages, the great majority of inspectors and officers are able to use identification materials in these languages, or the available Chinese-character publications. Local-language identification materials will likely have particularly high value for offtake management and trade regulation at local and domestic levels.

Overall, it appears that the main challenge is not so much in obtaining tortoise and freshwater turtle identification materials, but in accurately applying them, given the variability of many species with age and between individuals. As such, the primary need is for a mechanism to confirm initial identifications made by wildlife inspectors, rather than additional materials that present the same information in a slightly different manner. In the companion study on illegal tortoise and freshwater turtle trade, the concept of a secure species identification assistance network is proposed. This would connect law enforcement officers to outside species identification expertise without compromising confidentiality. Enforcement officers can post pictures into a restricted-access online system and tag them with group or descriptive labels ("turtle", "possible turtle shell ornament"). The system would then send a message (email, sms) to one or more previously-vetted and approved specialists in the species or product category, alerting them to log in and assist with identification. Such a system could provide reliable identifications within minutes or hours (taking into account time zones and other practicalities) and assure confidentiality and greatest possible quality of evidence to be collected. For greatest efficiency, simple guidance on the key aspects to photograph of a tortoise or freshwater turtle (whole animal, plastron view, close-up of head if possible) should be included as part of the network resources; the guidance for digital vouchering provided by Bender (2001) and Lehn et al (2007) would be good starting points. Obviously such a system should not be developed for just tortoises and freshwater turtles, but could work for many wildlife species in trade, live and possibly parts and derivatives as well.

In cases where DNA analysis of specimens, parts or derivatives is needed to determine or verify species identity, contact details for molecular laboratories with capacity to analyse wildlife samples will be needed. At the time of writing, the Secretariat in cooperation with the UNODC has concluded a survey of wildlife forensic laboratory capacity (Notification 2015/061[31]); the results of this effort will be directly pertinent to any needs for molecular analysis of tortoise and freshwater turtle samples.

At the risk of burdening Parties with additional reporting expectations, it will be interesting to survey their (perceived) needs for tortoise and freshwater turtle identification materials, possibly in the context of broader surveys of identification materials and capacity building needs concerning CITES-listed species.

5. Findings: Available capacity building materials relevant to international trade in tortoises and freshwater turtles

Identification materials are the foundation of regulated management, trade and enforcement regarding tortoises and freshwater turtles and have been reviewed in the preceding section, but additional aspects deserve guidance and capacity building attention.

Implementation of the CITES convention in general is a broad subject that is extensively covered by existing training and capacity building materials for officers of Management, Scientific and Enforcement Authorities, as well as traders and the general public. Capacity building materials for general CITES implementation are beyond the scope of this study.

Non-Detriment Findings (NDFs) represent the scientific risk assessment upon which to evaluate the sustainability of trade on the survival of the wild population from which offtake occurs, and may be extended to evaluate the potential impact of trade on other populations and species. Extensive guidance on the NDF process and case studies for a variety of species (groups) have been developed for CITES Authorities over the past decade or longer. Recently (2015) NDF guidance for tortoises and freshwater turtles was prepared

[31] https://cites.org/sites/default/files/notif/E-Notif-2015-061.pdf

and made available (see Annex 2 of AC28 Doc. 15[32]). While the tortoise and freshwater turtle NDF guidelines include reference to useful sources describing methodology and biological information, however, it is clear that further information compilation and provision, and capacity building in the effective and accurate sourcing and use of this information, will be needed.

Establishing quotas is an extension of the NDF process that is used by a number of Parties to manage tortoise and freshwater turtle offtake and trade. There have on occasion been issues with quotas being exceeded, and monitoring the fulfilment of an annual or provincial quota in the course of the year is a task for the management authority. This task is likely to become more efficient as more and more Parties gradually move towards e-permitting systems, which have the inherent ability to provide real-time data on the number of permits issued at any given moment, and the number of specimens covered by these permits. While significant for a number of tortoise and freshwater turtle species, this is a general development beyond the scope of this report.

Knowledge of species protection status in CITES, domestic law and foreign jurisdictions is essential for adequate offtake and trade management and enforcement. In the great majority of situations, MA, SA and enforcement officers are well aware of the applicable laws and species status. In some situations, such as under the Lacey Act of the United States, wildlife protective legislation in the country of origin of traded specimens remains effective and enforceable in a different country. For breaches of wildlife law in one jurisdiction to be effectively enforced in another jurisdiction, it is essential that officers have access to foreign wildlife laws and regulations. The ECOLEX database[33] provides access to numerous environmental laws of the world's countries, though it is often not easy to find the specific applicable laws and regulations concerning a species-country combination, as many are in the form of scans of photocopies and not searchable or keyword-indexed. It might be helpful to many institutions and individuals to encourage ECOLEX to gradually replace scanned image documents with searchable digital text versions of laws and regulations, with text and advanced search capabilities, so that it would be relatively simple to find the laws of a particular country that mention a specific species or keyword. Beyond this, a summary overview of pertinent laws per country (similar to the overview of Legal Authority concerning Reptiles and Amphibians (Nanjappa and Conrad, 2011) available for the United States) would be exceedingly useful, but would require extensive efforts to produce.

As noted in the studies on illegal tortoise and freshwater turtle trade and on Non-Detriment Findings for tortoises and freshwater turtles, for several of these species the international trade is restricted to (or subject to different regulations for) specimens originating from captive production facilities. Guidance is available to assist authorities to evaluate the likely wild or captive origin of tortoise and freshwater turtle specimens in trade (Benyr, 2014; also briefly discussed in Annex 2 of AC28 Doc. 15[34]). In addition, guidance for the inspection and validation of captive breeding facilities for reptiles in Southeast Asia has been prepared (TRAFFIC, 2013b) and additional guidance for captive facility inspection is in development (e.g., see SC66 Doc. 41.1[35]) and will likely be of great value.

Additional capacity building materials needed

At present, it appears that there are no glaring absences of critical capacity building and training materials that are specific to trade in tortoises and freshwater turtles. Their trade is an integral part of the overall trade in CITES-listed species and relies to a large extent on adequate implementation of the CITES Convention by all Parties.

While guidance for Non-Detriment Findings for tortoises and freshwater turtles are available, much more can be done to compile and provide pertinent information to SA staff and others. In particular, population assessment and monitoring techniques warrant additional attention, as do population dynamics and population structure, specifically aspects of gross and net population recruitment rates in relation to offtake rates, for trade and other impacts on populations.

Correspondingly, extensive scope remains for expansion, improvement and refinement of evaluation processes for captive production systems for tortoises and freshwater turtles, in the areas of inspection, verification and possibly registration of captive breeding facilities, as well as in improving the available materials and expertise to differentiate between captive-born, captive-reared, and wild-sourced specimens in trade or held in captive facilities.

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[32] *https://cites.org/sites/default/files/eng/com/ac/28/E-AC28-15-Annex2.pdf*

[33] *http://www.ecolex.org/start.php*

[34] *https://cites.org/sites/default/files/eng/com/ac/28/E-AC28-15-Annex2.pdf*

[35] https://cites.org/sites/default/files/eng/com/sc/66/E-SC66-41-01x.pdf

The international trade in tortoises and freshwater turtles has been found to have potentially significant impacts on wild populations (AC25 Doc.19 Annex, 2011[36]) and to have a significant illegal or semi-legal trade component (see companion report on Decision 16.122, paragraph a)). Thus, it is recommended that tortoises and freshwater turtles can be emphasized appropriately in current and future capacity building efforts by the CITES Secretariat and Parties. In addition, it will be helpful if specific capacity building needs regarding tortoise and freshwater turtles can be articulated by Parties through an appropriate avenue, such as the Annual or Biannual Reports or through surveys of capacity building needs conducted by the CITES Secretariat and Committee Working Groups.

6. Recommendations

From the analysis of existing and needed identification and capacity building materials for tortoises and freshwater turtles, it is recommended to:

- Develop an introductory guide to the recognition and general identification of tortoise and freshwater turtle parts and derivatives in (international) trade, to enable inspectors to recognize tortoise and freshwater turtle parts and derivatives in general, enable identification of specific diagnostic items, appreciate the permit requirements for such shipments, and receive guidance for further identification assistance and resources.

- Establish a rapid-response secure identification network for tortoises and freshwater turtles (and other wildlife) in trade, using email, sms, and/or mobile phone pictures to connect wildlife inspectors to a network of trusted species identification specialists.

- Develop simple guidance for wildlife inspectors (and others) on how to photograph a tortoise or freshwater turtle specimen, part or derivative, for identification by external specialists.

- Encourage ECOLEX to progressively replace scanned image versions of laws and regulations with searchable digital text versions, and provide text-search and advanced search capabilities, so that it will be relatively simple to find the laws of a particular country that mention a specific species or keyword.

- Develop further guidance concerning tortoises and freshwater turtles on aspects of population survey and monitoring, population dynamics in relation to offtake rates, inspection of captive breeding facilities, and differentiation of specimens originating from the wild from those from captive production systems.

- Explore options for the Capacity Building team at the CITES Secretariat and Committee Working Groups to incorporate specific items concerning tortoises and freshwater turtles in surveys of the Parties' needs for identification materials and capacity building efforts.

- Encourage the private sector to produce an updated turtle identification app for all smartphone platforms and available in multiple languages.

ANNEX

Identification Resources for Tortoises and Freshwater Turtles - Global

CITES WIKI Identification Guide http://www.cites.org/eng/resources/wiki_id.shtml and mirrored at http://citeswiki.unep-wcmc.org

CITES Identification Guide – Turtles and Tortoises: Guide to the Identification of Turtles and Tortoises Species Controlled under the Convention on International Trade in Endangered Species of Wild Fauna and Flora / An initiative of Environment Canada and PROFEPA (SEMARNAP). Ottawa: Environment Canada, 1999. 232 pp. Trilingual pdf in English, French and Spanish: https://cites.unia.es/cites/file.php/1/files/CAN-CITES_Turtle_Guide.pdf

Turkish edition: https://cites.unia.es/cites/file.php/1/files/turtles-tortoises-TR.pdf

Chinese edition: Guide to the Identification of Turtles and Tortoises Species Controlled under CITES. (1999). Edited by Tien-Hsi Chen, Vincent Y. Chen. 64pp plus indexes. In collaboration with: CITES Secretariat,

[36] *https://cites.org/sites/default/files/eng/com/ac/25/E25-19.pdf*

Geneva, Switzerland, TRAFFIC North America, Commission for Environmental Cooperation, Biodiversity Convention Office, Environment Canada. PDF, 9.3 MB: http://www.traffic.org/species-reports/traffic_species_reptiles15.pdf

Species accounts of the *Conservation Biology of Freshwater Turtles and Tortoises* series http://www.iucn-tftsg.org/toc/

Vetter, H. 2011. *Terralog: Turtles of the World Vol.1 – Africa, Europe, and Western Asia.* 2nd Edition. Edition Chimaira, Frankfurt am Main. 152 pp. ISBN 978-3-930612-27-7.

Vetter, H. 2004. *Terralog: Turtles of the World Vol.2 – North America*. Edition Chimaira, Frankfurt am Main, and Verlag ACS GmbH, Rodgau. 127 pp. ISBN 3-930612-57-7.

Vetter, H. 2005. *Terralog: Turtles of the World Vol.3 – Central and South America.* Edition Chimaira, Frankfurt am Main, and Verlag ACS GmbH, Rodgau. 129 pp. ISBN 3-930612-82-2.

Vetter, H., & P.P. van Dijk. 2006. *Terralog 4, Turtles of the World Vol. 4 – East and South Asia*. Edition Chimaira / AQUALOG Verlag ACS GmbH, Frankfurt am Main. 160 pp. ISBN 3-930612-84-4.

SEATURTLE.ORG. 2005. Sea Turtle Identification Key. 2 pp. [in English]. http://www.seaturtle.org/documents/ID_sheet.pdf and http://www.reef.org/reef_files/TurtleID.pdf

McCloud, K. 2008. A Photographic Identification Guide to Star-Patterned Tortoises. Identification Guides for Wildlife Law Enforcement No.12. USFWS, National Fish and Wildlife Forensics Laboratory, Ashland, OR. http://www.asianturtleprogram.org/pages/resources/May2008-McCloud_Star_Tortoise_patterns/McCloud_2008_Star_tortoise_patterns.pdf

Shi, H.T., M. Hou, P. Pritchard, M. Lau, J.C. Wang, Y.-X. Liu, and F. Yeh (eds). 2013. Identification Manual for the Conservation of Turtles in China. Encyclopedia of China Publishing House, Beijing, China. 174 pp. ISBN 978-7-5000-9246-9. https://cites.unia.es/cites/file.php/1/files/Identification_manual_conservation_turtles-china1.pdf

ETI BioInformatics. 2011. *Turtles of the World*. Smartphone version of the DVD-ROM "Turtles of the World" by C.H. Ernst, R.G.M. Altenburg and R.W. Barbour published by ETI, Netherlands, ISBN: 90-75000-82-0, republished for use on iPhone, iPad and iPod touch. USD 9.99. [apparently no Android version available] https://itunes.apple.com/us/app/turtles-of-the-world/id424806942?mt=8

Identification resources - Africa

Branch, B. 2008. *Tortoises Terrapins & Turtles of Africa*. Struik Publishers, Capetown. 128 pp. ISBN 978 77007 463 7.

Vetter, H. 2011. *Terralog: Turtles of the World Vol.1 – Africa, Europe, and Western Asia.* 2nd Edition. Edition Chimaira, Frankfurt am Main. 152 pp. ISBN 978-3-930612-27-7.

Boycott, R.C., and O. Bourquin. 2000. The Southern African Tortoise Book. (Revised Ed.). Bourquin publishing, Hilton, South Africa. 228 pp. ISBN 0-620-26536-1.

Leuteritz, T.E., J. Gerlach, R.A. Mittermeier, A.G.J. Rhodin, P.P. van Dijk, R. Lewis, and H. Randriamahazo. 2007/2008. Turtles and Tortoises of Madagascar and Adjacent Indian Ocean Islands – Pocket Identification Guide. Conservation International, Arlington, VA. ISBN 978-1-934151-15-0. http://www.chelonian.org/wp-content/uploads/file/Leuteritz_etal_2008_Madagascar.pdf

Pauwels, O.S.G., and J.P. Vande Weghe. 2008. Les Reptiles du Gabon. Smithsonian Institution Press, Washington DC, USA. 298 pp. ISBN 978-1893912014.

Spawls, S., K. Howell, R. Drewes and J. Ashe. 2002. *A Field Guide to the Reptiles of East Africa*. Academic Press, London & San Diego. 543 pp. ISBN 0-12-656470-1.

Trape, J.F., S. Trape and L. Chirio. 2012. *Lézards, crocodiles et tortues d'Afrique occidentale et du Sahara.* IRD Editions, Marseille, France. 503 pp. ISBN 798-2-7099-1726-1.

Identification resources - Asia:

Vetter, H. 2011. *Terralog: Turtles of the World Vol.1 – Africa, Europe, and Western Asia.* 2nd Edition. Edition Chimaira, Frankfurt am Main. 152 pp. ISBN 978-3-930612-27-7.

Vetter, H., & P.P. van Dijk. 2006. *Terralog 4, Turtles of the World Vol. 4 – East and South Asia*. Edition Chimaira / AQUALOG Verlag ACS GmbH, Frankfurt am Main. 160 pp. ISBN 3-930612-84-4.

Shi, H.T., M. Hou, P. Pritchard, J.J. Peng, Z. Fan, & F. Yin (eds). 2008. Identification Manual for Traded Turtles in China. China Encyclopedia Press, Beijing, China. 168 pp. ISBN 978-7-5000-7937-8. [in Chinese].

Shi, H.T., M. Hou, P. Pritchard, M. Lau, J.C. Wang, Y.-X. Liu, and F. Yeh (eds). 2013. Identification Manual for the Conservation of Turtles in China. Encyclopedia of China Publishing House, Beijing, China. 174 pp. ISBN 978-7-5000-9246-9. https://cites.unia.es/cites/file.php/1/files/Identification_manual_conservation_turtles-china1.pdf

ESIEMO PR China (Endangered Species Import and Export Management Office of the People's Republic of China). 2002a. *Identification Manual for Common Turtles and Tortoises*. China Forestry Publishing House, Beijing, China. 174 pp. ISBN 7-5038-3022-0.

Purkayastha, J., I. Das, and S. Sengupta. 2015. Freshwater Turtles & Tortoises of South Asia. Bhabani Books, Guwahati, India. 138 pp. ISBN 978-93-81139-83-7. Pdf file available from first author free of charge for CITES authorities, contact <mail.jayaditya[at]gmail.com>

Das, I. 1991. *Colour Guide to the Turtles and Tortoises of the Indian Subcontinent.* R & A Publishing Ltd, Portishead, Avon, England, 133 pp. ISBN 1-872688-02-0.

TRAFFIC. 2013a. *Identification sheets for wildlife traded in South-East Asia.* Second edition, 98pp. TRAFFIC Southeast Asia, Petaling Jaya, Malaysia. English version (PDF, 10 MB): http://www.traffic.org/id-reports/traffic_pub_identification4.pdf . Versions in the languages of Brunei Darussalam, Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Myanmar, Philippines (Tagalog), Singapore (English), Thailand and Viet Nam available at http://www.esabii.biodic.go.jp/training/

Platt, K., S. Platt, Win Ko Ko, Khin Myo Myo, Kyaw Moe and Me Me Soe. 2014. *Photographic Guide to the Freshwater Turtles and Tortoises of Myanmar*, second edition. Turtle Conservation Team (MOECAF, WCS, TSA), Yangon, Myanmar. 56 pp. Bilingual Burmese and English.

Stuart, B.L., P.P. van Dijk and D.B. Hendrie. 2002 "2001". *Photographic Guide to the Turtles of Thailand, Laos, Vietnam and Cambodia*. Four bilingual versions, Thai/English (ISBN 0-9632064-8-6), Laotian/English (ISBN 0-9632064-7-8), Vietnamese/English (ISBN 0-9632064-9-4), & Khmer/English (ISBN 0-9632064-6-X); each 84 pp. Wildlife Conservation Society Asia Program, Wetlands International, TRAFFIC and The World Bank, July 2002.

Hendrie,, D.B., B.D. Phong, T. McCormack, H.V. Ha and P.P. van Dijk. 2010. *Identification guide for law enforcement officers to the tortoises and freshwater turtles of Vietnam*. ENV, Humane Society International, Cuc Phuong Turtle Conservation Center, and the Asian Turtle Program. 66 pp.
Vietnamese version: http://www.asianturtleprogram.org/pages/resources/New-Turtle-ID-book-20Sep10/Turtle ID book 2011.pdf

Auliya, M. 2007. *An Identification Guide to the Tortoises and Freshwater Turtles of Brunei Darussalam, Indonesia, Malaysia, Papua New Guinea, Philippines, Singapore and Timor Leste*. TRAFFIC Southeast Asia, Petaling Jaya, Malaysia. 100 pp. ISBN 978-983-3393-10-7.

Lim, Boo Liat, and Indraneil Das. 1999. *Turtles of Borneo and Peninsular Malaysia*. Natural History Publications (Borneo), Kota Kinabalu. x + 151 pp. ISBN 983-812-039-1.

Identification resources - Central and South America and the Caribbean:

Rueda-Almonacid, J.V., J.L. Carr, R.A. Mittermeier, J.V. Rodríguez-Mahecha, R.B. Mast, R.C. Vogt, A.G.J. Rhodin, J. De La Ossa-Velásquez, J.N. Rueda, and C.G. Mittermeier. 2007. *Las tortugas y los cocodrilianos de los países andinos del trópico*. (The turtles and crocodilians of the countries of the Tropical Andes.) [In Spanish]. Bogotá, Colombia: Editorial Panamericana, Formas e Impresos, Serie de guías tropicales de campo No. 6, Conservación Internacional, 538 pp. http://www.chelonian.org/wp-content/uploads/file/Rueda-Almonacid_etal_2007

Vogt, R.C. 2008. *Amazon Turtles*. 104 pp. ISBN 978-603-4017-07-8.

Vetter, H. 2005. *Terralog: Turtles of the World Vol.3 – Central and South America.* Edition Chimaira, Frankfurt am Main, and Verlag ACS GmbH, Rodgau. 129 pp. ISBN 3-930612-82-2.

Identification resources - Europe

Vetter, H. 2011. *Terralog: Turtles of the World Vol.1 – Africa, Europe, and Western Asia.* 2nd Edition. Edition Chimaira, Frankfurt am Main. 152 pp. ISBN 978-3-930612-27-7.

Fritz, U. (Ed.). 2001. *Handbuch der Reptilien und Amphibien Europas, Band 3/IIIA: Schildkröten (Testudines) I.* Aula-Verlag, Wiebelsheim, Germany. 594 pp. ISBN 3-89104-004-0. [in German].

Identification resources - North America

Vetter, H. 2004. *Terralog: Turtles of the World Vol.2 – North America*. Edition Chimaira, Frankfurt am Main, and Verlag ACS GmbH, Rodgau. 127 pp. ISBN 3-930612-57-7.

Ernst, C.H., and J.E. Lovich. 2009. Turtles of the United States and Canada. 2nd Ed. The Johns Hopkins University Press, Baltimore, MD, USA. 827 pp. ISBN 978-0-8018-9121-2.

Lindeman, P.V. 2013. The Map Turtle and Sawback Atlas: Ecology, Evolution, Distribution, and Conservation. University of Oklahoma Press, Norman, OK, USA. 460 pp. ISBN 978-0-8061-4406-1.

Buhlmann, K., T. Tuberville and W. Gibbons. 2008. Turtles of the Southeast. University of Georgia Press, Athens, GA, USA. 252 pp. ISBN 978-0-8203-2902-4.

Meylan, P.A. (Ed.). 2006. *Biology and Conservation of Florida Turtles*. Chelonian Research Monographs, Number 3. Chelonian Research Foundation, Lunenburg, MA, USA. 376 pp. ISBN 0-9653540-4-0. http://www.chelonian.org/crm-3/

Identification resources - Oceania

Cann, J. 2008. *Freshwater Turtles*. Steve Parish Publishing Pty Ltd, Archerfield, Australia. 96 pp. ISBN 9781741934120.

Identification resources – parts & derivatives

Switzerland. 2015. Federal Food and Safety and Veterinary Office, Tengwood Organisation *Bushmeat: Information and identification guide*. A collaboration of the Federal Food Safety and Veterinary Office and Tengwood Organisation. [Bern, Switzerland: FSVO, 2015. Available in English and French: https://cites.unia.es/cites/file.php/1/files/bushmeat-FSVO.pdf

WCS Vietnam Wildlife Trade identification website [in Vietnamese]: http://www.giamdinhloai.vn/Desktop.aspx/Home/

Pendry, S., C. Allen, J. Wu and G. Cameron. 2004. Traditional Asian medicine identification guide for law enforcers: version II). Her Majesty's Customs and Excise, London and TRAFFIC International, Cambridge, UK. A guide to assist enforcers to determine which medicines and ingredients are legal or illegal. 322pp. http://www.traffic.org/medicinalreports/ traffic_pub_medicinal5.pdf

Guidelines to photographically document turtles:

Bender, C. 2001. Photodocumentation of Protected Reptiles. German Society for Herpetology and Terrarium Keeping (DGHT) e.V.,, Rheinbach. 28 pp. ISBN 3-9806577-2-8.

Lehn, C., I. Das, M.R.J. Forstner and R.M. Brown. 2007. Responsible Vouchering in Turtle Research: An Introduction and Recommendations. In: Shaffer, H.B., FitzSimmons, N.N., Georges, A., and Rhodin, A.G.J. (Eds.). *Defining Turtle Diversity: Proceedings of a Workshop on Genetics, Ethics, and Taxonomy of Freshwater Turtles and Tortoises*. Chelonian Research Monographs No. 4, pp. 147-156. http://www.chelonian.org/wp-content/uploads/file/CRM%204/CRM_4_2007_Shaffer_FitzSimmons_Georges_Rhodin_Defining_Turtle_Diversity.pdf

Nomenclature, synonyms, and distribution of turtles:

Standard Reference for Nomenclature of turtles: Fritz, U., & P. Havaš. 2007. Checklist of Chelonians of the World (including Appendix). *Vertebrate Zoology*, Vol. 57 (2): 149-368. http://www.senckenberg.de/files/content/forschung/publikationen/vertebratezoology/vz57-2/57-2_fritz_149-368.pdf

SpeciesPlus website: http://speciesplus.net/species

Turtle Taxonomy Working Group (TTWG) annual *Checklist*: http://www.iucn-tftsg.org/checklist/ [documenting recent scientific literature on turtle taxonomy, not always consistent with adopted CITES nomenclature].

Non-Detriment Findings

CITES. 2015. Non-Detriment Findings and Trade Management for Tortoises and Freshwater Turtles-a guide for CITES Scientific and Management Authorities. Annex 2 of AC28 Doc. 15 : https://cites.org/sites/default/files/eng/com/ac/28/E-AC28-15-Annex2.pdf

NDF section on CITES virtual college website: https://cites.unia.es/mod/resource/view.php?id=57&lang=en#ID-manuals

CITES. 2011. Document AC25 Doc.19 Annex: A study of progress on conservation of and trade in CITES-listed tortoises and freshwater turtles in Asia. https://cites.org/sites/default/files/eng/com/ac/25/E25-19.pdf

Captive breeding facilities inspection and differentiation of wild-collected from captive-raised turtles

Benyr, G. 2014. Die Unterscheidung von Wildfangen und Nachzuchten bei Reptilien: Bedeutung für den Artenschutz. Bundesministerium für ein lebenswertes Österreich, [in German]. 182 pp. http://www.bmlfuw.gv.at/umwelt/natur-artenschutz/cites/berichte/citeswildentnahme.html

TRAFFIC. 2013b. *Inspection Manual for use in Commercial Reptile Breeding Facilities in Southeast Asia*. Report prepared by TRAFFIC. Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Geneva, Switzerland. 81 pages. https://cites.unia.es/cites/file.php/1/files/cb-captive-breeding-manual-en.pdf or https://cites.org/sites/default/files/eng/com/ac/27/E-AC27-Inf-17_0.pdf

Wildlife Legislation resources

FAO, IUCN and UNEP. ECOLEX – the gateway to environmental law. http://www.ecolex.org/start.php [in English, French and Spanish].

Nanjappa, P., and P.M. Conrad (eds.). 2011. State of the Union: Legal Authority over the Use of Native Amphibians and Reptiles in the United States. Version 1.03. Association of Fish and Wildlife Agencies, Washington DC. 225 pp. http://www.fishwildlife.org/files/SOU_FULL-lo-res.pdf

Contact details for Expert consultation

CITES Nomenclature Specialist – Zoology: see the CITES Website -> Animals Committee members: http://www.cites.org/eng/com/ac/member.php

IUCN SSC Tortoise & Freshwater Turtle Specialist Group: http://www.iucn-tftsg.org/contact/

Studbook Keepers for Tortoises and Freshwater Turtles:

- European Studbook Foundation (ESF): http://www.studbooks.eu. List of studbook keepers by species (click on name of species' studbook keeper to email): http://www.studbooks.eu/index.php?option=com_content&view=article&id=244&Itemid=343
- American Zoo Association Animal Programs: https://www.aza.org/animal-programs/ ; email <conservation[at]aza.org>

Rescue facilities and assistance with placement of seized turtles:

- Species Survival Network directory of Wildlife Rescue Facilities: http://www.ssn.org/cites_rescue_intro_EN.htm
- Turtle Survival Alliance: http://www.turtlesurvival.org/contact

PROYECTOS DE DECISIÓN PARA SOMETERLOS A LA CONSIDERACIÓN DE LA COP17
TORTUGAS TERRESTRES Y GALÁPAGOS (TESTUDINES SPP.)

Dirigida a la Secretaría

17.A La Secretaría, sujeto a la disponibilidad de financiación externa, deberá:

a) en colaboración con las Partes que necesiten ayuda y con los expertos correspondientes, proporcionar o desarrollar orientaciones para las Autoridades Científicas y Administrativas de la CITES sobre:

i) las técnicas para estudiar y hacer seguimientos de las poblaciones silvestres de tortugas terrestres y galápagos, evaluar los impactos de la extracción y aplicar programas de gestión adaptativa en el contexto de formulación de dictámenes de extracción no perjudicial; y

ii) la diferenciación entre ejemplares procedentes del medio silvestre y ejemplares obtenidos de sistemas de cría en cautividad o en granjas;

b) contratar consultores para que, en colaboración con las Partes pertinentes, expertos y el ICCWC, desarrollen una guía sobre las categorías de partes y derivados de tortugas que se encuentran en el comercio; la guía estará dirigida a los organismos nacionales responsables de la aplicación de las leyes para la protección de la vida silvestre a fin de fomentar su conocimiento sobre el comercio de este tipo de especímenes, permitir una identificación inicial de los mismos y proporcionar una orientación sobre otros recursos de identificación existentes y expertos que puedan ser consultados; y

c) en colaboración con el ICCWC y con las Partes y expertos correspondientes, establecer una red segura de identificación, de respuesta rápida, a fin de que los funcionarios de inspección estén en contacto con una red de especialistas acreditados en la identificación de especies; se empezaría con una fase inicial piloto centrada en tortugas terrestres y galápagos y posteriormente, si fuese procedente, se podría extender a otras especies.

17.B La Secretaría informará sobre la aplicación de la Decisión 17.A durante la 18ª reunión de la Conferencia de las Partes.

Dirigida al Comité de Fauna

17.C El Comité de Fauna estudiará la guía proporcionada o desarrollada de acuerdo con lo previsto por la Decisión 17.1, párrafos a) y b), y formulará sus recomendaciones que se someterán a la consideración de la Secretaría.

PRESUPUESTO Y FUENTE DE FINANCIACIÓN PROVISIONALES
PARA LA IMPLEMENTACIÓN DE PROYECTOS DE RESOLUCIÓN O DECISIÓN

Según la Resolución Conf. 4.6 (Rev. CoP16) sobre la *Presentación de proyectos de resolución, proyectos de decisión y de otros documentos para las reuniones de la Conferencia de las Partes*, la Conferencia de la Partes decide que cualquier proyecto de resolución o decisión presentado a la consideración de la Conferencia de las Partes que incida en el presupuesto y en el volumen de trabajo de la Secretaría o de los comités de carácter permanente, debe incluir o llevar anexado un presupuesto correspondiente al trabajo previsto y una indicación de la fuente de financiación.

La aplicación de los proyectos de Decisión presentados en el Anexo 5 tendrían implicaciones presupuestarias y de carga de trabajo para la Secretaría, además de implicar una carga de trabajo para el Comité de Fauna y el Comité Permanente, tal y como se describe a continuación:

Decisiones 17.A y 17.B

La aplicación del proyecto de Decisión 17.A estaría sujeta a la obtención de financiación externa y no sería necesaria su financiación de los fondos básicos. La supervisión del trabajo y la colaboración con los consultores, Partes pertinentes, expertos y socios del ICCWC requeriría la dedicación de tiempo por parte de la Secretaría que, no obstante, debe incluirse como parte básica del trabajo de la Secretaría e integrarse en su programa de trabajo ordinario.

Decisión 17.C

Es posible que las tareas asignadas al Comité de Fauna conforme a lo previsto por el proyecto de Decisión 17.C requieran que el Comité trabaje entre sesiones y dedique tiempo en sus reuniones a ellas. No obstante, la Secretaría opina que el trabajo puede encajarse en el programa de trabajo ordinario del Comité, sin necesidad de financiación adicional.