

VOL. 25 NO. 2

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TRAFFIC

B U L L E T I N



**REPORT OF 16TH
CITES MEETING**

**CAMBODIA AND SINGAPORE:
THE DECLINE IN DOMESTIC
IVORY MARKETS**

**GREEN IGUANAS
IN COLOMBIA**

The journal of the TRAFFIC network disseminates information
on the trade in wild animal and plant resources

OCTOBER 2013

TRAFFIC

the wildlife trade monitoring network

TRAFFIC was established in 1976 to perform what remains a unique role as a global specialist, leading and supporting efforts to identify and address conservation challenges and solutions linked to trade in wild animals and plants.



MIKE GOLDWATER / WWF-CANON

TRAFFIC's Vision is of a world in which trade in wild plants and animals is managed at sustainable levels without damaging the integrity of ecological systems and in such a manner that it makes a significant contribution to human needs, supports local and national economies and helps to motivate commitments to the conservation of wild species and their habitats.

TRAFFIC

Trade in wildlife is vital to meeting the needs of a significant proportion of the world's population. Products derived from tens of thousands of species of plants and animals are traded and used for the purposes of, among other things, medicine, food, fuel, building materials, clothing and ornamentation.

Most of the trade is legal and much of it sustainable, but a significant proportion is not. As well as threatening these resources, unsustainable trade can also lead to species declining in the wild to the point that they are threatened with extinction. Illegal trade undermines local, national and international efforts to manage wild natural resources sustainably and causes massive economic losses.

TRAFFIC is a strategic alliance of WWF and IUCN, the International Union for Conservation of Nature. The role of

TRAFFIC is to seek and activate solutions to the problems created by illegal and/or unsustainable wildlife trade. TRAFFIC's aim is to encourage sustainability by providing government, decision-makers, traders, businesses, consumers and others with an interest in wildlife trade with reliable information about trade volumes, trends, pathways and impacts, along with guidance on how to respond where trade is illegal or unsustainable. Eight regional TRAFFIC programmes are co-ordinated by the TRAFFIC headquarters in Cambridge, UK.

TRAFFIC's reports and advice provide a technical basis for the establishment of effective conservation policies and programmes to ensure that wildlife is maintained within sustainable levels and conducted according to national and international laws and agreements. The journal of the TRAFFIC network, *TRAFFIC Bulletin*, is the only journal devoted exclusively to issues relating to international trade in wild plants and animals. Provided free of charge to over 4000 subscribers and freely available from the TRAFFIC website (www.traffic.org), it is a key tool for disseminating knowledge of wildlife trade and an important source of information for those in a position to effect change and improve awareness.



MARTIN HARVEY / WWF-CANON

Much of the content published in the *TRAFFIC Bulletin* arises from investigations carried out by TRAFFIC staff, whose wide-ranging expertise allows for a broad coverage of issues. TRAFFIC has also built up a global network of contacts with, for example, law enforcement agents, scientists, and wildlife experts, some of whom are regular contributors to the *TRAFFIC Bulletin*.

TRAFFIC welcomes articles on the subject of wildlife trade that will bring new information to the attention of the wider public; guidelines are provided in this issue and online to assist in this process. For more information, please contact the editor: Kim Lochen (kim.lochen@traffic.org).



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SIMON RAWLES / WWF-CANON

The *TRAFFIC Bulletin* is a publication of TRAFFIC, the wildlife trade monitoring network, which is the leading non-governmental organization working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development. TRAFFIC is a strategic alliance of WWF and IUCN.

The *TRAFFIC Bulletin* publishes information and original papers on the subject of trade in wild animals and plants, and strives to be a source of accurate and objective information.

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Green Iguana *Iguana iguana*
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Reduction in demand for ivory in Singapore, but transit trade vigilance needed

Lola Webber, Chris R. Shepherd and Kanitha Krishnasamy



Interventions to tackle the illegal trade in endangered species have focused traditionally on reducing the supply of wildlife specimens, parts, products and derivatives into the market. These have taken a variety of approaches: for example, by protecting flora and fauna in range countries, closing legal gaps and loopholes, enhancing law enforcement effort, increasing seizures and prosecutions and strengthening the suite of penalties and other deterrents aimed at poachers and traffickers.

EDITORIAL

Despite such efforts, however, during the past decade there has been a significant increase in the volume of illegal wildlife trade for some species, and a shift in the dynamics underpinning it. Factors driving this include a surge in demand, largely from East and South-east Asian markets, for endangered species products such as elephant ivory, rhinoceros horn, Tiger bones and skins, luxury woods, reptile skins and species used in traditional medicines.

Since 2008, sustained economic growth in parts of Asia, China in particular, has provided a counterbalance to a period of increased volatility and widespread recession in Europe and North America. Three decades of unprecedented social, political and economic transformation have also generated important opportunities for improvements in quality of life and increased purchasing power across the majority of Asian economies. This has also given rise to trends such as the conspicuous consumption of unique and precious luxury goods, including rare wildlife products.

TRAFFIC's trade and market monitoring shows that products derived from particular species of wild fauna and flora, many long-venerated, pervasive and deep-rooted in Asian countries' cultural history, are part of that general profile of status-driven consumption.

When juxtaposed against increasing species scarcity, this rising demand has made wildlife crime a lucrative endeavour, and thus an attractive prospect for well-organized criminal syndicates. Interventions to disrupt these will only be effective if an integrated approach to doing so is adopted; i.e. by reducing the demand for endangered species products while concurrently pursuing ways to increase law enforcement effectiveness and limit the supply of products into the market.

Recognizing the magnitude of the challenge, TRAFFIC and WWF convened at the end of 2011 a group of "creative experts" to coalesce ideas and experience on influencing public behaviour. Success factors and challenges common across fields beyond nature conservation were explored in depth, e.g. environmental economics and public healthcare. Representatives from the media, public relations, management advisory and other companies, as well as Inter-Governmental Organizations, academia and government, agreed that "demand reduction" interventions to dissuade consumption would only work if accurately targeted, based on empirical evidence about purchasing motivations, and with messaging delivered by those persons and vectors influential with key audiences.

A clear consensus was also expressed: to be effective, demand reduction messaging should be tailored to people's interests, attitudes, values and desires—for example, their hopes of attaining social status and reinforcing self-worth. Conservation messaging has historically emphasized the need to protect animals instead, e.g. by urging compassion for their plight or to protect the planet for future generations. Expert opinion recognized, however, that this was unlikely to resonate with those whose behaviour and leadership would be essential to drive change in consumption patterns.

Building on this set of insights, TRAFFIC has since developed a five-step process grounded in social science principles, led by statutory authorities and engaging a wide variety of stakeholders, as a framework for future demand reduction initiatives. Two years on, this structure has been endorsed by both the Global Tiger Recovery Programme and the Rhino Working Group established under CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) with respect to framing both species-specific and systemic interventions.

TRAFFIC has also begun to apply the framework through initiatives in China and Viet Nam. Market research conducted in these countries has confirmed the specific behaviours (Step 1) and consumer segments (Step 2) that need to be targeted. Insights have been gleaned into whether people are consuming endangered species products for themselves, or as gifts to others, and what their motivations are for doing so. A rich mix of "emotional motivators", including the demonstration of status, prestige or to adhere to some form of social norm, and "functional motivators"—including perceived medicinal purposes—has become apparent.

Such perceptions have been cross-referenced with models, concepts and theories from fields including behavioural economics, psychology and sociology (Step 3), and are informing the development of marketing frameworks (Step 4) that will guide activities to change the behaviour of consumers (Step 5). Examples of these include inviting influential business leaders to develop Codes of Conduct to reduce the corporate gifting of products.

In order to ensure this type of insight-led approach is delivered at sufficient scale and for a significant duration, TRAFFIC is facilitating collaborations amongst key stakeholders, including government, corporate leaders and those influential in society. This is helping to foster strong "thought leadership" around demand reduction interventions, which are a relatively new field of conservation interest. Such approaches will be critical if we are to implement an optimized suite of interventions, and employ effectively the agents of change that will realistically undermine the factors driving serious organized wildlife crime. Only then will we begin to change patterns of over-exploitation towards a collective security—environmental, economic, food, health and overall national and international aspects—that will ensure a long-term future for wild populations of endangered species.

*Gayle Burgess, Development and Evaluation Officer and
James Compton, Senior Director, Asia Pacific, TRAFFIC*

In the mid-1990s, the retail trade in wildlife products in Cambodia's main cities and towns was considerable. In Phnom Penh, the principal markets featured numerous and varied live wild animals and wildlife products for sale, whilst vendors in the small town of Poipet, for instance, offered items from at least 21 different mammal species (Martin and Phipps, 1996). By 2001, due to improved law enforcement by the government, working closely with several non-



PHOTOGRAPHS: CHRYSSEE MARTIN

THE DECLINE IN CAMBODIA'S IVORY TRADE

governmental organizations (NGOs), the quantity and diversity of wildlife products for retail sale had decreased significantly, and the wildlife market in Poipet had almost collapsed. Nevertheless, in Phnom Penh in the same year, there were at least 55 retail outlets offering 1683 ivory items, mainly small amulets carved into the shape of a Buddha (82%) and flower bud pendants (9%); in addition, 13 different elephant parts were on display in retail outlets in the capital city (Martin and Stiles, 2002).

Since 1994, trade in new ivory has been prohibited in Cambodia (Sanderson, 2001). The country ratified the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1997, since when there have been few known ivory imports to supply the domestic market; Khmer ivory craftsmen and their customers prefer Asian Elephant ivory to African, and there are adequate quantities available from the country's elephant population to meet limited local demand. In March 2013, the authors undertook a survey to assess the availability of ivory in the country and their findings are summarized below.

Sources and prices of tusks

There are two sources for elephant tusks in Cambodia: one is from the 400 to 600 remaining wild elephants in the country (Prun Sovanna, Deputy Director, Mondulkiri Protected Forest, pers. comm., March 2013; Matt Maltby, Fauna and Flora International, Phnom Penh, pers. comm., March 2013). In 2010, two elephants were known to have been killed illegally: in the Seima Protection Forest in Mondulkiri Province and Mondulkiri Protected Forest (Maltby and Bourchier, 2011); none was poached in 2011 or 2012.

However, five were killed in neighbouring Yok Don National Park in Viet Nam in 2012, some of which may have originated from Cambodia. Their tusks and tushes—the small ivory teeth of female elephants—were probably sold in Viet Nam, where prices are reportedly higher (Prun Sovanna, pers. comm., March 2013).

There has been little elephant poaching in Cambodia recently because the government, with the support of the NGO community, has expanded patrolling efforts, enforced wildlife laws backed by strong penalties, and improved the livelihoods of local rural people (Prun Sovanna, pers. comm., March 2013; Maltby and Bourchier, 2011). Wildlife Alliance, an NGO with strong government co-operation, started closing down retail outlets offering ivory in 2000/2001. In 2010, it deployed its Wildlife Rapid Response Teams in co-operation with several government law enforcement agencies to reduce poaching and the sale of wildlife products, and this effort is ongoing.

In addition to ivory derived from wild elephants, raw ivory for Khmer craftsmen also comes from the tusk tips removed from captive elephants whilst living, or obtained from those that die. There are only 91 captive elephants remaining, down from 101 in 2009, as the local indigenous groups of people who keep elephants have a law against breeding them (Maltby pers. comm., March 2013). Connections to the Thai ivory trade were not established during this study.

IVORY BEING CARVED IN PHNOM PENH (ABOVE); IVORY AMULETS AND PENDANTS ON SALE IN PHNOM PENH (BELOW). THE CROSS-HATCHING CHARACTERISTIC OF IVORY IS VISIBLE ON THE CARVED HEART.



ESMOND MARTIN



ESMOND MARTIN

Prices paid by craftsmen for local Asian Elephant tusks have recently risen sharply: in 2011 an average 2–5 kg tusk could be purchased for USD600–700/kg; USD1200 in 2012; and, at the time of the latest survey, in March 2013, USD1600–2000 per kg, according to ivory artisans. There is no evidence suggesting that African ivory is used by the craftsmen, now or in the recent past.

Ivory craftsmen in Phnom Penh

In 1994, about 30 craftsmen worked ivory in Phnom Penh, but not on a full-time basis (Martin and Phipps, 1996). In 2001, the number decreased to about 25 (Martin and Stiles, 2002). There were even fewer in 2013. The authors found three ivory craftsmen in small, open air workshops in central Phnom Penh, whilst others probably work from their homes.



ESMOND MARTIN

IVORY BEING CARVED IN PHNOM PENH (BELOW) AND IVORY CARVINGS FOR SALE IN THE CITY (ABOVE). IT IS ESTIMATED THAT THE IVORY AMULETS AND PENDANTS—MAKING UP PRACTICALLY 90% OF THE 981 IVORY ITEMS ON SALE IN MARCH 2013—WOULD HAVE BEEN CARVED FROM LESS THAN 30 KG OF RAW IVORY.



CHRYSSEE MARTIN

The craftsmen prefer local Asian Elephant tusks because they claim that the inside of the tusks is slightly brown compared to the whiteness of African tusks. These tusks may also be preferred by customers because they appear to be older—almost antique in appearance, although some ivory items are also stained to give an antique appearance. One carver told the authors that African tusks “have no power and are not attractive”. All three carvers at the time of being interviewed had worked on ivory within the previous few days, but worked most of the time on bones and a variety of woods. The majority of the ivory items crafted in Cambodia are the small 2.5-cm Buddha amulets, whilst the second-most popular items are 3-cm long, flower bud pendants. Additional objects occasionally crafted from ivory include 3-cm miniature tusk pendants, other jewellery items and 1–2-cm animal figurines. Both hand tools and electrically powered drills are used.

Retail outlets and prices of worked ivory in Phnom Penh

In March 2013, 48 retail outlets in Phnom Penh were identified offering some 945 ivory items for sale; this figure is approximate, however, as it was sometimes difficult to identify the raw material used for very small pieces. Furthermore, many of the ivory Buddha amulets are partly covered in metal casing making identification of the raw material more difficult. Criteria used to identify the materials were based on: physical examination of the object; information from the vendors; quality of carving (usually the carving of ivory is of a higher standard than for those items crafted from less expensive raw materials); and price (inexpensive objects are rarely ivory). Over half of the surveyed retail outlets with ivory were jewellery shops (52%), followed by souvenir outlets (16%), shops selling both jewellery and souvenirs (9%), antique souvenir shops (7%), silver shops (7%) and other miscellaneous outlets (9%). Few of the jewellery shops displayed ivory: for instance, of the 74 jewellery shops on the mezzanine floor in the Olympic market, only four displayed ivory items. Of these approximate 945 items, 73% were Buddha amulets. The ivory flower bud pendants comprised 16% of the total ivory items seen for retail sale in Phnom Penh. Others included Buddha and animal figurines, chopsticks, miniature tusk pendants and rings. Importantly, almost all the ivory objects seen in Phnom Penh had been crafted locally, within the past 25 years, apart from a few foreign-made objects such as one pair of old European opera glasses and a few older Chinese chopsticks. There were some older Cambodian items: 10–25-cm Buddha figurines and hair combs. There were no recognizably new Chinese ivory items, which is unusual for a South-east Asian country.

The highest prices for ivory items in Phnom Penh were found in one hotel and in a modern western-style mall. Retail prices for Buddha amulets not covered in metal casing ranged from USD15–150 (with an average price of USD55); flower bud pendants (between USD15–35, with an average price of USD21). Traditionally, Cambodians

believe that owning an ivory Buddha amulet or other ivory item brings good luck, prosperity and good health. Men tend to wear the Buddha amulets around their necks, display them at home, and give them to children. The flower bud pendants are worn by women. Almost all customers buying ivory items were reportedly Cambodians, while the few others are Europeans. The most expensive items were two Buddha figures (of 20 cm for USD3500 and 25 cm for USD5000). Some shops had fixed prices but others would reduce their prices by 20% or more. The prices given here were before bargaining.

Retail outlets and prices of worked ivory in Siem Reap

Siem Reap, the town adjacent to the Angkor Wat ruins, has greatly expanded since the early 2000s due to the massive increase in foreign tourists which, from 2003 to 2011, quadrupled to 1 610 076 visitors (Kingdom of Cambodia, 2012). There are many hundreds of jewellery and souvenir shops in the town, but only three retail outlets were identified displaying a total of 36 ivory items. Only one jewellery shop displayed an ivory Buddha amulet for USD220; a gift shop had nine ivory bangles from West Africa made over 25 years ago (that were priced for between USD550 and USD1100 each) and an ivory armband (USD1350). In a third shop, selling antiques, 25 Asian Elephant ivory items that had been locally crafted were found, some about 100 years old, the vendor said. These included 19 Chinese-style hairpins (USD300 each) and two pairs of polished tusks: one pair measured 68 cm (USD4600) and the other was one metre (USD12 000). The vendor warned the authors not to try to carry ivory items out of the country, but to post them, mixed with other objects. The main buyers of these few ivory items in Siem Reap are foreigners, but not Chinese.

Although there are carvers practising their craft in Siem Reap, they hardly ever work ivory. At the “Artisans Angkor” workshops visited daily by hundreds of tourists, craftsmen were carving stone and wood, but not ivory, working a five-and-a-half day week and earning about USD100 a month. No ivory items were seen at the souvenir stalls at Angkor Wat.

Alternative materials for elephant ivory

There were thousands of Buddha amulets for sale in Phnom Penh in 2013, but the great majority were made of plastic, wood, and bone from cows, water buffaloes and elephants. Retail prices for these Buddha amulets were around USD5–10.

DISCUSSION AND CONCLUSION

Where large amounts of wildlife items were on sale in Phnom Penh’s retail outlets during surveys carried out in 1994 and 2001, these had all but disappeared by the time of the current survey. Furthermore, most of the 981 ivory items observed for sale in Phnom Penh and Siem Reap in 2013 had been carved some years earlier. There

are several reasons for this significant reduction in ivory. First, the government and NGOs crack down on elephant poaching has reduced the supply of tusks in the Cambodian market. Secondly, stronger law enforcement has made it riskier to sell newly-made ivory objects, so prices have become too high for many Cambodians. In 2001, ivory craftsmen in Phnom Penh paid on average USD350/kg for tusks weighing between two and five kilogrammes (Martin and Stiles, 2002) compared to USD1800/kg in March 2013. Over the same period, the average retail price for an ivory Buddha amulet increased from USD11 to USD55, and for a flower bud pendant from USD7 to USD21. Thirdly, Cambodians reportedly now prefer to purchase gemstones and gold. No-one was seen to buy ivory during the March 2013 survey. Despite the fact that some 334 000 Chinese nationals visited Cambodia during 2012 (Kingdom of Cambodia, 2013), it was reported that Cambodian-style amulets and pendants do not appeal to the Chinese, even though they are the principal buyers of worked ivory elsewhere in Asia.

It is estimated that the ivory amulets and pendants, making up practically 90% of the 981 ivory items on sale during March 2013, would have been carved from less than 30 kg of raw ivory. Thus, unlike in neighbouring countries—Lao PDR, Myanmar, Thailand and Viet Nam—the Cambodian domestic trade in ivory is no longer significant and does not appear to be a major threat to elephants.

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IVORY STOCKPILES:

PHILIPPINES: On 21 June 2013, more than five tonnes of elephant tusks were destroyed by the Philippines Government. The ivory was part of a stockpile that had been collected over a 17-year period.

In the most recent Elephant Trade Information System (ETIS) analysis, presented to Parties at the 16th meeting of the Conference of the Parties to CITES in March this year, the Philippines was among the nine countries and territories identified as being most heavily implicated in major illegal ivory trade flows. These nine are now required to submit action plans to improve their implementation of CITES ivory trade requirements. This obligation was directed at China and Thailand as end-use markets; Malaysia, Philippines, Hong Kong and Viet Nam as transit countries/territories; and Kenya, Tanzania and Uganda as ivory source, transit or exit points in Africa.

USA: Authorities in the USA have announced their intention to destroy some six tonnes of raw and carved whole tusks seized by US agents over the last 25 years in a push to deter the illegal trade in elephant ivory. The initial date for the event was postponed.

www.scmp.com/news/asia/article/1266100/manila-destroys-us-0m-seized-ivory-send-message-prevent-theft; www.cites.org/eng/cop/16/doc/E-CoP16-3-02-02.pdf

ZIMBABWE: In recent months, poachers in Zimbabwe have resorted to killing elephants with the use of poison. More than 90 elephants died in Hwange National Park after a water hole was deliberately contaminated with cyanide. Nine poachers were arrested after rangers tracked them to a cache of ivory hidden in the park. The chemical also resulted in the death of smaller animals and predators feeding on the elephant carcasses.

www.bbc.co.uk/news/world-africa-24234927, 25 September 2013; TRAFFIC

ASIAN ELEPHANT LOANS FROM LAO PDR TO JAPAN

The Asian Elephant is included in Appendix I of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) and trade is only permitted in exceptional circumstances. Lao PDR became a Party to CITES in 2004. Formerly known as Lan Xang, the land of a million elephants, Lao PDR now has a small remaining population of perhaps 1000 elephants, half of which live in the wild and the remainder in captivity (IUCN, 2012). In recent years it has become clear that Lao PDR plays a much larger role in the trade in ivory and elephant parts than previously thought, acting in part as a gateway into China (Nijman and Shepherd, 2012).

In June 2012, it was announced that six Asian Elephants *Elephas maximus* from Lao People's Democratic Republic (Lao PDR) were to be loaned to Tohoku Safari Park (Fukushima Prefecture), Iwate Safari (Iwate Prefecture), and World Monkey Park (Tochigi Prefecture), Japan, for a period of three years to support areas devastated by the 2011 tsunami (Anon., 2012). Known as "Japan-Lao Goodwill Elephants", the pachyderms arrived in July 2012. Reportedly the elephants are privately-owned but it is unclear if the animals were wild-caught or born in captivity.

CITES allows the loan of Appendix I species to circuses or travelling exhibitions provided the transactions are non-commercial and that none is exported pursuant to the criteria in Article III, paragraph 3 (which would require Lao PDR to declare a non-detriment finding), but similar exchanges of Asian Elephants have been heavily criticized in the past as being detrimental to the species (Hedges *et al.*, 2006). The loan is one of a series and after Thailand, Lao PDR now has the largest number of outstanding inter-country elephant loans. In 2000, 2003 and 2008, a total of 22 elephants (10 wild-caught, 12 captive-bred) were loaned to South Korean zoos, and in 2009, two individuals (origin unknown) were loaned to Pyongyang Zoo, North Korea. Another 12 Laotian captive-bred elephants were sent on loan by Thailand to South Korean zoos in 2001 and 2008. None of these elephants seems to have been returned to Lao PDR. In addition to these loans, since 2000 Lao PDR has exported 26 elephants to international zoos: two wild-caught individuals to Greece, 10 wild-caught and two captive-bred individuals to Kazakhstan, and 12 captive-bred individuals to China (CITES, 2013).

It should be noted that the reliability of the records in the CITES database is entirely dependent on Parties' accuracy in reporting these data. As well as discrepancies between officially reported import and export figures and the actual import or export figures (Blundell and Mascia, 2005; Nijman and Shepherd, 2010; Chen *et al.*, 2009), significant numbers of individuals declared as captive-bred are in fact wild-caught (Nijman, 2010). Prior to export, the Scientific Authorities of both importing and exporting Parties must provide assurance that the export is not detrimental to the survival of the species. The export of some 68 elephants from Lao PDR over a relatively short time period may suggest that this is detrimental to a wild population of possibly only 500 specimens, and calls for prudence in allowing any further exchanges.

The revision of *Resolution Conf. 10.10 Trade in elephant specimens* at the 16th meeting of the Conference of the Parties included insertion of a recommendation that "all elephant range States have in place legislative, regulatory, enforcement, or other measures to prevent illegal trade in live elephants". Trade in live Asian Elephants is likely to become an issue at future meetings of the CITES Standing Committee.

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Wildlife trade training sustainability and stewardship—a case study from South-east Asia

TRAFFIC regularly conducts training to develop awareness of illegal wildlife trade amongst enforcement agencies. In 2011, it held a Training of Trainers (ToT) workshop in Kuala Lumpur, Malaysia, on wildlife trade regulation and identification of threatened species, specifically designed to provide participants with the materials and skills necessary to set up and run their own workshops and thus reduce their reliance on others to provide training (see *TRAFFIC Bulletin* 23(3):87–88). The Vietnamese participants attending this workshop went on to organize their own training workshop in Ho Chi Minh City and similar workshops were held by the Cambodian participants, in Phnom Penh, Cambodia, in 2012. In January 2013, two similar workshops were carried out in Myanmar, led by ToT participants, and a report of these sessions is summarized below.

ToT participants receive a Training Management Package (TMP) containing presentations with full speakers' notes and guidance on organizing a training course. Since these materials have a regional focus, users are encouraged to adapt them to make them country-specific and with up-to-date examples. South-east Asia is home to 20% of all known species (Brimoh *et al.*, 2010) and overlaps four of the world's biodiversity hotspots (Meyers *et al.*, 2000). Almost all Myanmar's land area lies within the Indo-Burma hotspot. The country shares borders with five countries, and is an important conduit directly connecting China to both South and South-east Asia. The presence of illegal wildlife trade there has been well documented (e.g. Shepherd, 2002; Shepherd and Nijman, 2008a, 2008b; Oswell, 2010) and the country's fourth report to the Convention on Biological Diversity (CBD) (Anon., 2009) made specific mention of threats from increasing demand within the country and from its neighbours, a statement echoed in the *2007 Top News on the Environment in Asia* (IGES, 2007).

The two workshops in Myanmar, co-organized by the Nature and Wildlife Conservation Division of the Myanmar Ministry of Environment Conservation and Forestry's Forestry Department and the Ministry of the Environment, Japan, were attended by 55 participants from 13 government agencies and two observers. The pre-workshop questionnaire revealed just seven percent of attendees had received previous training on CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) and around 40% had never heard of it. They listed knowledge of CITES as their top training priority. Only 13% had ever received training on species identification.

Classroom sessions took place at the Central Forestry Department Training Centres (CFDT) in Hmawbi, Yangon, and in Patheingyi, Mandalay; only two of the three Myanmar ToT participants were present. All materials were based on the TMP, but had been translated, adapted and updated. While the intention of the ToT was to ensure that participants could arrange and run similar courses themselves, the Myanmar workshops illustrated the value of passing skills onto others within an institution rather than being held by specific individuals.

The species identification sessions held at the Yangon and Mandalay zoos were conducted by the ToT participants and a turtle biologist from WCS-Myanmar and focused on freshwater turtles and tortoises. These species are heavily traded across South-east Asia and are often difficult to identify. New identification sheets were developed in conjunction with this work and added to the Identification Sheets for Wildlife Species Traded in South-east Asia, produced by TRAFFIC for the ASEAN-Wildlife Enforcement Network (with translations available for all

ASEAN countries, China and Japan). Of the 15 developed since 2011, all but one feature freshwater turtle and tortoise species.

Such workshops provide opportunities for greater engagement and hopefully foster increased collaboration between the ministries and departments responsible for enforcing wildlife trade regulations. Post-training evaluation showed over 96% of attendees believed that the objectives of the training had been achieved and 97% would recommend the workshop to others. Comments focused largely on the need for more multi-agency trainings, particularly in border areas.

Trainers of the post-ToT workshops in Viet Nam and Cambodia took to the stage during a side event at the sixteenth meeting of the Conference of the Parties to CITES (CoP16) in Bangkok in March 2013. A ToT participant from Viet Nam's CITES Management Authority noted that although those attending the ToT were not professional trainers, the course had given them the skills to organize their own workshops and develop lecture packages on wildlife trade, national regulations and CITES. He noted that they also received information on how people learn and ways to apply this knowledge to increase training effectiveness. He reported that since the ToT, Vietnamese authorities had conducted training for around 1000 individuals from a variety of enforcement agencies and private sector organizations.

The ToT approach appears to have been successful in Viet Nam and given the very high level of enthusiasm and interest shown during the Myanmar workshops, it is to be hoped that these events will prove to be the first of many in that country. TRAFFIC remains in contact with many ToT participants but believes that ensuring training longevity requires that materials be embedded within agency training curricula so as to provide all existing staff and new recruits with the opportunity to learn that illegal trade in wildlife is a serious issue in South-east Asia, and that combating it will take the efforts of many agencies.

The ToT and follow-on activities were organized under the banner of the East and Southeast Asian Biodiversity Information Initiative (ESABII). TRAFFIC would like to thank the Ministry of the Environment, Japan and all of the government agencies and others who have been involved with the ToT and related efforts.

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Improving Forest Governance in Latin America

Latin America occupies less than 15% of the earth's land surface but holds over 40% of its biodiversity (UNDP, 2010). The Amazon alone is the largest remaining expanse of tropical forest in the world with half of all remaining rainforest. Unfortunately, the Latin America continent has also had the highest rates of deforestation in recent times, with an average of four million hectares lost every year between 2000 and 2010 (FAO, 2011a).

There is increasing interest in the issue of forest governance across all Latin America (Blandinières *et al.*, 2013) which TRAFFIC and partners are very keen to support and encourage. TRAFFIC is leading on a European Commission (EC) funded project to promote the EU Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan in partnership with WWF-Colombia and IUCN-Sur. The project, entitled "Supporting the implementation of the EU FLEGT Action Plan in South America: Catalysing initiatives to control and verify the origin of the timber in trade and support related improvements in forest governance", works in four of the nine countries that the Amazon rainforest covers (Brazil, Colombia, Ecuador and Peru). These countries are all described as megabiodiverse since they harbour a disproportionately large number of species (Mittermeier *et al.*, 1997); conservation of their forests is therefore of critical importance. All four countries face the challenge of dealing with illegal logging (see Box 1), although the nature of the challenge and the way it is being addressed varies substantially. Scoping studies that summarize the forest governance situation in all four countries have recently been completed and an overview of these studies is set out below.

BRAZIL

Brazil has the second-largest expanse of forest in the world, with over 500 million hectares (FAO, 2011a). However, its Atlantic forest is down to 10% of its original extent, which puts further pressure on the remaining forest (Sparovek *et al.*, 2012). Brazil produces over 60% of wood and wood-derived products for the region although over 85% of its industrial wood production is from plantations (Blandinières *et al.*, 2013). The most substantial demand comes from its domestic timber market which takes up over 86% of the production (Macqueen *et al.*, 2003). The government has made significant progress in improved monitoring through the use of satellite data and more effective enforcement actions, which have been widely recognized as having reduced deforestation (Assunção *et al.*, 2013) although there is some recent evidence that this success may be reversing (Prada, 2013).

Forest governance emerged as a critical issue in Brazil in the mid-1980s. This initiated a period of both creation of forestry plans and new government legislation and directives. The Document of Forest Origin ("Documento de Origem Florestal" or DOF) was created in 2006 and remains the central timber tracking system, although some States have developed their own parallel equivalent (e.g. Mato Grosso and Para use the "Commercialisation System for Supply and Transport of Forest Products" or SISFLORA). These are computerized timber control systems that have been designed to accompany all timber shipments with information on the origin, species, type of product, quantity and monetary value of the timber.



BOX 1: MEASURES TO ADDRESS ILLEGAL LOGGING

Illegal logging can be a precursor to other destructive practices causing habitat loss and unsustainable wildlife trade. It also threatens the livelihoods of forest-dependent people, undermines the legal trade in wood products and deprives governments of an estimated USD30–100 billion (Nellemann and INTERPOL Environmental Programme, 2012). Illegal logging contributes to forests being vastly undervalued as a resource and hence often prevents forestry from representing a viable alternative economic model when compared to activities such as oil palm plantations or mining, which have greater negative environmental impacts (Pin Koh and Wilcove, 2008). It can also undermine attempts to make the timber industry sustainable through appropriately tailored management practices and investments. There is an increasing acknowledgement of this issue and an associated implementation of effective action by national/regional governments, the private sector and wider civil society (Lawson, 2010). Efforts to combat illegal forestry include more effective policing (e.g. INTERPOL's Project LEAF (Law Enforcement Assistance for Forests) launched in June 2012), wider stakeholder engagement including local communities, and the use of legislation banning the trade in illegal timber and timber products. In the USA, the *Lacey Act* was amended in 2008 banning the commerce of illegally sourced timber, and Australia passed its own *Illegal Logging Prohibition Act* in 2012. The *European Union Timber Regulation* (EUTR), which came into force on 3 March 2013, prohibits illegally harvested timber or derived products from entering the EU market and requires appropriate implementation and maintenance of a due diligence system to minimize the risk that such goods are sold in the EU. The EUTR explicitly requires traceability of all timber and timber products throughout the supply chain. Although its primary aim is to prevent illegal timber from being sold in the EU, the regulation is also designed to reinforce forestry related legislation in the exporting country.

The EUTR is only one measure that has been implemented under the EU Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan. Another has been the establishment of FLEGT Voluntary Partnership Agreements (VPAs) between timber exporting countries and the EU, which aim both to ensure that wood entering the EU is legally sourced, and to support improvements in the governance of the forest sector of the producer country. To date, no FLEGT VPAs have been signed in Latin America although some negotiations have been initiated.

The FLEGT Action Plan, as well as some of the specific activities it encompasses such as EUTR and FLEGT VPAs, are poorly understood among stakeholders. Apart from legislative instruments (such as EUTR), the FLEGT Action Plan identifies six further areas where measures should be focused. These are: supporting timber exporting countries; promoting legal timber trade; promoting public procurement policies; supporting private sector initiatives; encouraging sound financing/investment in the forestry sector; and addressing the issue of conflict timber. The positive impact that such a comprehensive approach could have should not be underestimated (Lawson, 2010). A recent report highlighted the significant detrimental impact that the EU may be having on deforestation (VITO, IIASA and CICERO, 2013) and, by implication, on forest governance. Furthermore, it is worth remembering that the EU is the second-largest importer of timber products in the world, with a total value of Euro13 billion in 2011 (ETTF, 2012).



J. NUÑEZ-MIÑO / TRAFFIC

IN SOUTH AMERICA, THERE ARE VERY PROMISING SIGNS OF A DEEPER UNDERSTANDING AND ENGAGEMENT WITH FORESTRY GOVERNANCE ISSUES. ONE EXAMPLE THAT REFLECTS THIS IS THE DEGREE OF CROSS-BOUNDARY CO-OPERATION DEMONSTRATED BY BRAZIL, COLOMBIA, ECUADOR AND PERU IN THEIR WILLINGNESS TO ENGAGE IN A RANGE OF REGIONAL AGREEMENTS WITH FORESTRY-RELATED CONTENT

Several initiatives engage a large number of cross-sectoral stakeholders, the most notable of which has been the National Forest Programme (“Programa Nacional de Florestas” (PNF)), launched in 2000. The PNF includes among its objectives the curbing of illegal logging and encouraging sustainable use. More recently this programme has lost its momentum, however the value of this type of holistic and inclusive initiative has been widely acknowledged. TRAFFIC, in collaboration with WWF-Brazil, is currently engaging a range of key actors, including the Brazilian timber industry, to promote sustainably managed forests.

COLOMBIA

Like other Latin American countries (e.g. Ecuador), over 40% of Colombia’s natural forest is owned by indigenous, Afro descendent and rural communities (Ucros, 2009). Unlike its neighbouring countries, Colombia is a net importer of wood products, which is now encouraging a policy of incentive-driven reforestation plantations (Proexport, 2012). Furthermore, funding from the EU and others has supported development of Colombia’s forest governance in recent years (Blandinières *et al.*, 2013). One of these developments is the “Intersectoral Pact for Legal Wood in Colombia”, which is a voluntary agreement between 70 organizations, including government, private sector and civil society. The objective is to ensure that the wood harvested, transported, processed, marketed and used in Colombia comes from legal sources. Development statute law states that the State will “promote the implementation of the Pact for Legal Timber” and the government has included forest governance as one of its topics to work on. Additionally Colombia, along with Peru, has recently signed Free Trade Agreements (FTAs) with both the USA and the EU that explicitly include clauses on improved forest governance.

ECUADOR

In 2000, Ecuador moved to a new model of forest management based on a national strategy for sustainable forests. It went even further in 2008 by becoming the first country to include explicitly chapters on the “Rights of Nature” in its constitution. This now grants nature the right to “exist, persist, maintain and regenerate

its vital cycles, structure, functions and its processes in evolution”. This provides the authority to petition on behalf of ecosystems in addition to requiring the government to remedy violations of these rights.

The forest governance model being implemented by the Ministry of Environment in Ecuador focuses on five elements: i) improve administrative efficiency and control system; ii) strengthen the system of incentives for sustainable forest management and forest conservation; iii) generate information to facilitate timely decision-making; iv) promote reforestation of degraded areas and protection; and v) implement research, training and dissemination.

One particularly successful implementation of this governance model has been the use of incentives combined with environmental and socio-economic targets via the “Socio Bosque” programme, which was initiated in 2008 (De Koning *et al.*, 2011). Socio Bosque is a national government programme that gives direct economic incentives to forest owners who voluntarily commit to comply with conservation actions via a 20-year agreement. In a country where the majority of natural forest is owned by rural families and Afro-Ecuadorian and indigenous communities, this has had a significant positive impact resulting in over 90 000 beneficiaries and nearly 900 000 hectares of natural ecosystems (Fehse, 2012). Other incentive schemes, similar to the one previously outlined for Colombia, have also been established in Ecuador in order to encourage reforestation through commercial plantations.

PERU

Peru has the fourth biggest extent of tropical forest in the world (FAO, 2011b). A report in 2012 highlighted some of the challenges faced in the fight against illegal timber in Peru, primarily fraud and corruption (Urrunaga *et al.*, 2012). Peru is currently undergoing an extensive review of its forestry sector, the framework of which is outlined in the *Wildlife Forestry Law* signed in 2011. This new law requires forest concessions to have in place sustainable forest management plans and operating plans to strive towards sustainability. A National Policy for Forestry and Wildlife has also recently been approved, which sets out the framework and direction of forest governance in Peru over the long term.

Two Free Trade agreements have been recently signed with the USA (main importer) and the EU which explicitly include sections on forest governance and the promotion of legal timber trade. Information and tools are currently being developed in order to support this drive towards improved forest governance. Traceability of timber and timber products will be a useful tool to verify legality and there are a number of promising developments. A project funded by the International Tropical Timber Organization (ITTO) has trialed a timber traceability system aimed at satisfying the export markets (Torres, 2013). The Peruvian Government has also been designing a “National System of Forest Information” (“Sistema Nacional de Información Forestal” (SNIF)), which will integrate all aspects of the forest harvesting process in a real-time online database expected to go live very soon.

Conclusions

Illegal logging is a worldwide issue of critical importance both for conservation, forest-dependent peoples and businesses (World Bank, 2006). In South America, there are very promising signs of a deeper understanding and engagement with forestry governance issues. One aspect that reflects this is the degree of cross-boundary co-operation demonstrated by all four countries in their willingness to engage in a range of regional agreements with forestry-related content (FAO, 2011b). TRAFFIC’s project in South America aims to support this process by facilitating and encouraging further co-operation and exchange of information, both at the international and cross-sectoral levels. One example of this is work that TRAFFIC is doing with funding from GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), examining the synergies between the FLEGT Action Plan and other measures and programmes that impact on illegal logging. TRAFFIC’s strategy includes engaging with stakeholders ranging from government bodies, private sector companies, forest-dependent people and other civil society representatives. It is also of critical importance that the efforts being made to improve forest governance in Latin America should be more widely acknowledged and supported in consumer countries. The benefits of taking this approach will be far reaching, not only in terms of the positive impact on forest conservation but also in improving the perception of the tropical timber trade.

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HORNBILLS: WILD SPECIMENS IN TRADE DECLARED AS CAPTIVE-BRED

Globally, there are approximately 60 species of hornbills, all of which are restricted largely to forest habitats in Africa and Asia (Gonzalez *et al.*, 2013). These large birds play an essential role as seed dispensers in the various ecosystems they inhabit.

Many hornbills are threatened, usually by the loss of forest and large nesting trees, but in many cases by subsistence and commercial hunting and capture for trade. Hornbill meat is consumed in some parts of the birds' range, their tail feathers used as ornamental objects or in traditional dress, and the ivory-like casques unique to one species—the Helmeted Hornbill *Rhinoplax vigil*—are carved and traded for decorative purposes. Live hornbills are also traded for pets and display.

Some species are of urgent conservation priority, such as the Sulu Hornbill *Anthracoceros montani* which is endemic to a few small islands in the Philippines, and which is now thought to number as few as 40 in the wild due to loss of habitat, hunting for local consumption and trade (BirdLife International, 2012).

On 24 to 26 April 2013, experts from around the world gathered in Manila, Philippines, for the 6th International Hornbill Conference. The meeting, entitled *Hornbills and caring communities: helping forests to thrive*, provided a platform for the sharing of research findings and knowledge on in situ and ex situ conservation efforts and needs.

The Philippines was an ideal location for hosting the conference, having six species of hornbill, all of which are endemic to the archipelago nation. TRAFFIC gave a presentation on the international trade in Papuan Hornbills *Rhyticeros plicatus* from the Solomon Islands in a paper entitled *Trade of 'captive-bred' birds from the Solomon Islands: a closer look at the global trade in hornbills*. This was a follow-up to the TRAFFIC report *The export and re-export of CITES-listed birds from the Solomon Islands* (Shepherd *et al.*, 2012), launched in July 2012 (http://www.traffic.org/species-reports/traffic_species_birds17.pdf), which highlighted the large-scale laundering of wild-caught CITES (Convention on International Trade in Endangered

Species of Wild Fauna and Flora) listed birds from the Solomon Islands, fraudulently declared as being captive-bred. Among the birds imported from the Solomon Islands between 2002 and 2010 were 940 Papuan Hornbills. Of these, 660 were declared as being captive-bred despite the Solomon Islands having no commercial breeding facilities for birds. In all, 890 of the 940 Papuan Hornbills exported from the Solomon Islands were imported by Singapore, including 460 declared as being captive-bred, illustrating the major role played by Singapore in the global bird trade.

The TRAFFIC paper presented at the 6th International Hornbill Conference called for governments of importing countries to be far more prudent and cautious when processing imports of birds that are declared as captive-bred, such as hornbills. Hornbills mature late in life and reproduce slowly, making commercial captive-breeding, especially in large numbers, an unlikely prospect.

The Solomon Islands has been the most significant source of hornbills for the international market. Between 1995 (the first record of the Solomon Islands exporting hornbills) and 2011 (the last year for which records are available, albeit incomplete) a total of 1080 Papuan Hornbills were recorded by other countries as having been imported from the Solomon Islands. To put this in context, over that period the entire international trade in CITES-listed hornbills (18 species exported from 22 countries) amounted to 1498 individuals. Thus for almost two decades, the Solomon Islands dominated the global trade in hornbills, accounting for over 70% of total exports.

Apart from wild-caught hornbills, the Solomon Islands also exported captive-bred hornbills—688 birds in total. This amounts to almost 70% of all captive-bred hornbill exports globally, greatly exceeding all other countries. Singapore stands out as an important importer, exporter and re-exporter of hornbills. The EU countries were an important importer of captive-bred hornbills, although no single country stands out. The United Arab Emirates, however, has also imported a significant number of hornbills. Most of their imports were from Singapore, although in 2009 they imported 15 captive-bred *Aceros* hornbills (species not known)

from Bahrain. Given the unlikelihood that hornbills are being bred in captivity, the relatively high proportion of trade in purportedly captive bred hornbills should have sent warning signs, and led individual CITES authorities from importing countries to question this trade (Nijman and Shepherd, in press). TRAFFIC encourages Parties engaged in trade in hornbills to increase co-operative efforts and to enhance implementation of national regulations to ensure wild-caught hornbills are not being laundered into the international market falsely declared as captive-bred.

TRAFFIC congratulates the organizers and the Government of the Philippines as the host country of the 6th International Hornbill Conference and encourages all range States to put measures in place that will ensure hunting and trade is not a threat to the conservation of hornbills.

The 7th International Hornbill Conference is likely to be held in Malaysia, in the State of Sarawak. The emblem of Sarawak is the magnificent Rhinoceros Hornbill *Buceros rhinoceros*, making this State, which is also home to seven other hornbill species, a suitable host for the meeting.

Protection urgently needed for the endemic Sumatran Laughingthrush

The illegal and unsustainable cage bird trade in Indonesia is a serious threat to many birds in that country, with some species now close to extinction. According to BirdLife International (2013), Indonesia has 122 Globally Threatened bird species—more than any other country in South-east Asia—with trade a critical threat to many. The Sumatran Laughingthrush *Garrulax bicolor* is one of these.

Until recently, the Sumatran Laughingthrush was considered a subspecies of the White-crested Laughingthrush *Garrulax leucolophus*, but was recently elevated to a full species (Collar, 2006). The White-crested Laughingthrush is native to the north and north-eastern Indian subcontinent, south-eastern Tibet Autonomous Region and south-western China, Myanmar, Thailand and parts of Indochina, while the Sumatran Laughingthrush is endemic to the Indonesian island of Sumatra, where it is found in the mountainous regions (van Marle and Voous, 1988; BirdLife International, 2012). It is seriously threatened by capture for the domestic trade in cage birds (Shepherd, 2007; Shepherd, 2010; BirdLife International, 2012; Collar *et al.*, 2012). The Sumatran Laughingthrush moves about in groups and is attracted to decoys, making it easy to trap (Collar *et al.*, 2012). Recent evidence suggests that this species has undergone a considerable decline and is now known to be present at only a small number of sites (BirdLife International, 2012). While it is not included in the list of protected species in Indonesia, there is no quota for this species and therefore harvest and trade is not permitted (Shepherd, 2010). Currently, the Sumatran Laughingthrush is assessed as being Vulnerable by the *IUCN Red List of Threatened Species* (BirdLife International, 2012).

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Market surveys in Medan and Jakarta

During the course of 65 surveys carried out by TRAFFIC between 1997 and 2008 in Medan and Jakarta, trade in Sumatran Laughingthrushes was observed being carried out at alarming levels (Shepherd, 2006; Shepherd, 2007; Shepherd, 2010). Some 82 individuals were observed during two spot checks in 2008. In June 2012, TRAFFIC visited the three largest bird markets in Jakarta, and noted a total of seven Sumatran Laughingthrushes being offered for sale for IDR500 000–750 000 (USD50–75 each). In 2013, a reliable source reported to TRAFFIC observing a combined total of approximately 80 specimens on four occasions at Pramuka Bird Market during January to March. Jatinegara and Barito bird markets in Jakarta were visited on 29 March but no Sumatran Laughingthrushes were observed. While turnover was not measured, bird dealers indicated that sales were brisk.

Regulatory framework needed to monitor trade

In March 2013, TRAFFIC received a report, complete with photographs, of two Sumatran Laughingthrushes in a zoo in Kuala Lumpur, Malaysia, representing the first documented evidence of this species being displayed in a South-east Asian country outside Indonesia. As there is no quota for the capture of this species, it is likely these birds were illegally trapped in Sumatra and exported in violation of Indonesia's regulations.

While it is well documented (BirdLife International, 2012) that the Sumatran Laughingthrush is seriously threatened by unregulated harvest for commercial trade, too little is being done to address such practices. Efforts to close down the illegal bird trade in Indonesia have been minimal, as exemplified by the presence of vast numbers of birds, often illegally obtained and fully protected by

law, being openly displayed in their thousands in large bird markets in most Indonesian cities, including the capital, Jakarta. Awareness of the plight of the Sumatran Laughingthrush and many other bird species in Indonesia similarly threatened by trade, remains poor at both national and international levels.

Specific conservation efforts for the Sumatran Laughingthrush are urgently needed. First and foremost, TRAFFIC encourages the Indonesian Government to provide full legal protection for the Sumatran Laughingthrush under the *Act of the Republic of Indonesia No. 5 of 1990 concerning Conservation of Living Resources and their Ecosystems (Undang-undang Republik Indonesia No. 5 Tahun 1990 tentang Konservasi Sumber Daya Alam Hayati dan Ekosistemnya)*. It further urges the government to reduce levels of capture of wild birds and to increase efforts to close illegal bird trade in markets and elsewhere. Confiscated birds could be used as founder stock in the existing ex situ conservation breeding programme. Efforts should also be taken to increase awareness of bird conservation in Indonesia and the need to reduce demand for wild-caught birds, as well as to instil a sense of pride and stewardship of this species.



SUMATRAN LAUGHINGTHRUSHES: FLORIAN RICHTER / CIKANANGA INTEGRATED CONSERVATION SOCIETY

THE SUMATRAN LAUGHINGTHRUSH IS SERIOUSLY THREATENED BY CAPTURE FOR THE DOMESTIC TRADE IN CAGE BIRDS, A PLIGHT FACED BY AN INCREASING NUMBER OF INDONESIAN BIRD SPECIES.

Ex situ conservation actions are under way. By mid-2012 there were 20 males and 17 female Sumatran Laughingthrushes in European Association of Zoos and Aquaria (EAZA) institutions, and a few more in private hands, and between October 2011 and September 2012, 10 birds were reared from four different pairs at the Cikananga Integrated Conservation Society centre, in West Java, Indonesia (Collar *et al.*, 2012). These captive birds may very well play an important role in the conservation of this species in the future.

Long-term monitoring to measure trade volumes, values and demand for the Sumatran Laughingthrush, and impact of trade on the species, is essential to guide future conservation efforts. Further investigation into the movement of Sumatran Laughingthrushes out of Indonesia is also recommended, and if this proves to be a threat, steps to monitor the trade by listing the species in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) should be taken into consideration.

In addition to publishing observations of trade in this species, TRAFFIC has contributed to the IUCN Red List assessment. Furthermore, in 2011, TRAFFIC produced an identification sheet on the Sumatran Laughingthrush, in both English and Indonesian, in order to assist enforcement officers in identifying this species. The sheet is available from: www.traffic.org/general-pdfs/Asian-identification-sheets-unrestricted-Nov-2012.pdf.

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FairWild Certification: Stories from the Scheme

The FairWild Standard is a set of principles guiding best practice in sustainable harvest and fair trade of wild plant ingredients. One of the ways in which it is being used in practice is as the basis of a third-party audited certification scheme, now in operation since 2007. This article provides a brief overview of the scheme, and news updates from companies involved.

The FairWild certification scheme provides comprehensive coverage of environmental, social and economic aspects of sustainability. The ecological requirements were strengthened in 2010 when the original FairWild Standard version 1.0¹ was merged with the International Standard for Sustainable Collection of Medicinal and Aromatic Plants (ISSC-MAP)², the latter having a strong focus on conservation and resource management aspects. Audit and certification against FairWild Standard version 2.0 (FairWild Foundation, 2010a) is carried out by the accredited certification body for FairWild, the Swiss-based Institute for Marketecology (IMO)³.

FairWild certification shares some features in common with organic and other social and fair trade schemes, but occupies its own special niche. Organic certification of wild crop harvesting is based primarily on the principles of organic agriculture (e.g. controlled use of inputs), with some requirements also on sustainable harvesting, whereas FairWild focuses on ecological and social sustainability in a wider sense, going much more deeply into resource management issues. FairWild's social principles have much in common with those of other fair trade schemes. However, the major difference is that FairWild focuses on wild collection, while most other fair trade schemes have been designed for the certification of agriculture and products derived from it. The organization of wild collection is typically very different from that found in agriculture, and FairWild is designed to meet the needs of collectors and their communities.

Features of the scheme

Under the scheme, an annual on-site audit is required, assessing the performance of the wild collection operation against a comprehensive set of control points (FairWild Foundation, 2010b). Those species and collection situations considered to be at "high risk" of unsustainable wild collection must meet an additional set of indicators. The initial classification of risk status is carried out in collaboration with the IUCN/SSC Medicinal Plants Specialist Group, based on an analysis of the species' biology, harvest methods used, conservation status, and a number of other factors.

¹Development of FairWild Standard version 1.0 was initiated by SIPPO (the Swiss Import Promotion Programme) in co-operation with Forum Essenzia e.V. and IMO (Institute for Marketecology). The Standard focused mainly on social and fair trade aspects of wild collection.

²Development of the International Standard for Sustainable Collection of Medicinal and Aromatic Plants (ISSC-MAP) was supported by the German Federal Agency for Nature Conservation (BfN), TRAFFIC, WWF, and IUCN (International Union for Conservation of Nature). This was primarily an ecological sustainability standard with supporting elements of economic and social sustainability. ³www.imo.ch

The 11 Principles of the FairWild Standard

- Maintaining wild plant resources.
- Preventing negative environmental impacts.
- Complying with laws, regulations, and agreements.
- Respecting customary rights and benefit sharing.
- Promoting fair contractual relationships between operators and collectors.
- Limiting participation of children in wild collection activities.
- Ensuring benefits for collectors and their communities.
- Ensuring fair working conditions for all workers of the FairWild collection operations.
- Applying responsible management practices.
- Applying responsible business practices.
- Promoting FairWild buyer commitment.

The FairWild scheme requires continuous improvement over the first five years of implementation. In their application to the scheme, the company must clearly define the scope proposed for certification, and then go on to develop species-area management plans for FairWild collection sites, conduct resource inventories and establish monitoring systems for the target species. The company will also train collectors on sustainable harvesting techniques. Formation of a collectors' association is encouraged, to improve communications between the company and collectors. A Premium fund is established to enable the buyer of the FairWild ingredients to invest in social development projects with the collectors and their communities. To achieve certification, the company must meet all mandatory requirements set in that year of the scheme, and also gain a minimum total score that increases over the first five years.

The FairWild certification scheme in action

At the end of 2012, 10 wild collection operations were certified, offering around 25 different FairWild-certified species between them. The scheme has gradually expanded since it began in 2007 with the first five audits. It is available worldwide, with a number of collection operations now working towards certification—already in 2013 an additional two companies have passed their Year 1 audit. A full list is maintained on the FairWild website.

In addition to the FairWild-certified companies, a number of other companies may be involved in handling the FairWild-certified ingredients along the trade chain—processing the ingredients and distributing them worldwide. Manufacturers that use the FairWild-certified ingredients in their finished products may display the FairWild logo on their packaging, according to a licence agreement and annual fee paid to the FairWild Foundation. Products bearing the FairWild mark have been available since 2010, and are now found in the USA, Canada, Japan and many countries in the EU and beyond.

Piloting FairWild-certification of Frankincense in Kenya

Neal's Yard Remedies is one of the UK's most well known natural cosmetic companies, retailing also an extensive range of herbal ingredients used in herbal medicine. For several years, the company has been working on the sustainable sourcing of Frankincense resin, used in one of its most popular ranges of cosmetics products. In July 2013, the first of the Neal's Yard Remedies products to contain certified ingredients was launched in the UK. The product contains a blend of Frankincense oils from three tree species. Two of them—*Commiphora confusa* and *Boswellia neglecta*—are from organic and FairWild-certified sources in Kenya, where they are wild-harvested from semi-desert arid lands. Over a five-year period, the FairWild scheme will help to implement a comprehensive management and monitoring system for sustainable collection of tree resins, ensure fair payment to collectors and help establish a Premium fund for community development projects.



COLIN WINTER / NEAL'S YARD REMEDIES

Collecting FairWild-certified Frankincense in Kenya.

What happened next for Medicinal plant of the year 2012, liquorice?

Liquorice root has featured several times in previous issues of the *TRAFFIC Bulletin*. In 2012, it was selected as "Medicinal plant of the year", due to its importance to human well-being worldwide. Liquorice *Glycyrrhiza uralensis* has been the focus of sustainable harvesting efforts through the FairWild scheme. A harvesting operation of *G. uralensis* in Kazakhstan was one of the first to be audited, the ingredients being traded through the German company Martin Bauer GmbH, who have supported the certification pilot in collaboration with US-based manufacturer Traditional Medicinals Inc. The harvesting is managed through a rotation system, with a six-year interval between harvestings, and with up to half of the roots left in the ground

to regenerate, thus reducing the impact not only on the target species but the whole ecosystem.

The FairWild certified liquorice root is used in a number of Traditional Medicinals' herbal teas, including Throat Coat® which is one of the top-selling medicinal teas in Canada and the USA. In 2012, the *Bulletin* reported the launch of Pukka Herbs' Organic Peppermint and FairWild liquorice tea, which also used ingredients from this source. The tea was the cornerstone of a consumer campaign and sponsorship with WWF—part of a 10-year anniversary celebration for Pukka. The tea is now retailed worldwide, and the campaign successfully raised over GBP50 000 for WWF. The consumer campaign was a winner of the inaugural 2degrees Sustainability Champions Award in this category⁴. FairWild-certified liquorice is increasingly in demand by industry, and UK-based company Organic Herb Trading Company now also offers a certified source from a producer in Spain.

In addition to the popularity of the certified ingredients with consumers, the scheme has also been beneficial to those involved in harvesting. Premium funds have been used to improve the living conditions of the collectors, including the building of showers, toilets and kitchen facilities, and also to pay for healthcare treatments.

Herbal ingredients: spotlight on Europe

Europe has a rich history of wild plant collection, and an important role in the international trade as both source and consumer region. A number of the FairWild certified collection operations are in Central and Eastern Europe, providing the market with wild plant ingredients such as the root and leaf of Marshmallow *Althaea officinalis* from Hungary (Schmidt & Co. Kft), collected by Roma people who traditionally earn income from wild collection. Dandelion *Taraxacum officinale* root and Nettle *Urtica dioica* leaf are on offer from Poland (Runo sp. z o.o.), where many of the collectors are elderly and have been collecting medicinal plants throughout their lives, in an area surrounding Europe's last standing primeval lowland forest—the Białowieża Forest—where European forest bison and moose still graze. The Raspberry *Rubus idaeus* leaf in Goražde, Bosnia & Herzegovina (Boletus d.o.o.) is largely harvested by Muslim women, who have traditionally collected these plants.

The scheme continues to expand in this important region. In 2012, two collection companies from Bulgaria became certified for the first time, offering FairWild certified ingredients such as Dandelion, Juniper *Juniperus communis*, Elderflower *Sambucus nigra* and Rose hip *Rosa canina*. Producers in Central Europe are also learning about FairWild through TRAFFIC's and WWF-Hungary's Traditional and Wild project in the Czech Republic, Slovenia, Poland and Hungary.

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⁴<http://www.2degreesnetwork.com/awards/2013/#winners>



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THE 16TH MEETING OF THE CONFERENCE OF THE PARTIES TO CITES

INTRODUCTION

The 16th meeting of the Conference of the Parties (CoP16) to CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) took place in Bangkok, Thailand, from 3 to 14 March 2013. In this, the year of the 40th birthday of the Convention, a record number registered for the meeting, resulting in attendance by some 2000 participants comprising Party representatives and observers from inter-governmental, international and national organizations.

The unprecedented number of participants is not necessarily a measure of increased engagement with CITES issues, but Secretary-General John E. Scanlon observed in his opening remarks at CoP16 that there was indeed renewed interest in CITES, though regrettably fuelled in part by an increase in wildlife poaching, particularly of elephants and rhinoceroses. In welcoming attendees and stressing the importance of CITES in the meeting's opening session, he was joined by dignitaries at the highest level—His Royal Highness The Duke of Cambridge (by video address), and the Prime Minister of Thailand, Yingluck Shinawatra—another benchmark for the Convention. In accordance with tradition, the Chairman of the CITES Standing Committee (Øystein Størkersen) and the Executive Director of UNEP (Achim Steiner) also gave opening speeches.

Oceanic Whitetip Shark *Carcharhinus longimanus* (above with pilot fish) was included in CITES Appendix II at CoP16. The species is heavily exploited throughout its range because of the strong international demand for its fins.

The following summary accounts of CoP16 developments are written by members of TRAFFIC's delegation at the meeting and include contextual information and comment. References in parentheses (*CoP16 Doc. 4.2 (Rev. 1)* and so on) are to formal documents of the CoP.

ADMINISTRATIVE AND STRATEGIC MATTERS

by Sabri Zain

Towards a fully transparent Convention?

Transparency was a key theme that emerged early on during the CoP, particularly in relation to discussions on the Rules of Procedure for secret ballots and potential conflicts of interest in the Animals and Plants Committees. Noting that the Rules of Procedure considered open voting as the rule and—other than for elections and choices of meeting venue—secret voting only as an exception, the European Union (EU) was concerned that a secret ballot had taken place on 69 occasions since CoP9, and on issues relating partly to important conservation matters, in particular on marine species or subjects, elephants and ivory trade. They claimed this undermined the integrity of the Convention and ran counter to the agreed goal of promoting transparency and accountability in international fora.

With the current Rules of Procedure requiring only 10 Parties to second a request for a secret ballot for it to be accepted, the EU proposed an amendment to the Rules stipulating that a request for a secret ballot should immediately be voted upon and that a motion for a secret ballot may not itself

be conducted by secret ballot (*CoP16 Doc. 4.2 (Rev. 1)*). A second proposal, from Mexico, also suggested that the threshold for accepting secret ballots should be raised from 10 supporting Parties, to one third of the Parties voting (*CoP16 Doc. 4.3 (Rev. 1)*). The CoP was clearly divided on this issue, with many Parties voicing support for raising the 10-Party threshold and others disagreeing that secret ballots were used too frequently and arguing that they were in line with basic democratic principles.

The debate was further complicated when the question was raised of whether a vote to decide on the issue of secret ballots concerned a procedural or substantive issue, which would determine whether it would be decided by a simple or a two-thirds' majority of Parties. Japan proposed a motion that a two-thirds' majority be required to amend the Rules of Procedure.

Despite the convening of a "Friends of the Chair" Group to help resolve these issues, debate continued in extraordinary plenary sessions over a three-day period and a vote was necessary to end the deadlock. Japan's motion that amendment of the Rules of Procedure be supported by at least two thirds of the Parties voting was carried, while the proposal from the EU did not achieve the two-thirds' majority support necessary to be carried, and Mexico's proposal was also rejected.

It is unlikely that this issue has been fully resolved by the outcome of the votes in session: during the remainder of the meeting, many Parties took the floor and announced their votes almost every time a secret ballot was concluded on an agenda item or listing proposal, highlighting that they were doing so in the interest of transparency.

Funding the Convention

Funding for support to the Convention is always a strategically important discussion at the CoP. With debate centred on the growth scenario for the Secretariat's budget, Parties were presented with the options of a budget with zero real growth (which would allow the maintenance of staff levels at the Secretariat) or a budget with zero nominal growth (which would mean having to reduce staff numbers) (*CoP16 Doc. 8.3 (Rev. 1)*). This latter option was supported by Japan, but in the event a compromise between the two options was finally reached (*Resolution Conf. 16.2*).

The Secretariat proposed that the CoP accept the Global Environment Facility (GEF) as a financial mechanism for CITES (*CoP16 Doc. 8.4*), stating the need for such a mechanism to assist Parties in implementing their international

environmental commitments, and pointing out that the GEF was the financial mechanism of four other environmental Conventions. A number of Parties, however, noted that GEF funding was primarily a country-driven process and that some countries were already receiving support from the GEF for their national activities. In the end, Parties agreed to defer consideration of a financial mechanism for CITES, instructing the Secretariat to explore the risks, benefits, necessity and feasibility, as well as the legal and other implications, of GEF becoming a financial mechanism for CITES (*Decision 16.2*). They agreed that the Secretariat should continue to develop its working relationship with GEF and draw attention to CITES priorities to try and strengthen the species-based component in the period of the Sixth Replenishment of GEF Resources (GEF-6).

Strengthening synergies with other multilateral environmental agreements (MEAs)

The theme of GEF financing was reiterated in the discussions on the CITES Strategic Vision (*CoP16 Doc. 12*), when the Secretariat noted that the proposal to include references to the CBD Strategic Plan on Biodiversity 2011–2020 and the relevant Aichi Biodiversity Targets in the Strategic Vision could demonstrate the contribution of CITES to these and thereby allow opportunities for CITES to access GEF financing. The USA opposed these inclusions, but the overall decision was to incorporate them, and to extend the validity of the Strategic Vision and Action Plan to 2020 (*Resolution Conf. 16.3*).

Steady progress was made in additional ways in strengthening co-operation with other multilateral environmental agreements: *Resolution Conf. 16.4 Cooperation of CITES with other biodiversity-related conventions* encourages Parties to consider further opportunities to strengthen the co-operation, co-ordination and synergies among the biodiversity-related conventions at all relevant levels, while *Resolution Conf. 16.5 Cooperation with the Global Strategy for Plant Conservation of the Convention on Biological Diversity* encourages collaboration on implementation of the said Strategy. A proposal for a memorandum of understanding between the Liaison Group of Biodiversity-related Conventions (BLG) and the Secretariat of Intergovernmental Science–Policy Platform on Biodiversity and Ecosystem Services (IPBES) was not accepted, but Parties did agree a series of Decisions promoting links between IPBES and CITES, including via establishment of a Standing Committee Working Group on IPBES.

ENFORCEMENT AND COMPLIANCE *by Sabri Zain*

High-level calls to action

Public attention in the months before CoP16 had been focused on reports of unprecedented levels of poaching of African Elephants *Loxodonta africana* and rhinoceroses Rhinocerotidae, accompanied by calls for significantly improved efforts to stem the killing. These calls were echoed at the highest levels of government, prompting recognition of wildlife crime as a serious transnational organized crime by the UN General Assembly, the Asia-Pacific Economic Cooperation (APEC) and the Convention against Transnational Organized Crime (CTOC). The then US Secretary of State, Hillary Clinton, made a strong “Call for Action” against wildlife crime, urging “strengthened and expanded enforcement”.

This growing high-level commitment was clearly visible at CoP16, strikingly with a pledge from the Prime Minister of Thailand to take forward the CITES agenda and the exhortation from HRH The Duke of Cambridge, to combat “shocking levels” of poaching and illegal trade. Additionally, the CoP hosted a “roundtable” on combating transnational organized wildlife and forest crime for ministers and high-level representatives. Organized by the International Consortium on Combating Wildlife Crime (ICCWC) in close co-ordination with the Government of Thailand, the event was held to share experiences across States and regions of efforts to combat such crime, and to reaffirm a commitment to counter it at top political levels.

Making enforcement work

Enforcement and compliance emerged as dominating themes during CoP16, particularly in the light of critical poaching developments noted above that set the scene long before the meeting began. Parties worked constructively on agreeing a number of new and innovative measures for inclusion in *Resolution 11.3 Compliance and enforcement*, including an encouragement to Parties to increase their use of specialized investigation techniques and tools, such as the ICCWC Wildlife and Forest Crime Analytic Toolkit. New issues were also highlighted in the revised Resolution, such as the need to provide real-time support to park rangers confronted by heavily armed groups, as well as the need to combat money laundering and facilitate the forfeiture of assets of criminals.

Decision 16.40, another notable enforcement-related output of CoP16, enshrines agreement to assess follow-up actions after large seizures of CITES specimens; to initiate a process to assess implementation and enforcement of CITES for

species listed in Appendix I; and to establish Wildlife Incident Support Teams (WISTs) to assist countries affected by significant poaching or making large-scale seizures of CITES specimens.

Renewed emphasis on strengthened enforcement also resulted in new measures in a number of the species-specific items on the CoP agenda, particularly in relation to illegal killing and trade of elephants and rhinoceroses (see separate sections on those species below).

Capacity-building for enforcement was a recurring item of discussion at the CoP and the subject of a joint side event co-organized by Japan’s Ministry of the Environment and TRAFFIC. This event highlighted capacity-building activities in South-east Asia to promote enforcement of trade regulations for CITES-listed species. It examined successes, lessons learnt and areas for further collaboration between governments and NGOs.

Regional co-operation

Regional co-operation can be seen as a highlight of CoP16, in so far as it was the occasion of the first-ever global meeting of wildlife enforcement networks (WENs), in the margins of the main meeting, on 5 March. This convocation of the WENs, organized by ICCWC, aimed to enable them to share experiences and to discuss the need for their enhanced co-operation and co-ordination. More than 10 WENs participated in the event and participants encouraged ICCWC to organize further meetings for them. As a step beyond this, moreover, ICCWC was encouraged to facilitate the creation and functioning of a “network of the wildlife enforcement networks”, to fortify the role of WENs, and to foster attention from civil society organizations, to draw more notice to the magnitude of wildlife crime and to work with them to reduce demand for endangered species.

Individual WENs, including the South Asia WEN, ASEAN WEN, Lusaka Task Force and Horn of Africa WEN organized separate events at the meeting highlighting different aspects of their work.

Giving CITES “teeth”

The seriousness with which Parties are now viewing enforcement was reflected in the emphasis placed on giving CITES “teeth” in many of the discussions at CoP16. The opening speeches at the 63rd meeting of the Standing Committee (SC63) on the eve of the CoP reminded Parties of the importance of using the criteria and measures provided in *Resolution Conf. 14.3 CITES Compliance Procedures* and at the CoP itself Parties agreed new texts pursuant to that Resolution regarding illegal trade in rhinoceroses

(*Decision 16.91*) and elephants (*Resolution Conf. 10.10 (Rev. CoP16)*) (see separate sections on those species below). These are designed to drive effective implementation and address the issue of accountability concerning lack of progress in line with CITES aims.

Discussion of national laws for the implementation of the Convention is a regular feature of CoP meetings. At CoP16, a US proposal was accepted whereby Parties who have been members of CITES for more than 20 years cannot justifiably claim that exceptional circumstances prevent them from adopting appropriate measures for its effective implementation. Clearly, there are a number of Parties that are growing impatient with repeated and consistent failure to demonstrate adequate progress with CITES-implementing legislation in certain cases—perhaps prompted by the growing sense of urgency to address levels of poaching and illegal trade that may spiral out of control if left unchecked.

ELEPHANTS by Tom Milliken

Following the withdrawal of an African Elephant downlisting and ivory trade proposal by Tanzania, discussions on elephants at CoP16 focused on the escalating conservation crisis in Africa. As noted previously, the sense of urgency for CITES to take action was evident from the start of the meeting. Elephants were “centre stage” in the opening ceremony and Thailand’s Prime Minister Yingluck Shinawatra announced that her country would “work towards amending the national legislation with the goal of putting an end to ivory trade and to be in line with international norms”. As Thailand is one of the largest unregulated ivory markets in Asia, and a country identified in every Elephant Trade Information System (ETIS) analysis as heavily implicated in illicit trade, this declaration from the host country provided impetus for realizing strong action on elephant issues throughout CoP16.

Against this backdrop, the analytical results of ETIS (*CoP16 Doc. 53.2.2 (Rev. 1)*), the CITES monitoring system to track illegal ivory trade that is managed by TRAFFIC, proved critical to the elephant deliberations and, ultimately, received unprecedented uptake in a series of measures to tackle illegal ivory trade. Indeed, the ETIS analysis to CoP16 documented record illegal trade in ivory, 2011 levels being three times greater than those found in 1998. Likewise, the report from the Monitoring Illegal Killing of Elephants (MIKE) programme showed the highest levels of poaching since the system began analysing site-specific data more than a decade ago and, also likewise, the evidence from this monitoring system was instrumental to proceedings at CoP16.

The revision at CoP16 of the CITES Resolution (*Resolution Conf. 10.10 Trade in Elephant Specimens*)—the Resolution that mandates MIKE and ETIS, establishes criteria against which legal domestic trade in ivory must comply, and provides the general framework for addressing trade in elephant specimens under the Convention—resulted in a significantly strengthened text that introduced a number of new measures, such as:

- compulsory annual reporting of all ivory stockpiles held by governments anywhere in the world;
- mandatory forensic examination of all large-scale ivory seizures (seizures of 500 kg or more);
- inclusion of “demand reduction” as a necessary course of action in end-use markets for ivory;
- the tracking of trade in live elephants; and
- a compliance mechanism in accordance with *Resolution Conf. 14.3 CITES compliance procedures* including the threat of sanctions when Parties fail to implement the Resolution’s requirements.

A series of CITES Decisions to support elephant conservation over the next three years were also adopted at CoP16, as summarized below.

- *Decision 16.78* mandates the Secretariat, subject to funding, “to convene a CITES Ivory Enforcement Task Force” comprising China (Hong Kong separately represented), Kenya, Malaysia, Philippines, South Africa, Tanzania, Thailand, Uganda and Viet Nam, together with the International Coalition to Combat Wildlife Crime (ICWC) partner organizations. The task force will review current law enforcement strategies and practices, promote law enforcement collaboration all along the trade chain, examine DNA testing and other forensic identification techniques for ivory, and consider the broader use of controlled deliveries, anti-money-laundering and asset recovery mechanisms as tools for combating wildlife crime. With one exception, all the designated countries in the task force were identified in the ETIS analysis to CoP16 as “countries of primary concern”, and Uganda was included as it was highlighted as being of concern in an ETIS report to SC62. In various combinations, these nine countries form the principal trade chains through which an estimated three quarters of the illegal ivory trade has moved since 2009. Thus, the prospect of collaborative law enforcement among this set of players holds promise for positively inhibiting ivory trade crime.
- *Decisions 16.79* and *16.80* subject a further 15 nations to a CITES oversight process that will examine their ivory trade policies and actions. In this regard, the Secretariat is charged with seeking clarification on implementation of CITES and other provisions concerning control of trade in elephant ivory and ivory markets and reporting on its findings to the next meeting of the Standing Committee. Based on the

ETIS analysis, Cameroon, Congo, the Democratic Republic of the Congo, Egypt, Ethiopia, Gabon, Mozambique, Nigeria and Uganda were identified as countries of “secondary concern”, whilst Angola, Cambodia, Japan, Lao People’s Democratic Republic, Qatar and the United Arab Emirates were seen as “important to watch”, thus making up the 15. Additional actions directed at these individual countries can be taken by the Standing Committee if problematic issues are subsequently revealed.

- *Decision 16.81* serves to foster co-operation between CITES and the UN Office on Drugs and Crime.
- *Decisions 16.82* and *14.78* deal with reporting to future Standing Committee meetings and the role of the Standing Committee in tracking progress on the other Decisions.
- *Decision 16.83* was formulated to direct all Parties involved in any ivory seizure of 500 kg or more to collect and submit samples to appropriate forensic laboratories for analysis within 90 days of the seizure. With effective implementation, this move should reveal sources of large quantities of ivory that would otherwise be likely to remain unknown.

In other developments instigated by the provision of ETIS results to SC62, further deliberations at SC63 and SC64, held just prior to and after CoP16, resulted in China and Thailand as destination countries, Malaysia, Hong Kong, Philippines and Viet Nam as transit countries/territories, and Kenya, Tanzania and Uganda as source countries, having to prepare detailed national ivory trade action plans and submit them to the Secretariat by 15 May 2013. *SC64 Doc. 2* states “...the eight Parties should keep the Secretariat updated via electronic means about progress made against timeframes and milestones; and the Secretariat shall monitor progress and will keep the Standing Committee informed intersessionally via electronic means”. All action plans were submitted by the deadline. Together with other results of CoP16, they hold great potential for putting “teeth” into the CITES framework for dealing with illegal trade in ivory, and holding governments accountable for their ivory trade policies and practices.

All in all, CoP16 has provided elephant conservation with a robust framework for action to address a range of issues in the global effort to arrest escalating illegal trade in ivory. ETIS played an indispensable role in identifying priority countries for attention and guiding the development of subsequent CITES policy actions and interventions.

RHINOCEROSSES by Tom Milliken

The relentless surge in rhinoceros poaching for the continuing horn trade to Asia, especially Viet Nam, was documented in a report for CoP16 by IUCN and TRAFFIC (*CoP16 Doc. 54.2 (Rev. 1)*). This report, mandated by *Resolution Conf. 9.14*, highlighted: record poaching losses in South Africa; the highest number of rhinoceros horns in trade in two decades; the advent of Europe and North America as sources of rhinoceros horn through thefts from museums and other institutions and the illegal acquisition of sport-hunted trophies; the use of European sport hunters in South Africa as conduits for illegal horn trade to Viet Nam; and the emerging roles of Mozambique and China in the illicit trade. The report concluded “Rhinos are facing a crisis and there is no room for complacency.” The CITES Parties clearly received the message, adopting a series of forceful measures to address critical rhinoceros conservation issues, as highlighted below.

- *Decision 16.84* directed all Parties to report rhinoceros horn seizures to the Secretariat and all countries along the trade chain to enable follow-up investigations, and to submit seized horn samples to accredited forensic laboratories for DNA analysis, as described in document *CoP16 Doc. 54.2 (Rev. 1)*. The Decision also calls for national legislation to underpin the use of specialized investigative techniques (such as controlled deliveries and covert investigations) and other law enforcement tools (for instance, anti-money-laundering and asset forfeiture legislation) to combat rhinoceros crime, and for prosecutions to employ a combination of relevant legislation so that penalties serve as effective deterrents. *Decision 16.84* also further strengthens CITES permitting procedures for rhinoceros horn specimens; calls for measures to regulate internal trade in rhinoceros specimens such as sport-hunted trophies or antique specimens, including all parts or derivatives; and stipulates that Parties should consider stricter domestic measures to regulate the re-export of rhinoceros horn products.
- *Decision 16.85* represents far-reaching, landmark progress in terms of the purview of CITES in addressing demand for endangered species products. It calls for all Parties identified as a range or consumer State “to develop and implement long-term demand reduction strategies or programmes and immediate actions aimed at reducing the illegal movement and consumption of rhino horn products, taking into consideration the draft demand reduction principles included in the Annex to document *CoP16 Doc. 54.1 (Rev. 1)*, to achieve measurable change in consumer behaviour”. In range States, the Decision continues,

“strategies or programmes to enhance community awareness with regard to the economic, social and environmental impacts of illicit trafficking in wildlife crime” should also be developed. Actions taken in this regard need to be reported to the CITES Rhino Working Group by 31 January 2015, so that “best practices” and challenges can be elucidated for a report to SC66.

- *Decision 16.86* is directed at Viet Nam, which was identified at CoP15 as the principal destination for rhinoceros horn. Viet Nam is exhorted to implement those elements of the South Africa–Viet Nam action plan that will serve to strengthen national management of rhinoceros horn trophies (including issues of tracking, possession, alteration and transfer of ownership), and improving investigations and prosecutions of Vietnamese nationals or others implicated in rhinoceros crime. This Decision also calls on Viet Nam “to conduct consumer behaviour research to develop and implement demand reduction strategies or programmes aimed at reducing the consumption of rhino horn products”, and to report on this and other activities, including arrests, seizures, prosecutions and penalties in rhinoceros crime cases, to the Secretariat by 31 January 2014.
- *Decision 16.87* is directed at Mozambique, a country that has emerged as the main staging ground for rhinoceros poaching incursions into South Africa’s Kruger National Park and the leading point of export for illicit rhinoceros horn in Africa at the present time. It calls on Mozambique to implement *Resolution Conf. 9.14 (Rev. CoP15)* and *Decision 16.84* effectively, with special attention to enacting legislation to establish penalties for rhinoceros crime that serve as a deterrent. Mozambique needs to produce a comprehensive report on its efforts to the Secretariat by 31 January 2014 for consideration by the CITES Rhino Working Group.
- *Decision 16.88* is directed at both Mozambique and South Africa, calling for enhanced bilateral co-operation to combat rhinoceros poaching and illegal horn trade, and a comprehensive report to the Secretariat by 31 January 2014 on actions taken.
- *Decision 16.89* requires the Secretariat, subject to external funding, to convene a CITES Rhinoceros Enforcement Task Force comprising Parties affected by rhinoceros poaching and illegal trade, the ICCWC partner organizations, EUROPOL “and, as appropriate, other Parties and experts. The Task Force should develop strategies to improve international cooperation”. The Decision also calls for the Task Force to develop “guidelines on best practices, protocols and operational procedures, that will promote the use of wildlife forensic technology; examine the implementation of *Resolution Conf. 9.14 (Rev. CoP15)* in...South Africa and Zimbabwe;... examine progress with curtailing illegal trade in rhinoceros parts and derivatives by citizens of

implicated States, particularly Viet Nam;...and revise *Resolution Conf. 9.14 (Rev. CoP15)*, taking into consideration the contents of *Decisions 16.84* and *16.85* and submit this revised version for consideration at the 17th meeting of the Conference of the Parties”. *Decision 16.89* further solicits external funding “to undertake a technical mission to the Lao People’s Democratic Republic to assess current enforcement activities relevant to illegal trade in wildlife, in particular in rhinoceros parts and derivatives, and the implementation of *Resolution Conf. 9.14 (Rev. CoP15)*”.

- Reports on actions taken pursuant to *Decisions 16.85–16.89* will be considered at SC65 and SC66, following evaluation by the CITES Rhino Working Group, as mandated in *Decision 16.90*.
- *Decision 16.91* calls upon the Standing Committee, at SC64, to extend the mandate of the Rhino Working Group that was first established at SC61 in August 2011. This was subsequently done on the last day of CoP16.
- In *Decision 16.92*, the Standing Committee is charged with reviewing the definition of “hunting trophy” provided in *Resolution Conf. 12.3 (Rev. CoP16)*, as it applies to rhinoceros horn hunting trophies, and determining whether revision is needed to eliminate any possible abuse of the definition to facilitate illegal trade in rhinoceros horn.

Collectively, these measures establish a far-reaching plan of engagement under CITES for international action to tackle the escalating illicit rhinoceros horn trade. The degree of specificity and the breadth of content in these Decisions hold considerable hope for improving the conservation status of the world’s five beleaguered rhinoceros species.

TIMBER SPECIES by David Newton

At CITES CoP16 there were six listing proposals concerning timber, the majority involving species that have been under harvest pressure for many years and that are in some instances now very rare in the wild. Two proposals were submitted by Madagascar (*CoP16 Props 58* and *63*), to include that country’s populations of Malagasy Ebony *Diospyros* spp. and Malagasy Rosewood *Dalbergia* spp. in Appendix II (with annotations); two from Belize (*CoP16 Props 61* and *62*) were for inclusion of three rosewood *Dalbergia* species in Appendix II; Thailand and Viet Nam put forward a proposal (*CoP16 Prop. 60*) to list another rosewood species (*D. cochinchinensis*) in Appendix II; and Brazil proposed amendment (*CoP16 Prop. 59*) of the annotation #12 for Brazilian Rosewood *Aniba*

rosaeodora to read “Logs, sawn wood, veneer sheets, plywood and extracts. Finished products containing such extracts as ingredients, including fragrances, are not considered to be covered by this annotation”, so that “extracts” (a defined term) rather than “essential oils” (the undefined term previously used in the annotation) would be covered by CITES provisions.

Remembering past struggles to get timber listed in CITES, for example attempts to list the commercially significant Big-leaf Mahogany *Swietenia macrophylla* in Appendix II at CoPs from 1992 to 2002, it might have been expected that there would again be enormous resistance from Parties to proposed listings of valuable timber species. Opposition in the past to the listing of commercially valuable timber species has often been greatest from range States of the species concerned. At CoP16, however, it was the range States themselves proposing the listings. In addition, in the background, the Southern African Development Community (SADC) reached agreement on supporting Madagascar’s timber proposals, just as a bloc of Asian Parties achieved a similar consensus on support for Thailand and Viet Nam’s proposal, while the Latin Americans pulled together to work to get Belize’s proposals approved.

When the day for tabling the timber proposals arrived, debates were among the easiest and most collaborative in nature of any CITES timber proposal debates. Each and every proposal was adopted and any amendments suggested seemed completely appropriate. A particularly heartening aspect of proceedings was perhaps the extent to which countries were prepared to take on formal Decisions that impose big responsibilities. This was nowhere more striking than in the case of the complex Decision (16.152) entered into by Madagascar for the management of its newly listed timber species. This Decision entails adoption of an action plan for such management, stipulating several concrete actions (for instance, the preparation of identification tools and establishment of precautionary export quotas based on documented Non-detriment Findings (NDFs)) and regular reports back to the CITES Plants Committee and the Secretariat. Belize, too, clearly appears willing to take on management of Appendix-II listings for the three species of *Dalbergia* it proposed. Such voluntary acceptance of responsibility, and in general the full support of range States for the timber proposals, distinguishes CoP16 from its predecessors. The ease of debate seems to indicate a new acceptance that the CITES community and Convention itself can assist countries to manage their natural resources more effectively, even those commercially prized.

Out of all these listing proposals, the most challenging to implement was always going to be the Madagascar *Diospyros* spp. and *Dalbergia* spp. proposals. The reasons for this are that the listings include dozens of species, many of which are hard to identify, their distribution and populations are largely unknown, and because Madagascar is struggling with illegal timber trade on a large scale owing to serious governance under-capacity. However, since CoP16, the World Bank has put out a tender requesting assistance with the management of Madagascar’s timber resources, including a legal review of timber-relevant statutes and management of illegal timber stockpiles. Obtaining this support will go a long way to assisting with implementation of the new responsibilities Madagascar has for the ebony and rosewood species.

FISHES by Glenn Sant

Controversy over the inclusion in CITES of marine species—Atlantic Bluefin Tuna *Thunnus thynnus* and seahorses *Hippocampus* spp., for example—has marked CoPs over the past decade. After CoP15, where all marine proposals failed, many will have been left with a particularly negative view of the capacity for CITES to make well-reasoned decisions on commercially important marine species. All this changed at CoP16, which can truly be seen as a moment of sea change in the history of marine species in CITES.

Introduction from the Sea

CITES Parties have pursued an agreement on “Introduction from the Sea”—or the question of how the harvest of marine resources outside the jurisdiction of any State is permitted in relation to Appendix-II species—over many years. CoP16 saw a culmination of discussions on this, following resolution of some final elements of the process through a working group of the CITES Standing Committee. In the outcome (*Resolution Conf. 14.6 (Rev. CoP16)*), clear responsibility has been given to the Flag State (State of vessel registration) to issue export permits for implicated marine specimens—which will require legal and NDF findings. The exception is when one State charters a vessel from another, in which case responsibility for permitting is via written arrangement between the two States (*Decisions 16.48–51* relate). It was especially timely that Parties agreed explicit instruction on how CITES should be implemented for species caught on the high seas just prior to consideration of proposals to list several shark and ray species.

Sharks and rays

The debate around sharks and rays at CoP16 involved the discussion of a number of issues related to Decisions of the Parties, an amendment to update a Resolution with broad application across all sharks and rays, and passion-filled debate resulting variously in rejection and acceptance of listing proposals.

Leading up to the CoP, debate over the merits of the seven proposals (*CoP16 Props 42–48*) to list species of sharks and rays was already spirited. In the event, two thirds of the 178 Parties to CITES voting at the CoP considered that Oceanic Whitetip Shark *Carcharhinus longimanus*, Porbeagle *Lamna nasus*, three species of hammerhead shark *Sphyrna* spp. and manta rays *Manta* spp. merited inclusion in CITES Appendix II. They also accepted, by consensus, a proposal to transfer the Freshwater Sawfish *Pristis microdon* from Appendix II to Appendix I. These outcomes were in sharp contrast to past experiences, and indeed proposals for a number of the same species had been rejected at CoP15.

The atmosphere during the final sessions at the CoP when these new elasmobranch listings were due to be confirmed was electric—and raucous when attempts by the minority of Parties opposing the listings failed to find the support necessary to re-open debate, thus ensuring the listings' adoption. The vote on whether to re-open debate in plenary session was via secret ballot: never in the history of CITES have so many Parties taken the floor after such a ballot to declare their vote, and the pride expressed by several Parties who reported that they had supported the listings was notable. This moment in CITES history was also remarkable as the point at which arguments that the Convention should not apply to commercially important marine species became decidedly unconvincing.

Effective implementation of the listing of these seven commercially important species undoubtedly remains a concern and the largest importer of shark fins in the world, China, took the floor following endorsement of the listings, calling on exporting Parties to ensure they addressed the issues of legal acquisition and NDF findings adequately when issuing permits for export. However, the listings mark a new step towards addressing the broader issue of responses to management challenges for fisheries affected by international trade and, to assist Parties, the listings do not come into effect until September 2014. This is in recognition of the implementation issues to address, particularly as they relate to the obligations for Flag States catching and trading the species, as these States must be able

to prove legal acquisition and produce NDFs (i.e. vouch for sustainable harvesting) before issuing export permits. It is worth considering with regard to the practicalities of the CITES shark listings that the challenges are the same challenges that any fisheries management regime would need to face in order to manage the species involved responsibly—all the more of a hurdle since none of these species has been responsibly managed in the past, and hence the dramatic declines caused to their numbers as a direct consequence of harvest for international trade. A number of Parties, including Brazil and the EU, provided generous offers of help with capacity-building for effective implementation of the listings, particularly for developing countries. Drawing on its recent study *Into the Deep: Implementing CITES Measures for Commercially Valuable Sharks and Manta Rays*, TRAFFIC is also assisting Parties in preparing for entry into force of the new listings, for example co-convening a regional workshop for Oceania on implementation requirements.

Freshwater stingrays *Paratrygon aiereba*, *Potamotrygon motoro* and *P. schroederi* had also been proposed for inclusion in Appendix II (*CoP16 Props 47 and 48*), but the Parties did not agree to list these species. Instead, they agreed a series of Decisions to continue work on the taxa within the Animals Committee via a working group tasked with considering the conservation statuses of the species, national-level progress on management, and with advising whether the species should be prioritized for inclusion in Appendix II.

Other marine species

Sharks were not the only marine species for which important decisions were made at CoP16. The continued difficulties around implementation and enforcement of the Appendix-II listing of Humphead Wrasse *Cheilinus undulatus* were discussed, with the result that Parties, the Standing Committee and the IUCN Groupers and Wrasses Specialist Group were variously tasked with working to improve implementation of the listing via *Decisions 16.139, 15.87 (Rev. CoP16) and 16.140*.

In contrast to the definite steps taken so far mentioned, little headway was made at CoP16 with sea cucumbers and toothfish. In discussion of *Decision 14.100 (Rev. CoP15)* on sea cucumbers, some regions, such as Oceania, said they wanted to see the Animals Committee extend its review of sustainable use and management of sea cucumber fisheries, but there was no consensus on how to proceed, and no new Decision was taken forward. When it came to toothfish, Parties were silent in response to presentation of the report of the

Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) (*CoP16 Doc. 63 (Rev. 1)*) in Committee II. The report catalogued a lack of co-operation with CCAMLR on the part of CITES Parties, specifically in addressing illegal fishing of Patagonian Toothfish *Dissostichus eleginoides*. CoP16 merely “noted” this report, despite the fact that, in 2002, a proposal to include the Patagonian Toothfish in Appendix II was withdrawn after Parties instead committed to co-operate with CCAMLR.

“OTHER” PROPOSALS by *Thomasina Oldfield*

Not only did CoP16 see a record number of participants, it also dealt with the highest number of proposals to amend the CITES Appendices since 1997: the 71 proposals considered contrast with a relatively minor total of 42 at the previous CoP and, furthermore, a number of these 71 proposals involved multiple species.

The high number of proposals was in part due to a drive by the Plants and Animals Committees to “tidy up” the Appendices following their “Periodic Review”. This process aims to ensure the Convention is kept up to date and avoids creating unnecessary administrative burdens through regulation of specimens of species that need no longer be under the purview of CITES.

The Periodic Review process amasses information on selected species, mostly from range States, for discussion and subsequent listing amendment recommendations from the Animals and Plants Committees. Accordingly, CoP16 considered proposals regarding species thought to be in little demand from the wild internationally: *Gallus sonneratii*, *Ithaginis cruentus*, *Tetraogallus caspius*, *Tetraogallus tibetanus*, *Tillandsia kautskyi*, *Tillandsia sucrei*, *Tillandsia sprengeliana* and *Dudleya stolonifera* and proposals regarding extinct species: *Rheobatrachus silus*, *Rheobatrachus vitellinus*, *Pteropus brunneus*, *Thylacinus cynocephalus*, *Onychogalea lunata*, *Caloprymus campestris*, *Chaeropus ecaudatus*, *Macrotis leucura* and *Sceloglaux albifacies*.

The proposals to delete the extinct species from the Appendices were adopted. Some of the species in question had been extirpated decades before CITES came into being and others, such as the gastric-brooding frogs of Australia, much more recently. A few species, *Pteropus brunneus* for instance, may never have even existed, yet had been included in the Appendices as a result of a higher-taxon (e.g. genus or family) listing.

Discussions on the other Periodic Review proposals were less straightforward. Despite the

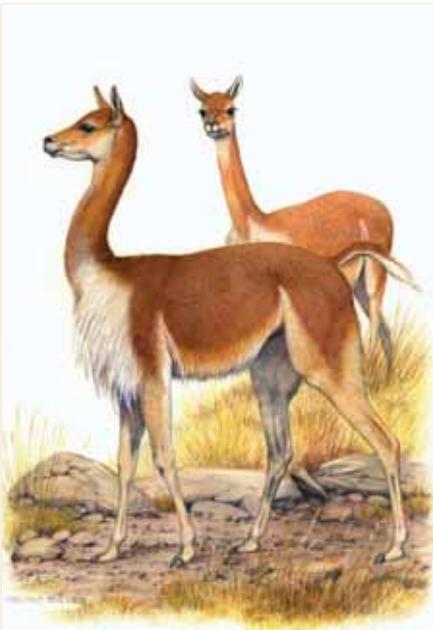
fact that relevant documents had been available on the CITES website for comment and engagement, range States were not supportive of amendments proposed in cases where they had not been actively involved in the lead-up processes. This was clearly a frustration to some. Limited engagement by range States in the Periodic Review often reflects lack of capacity (mainly funds), and some non-range States took on leadership responsibility in order to move forward intersessionally. Reflections on how well this worked may influence approaches to listing amendments resulting from Periodic Review efforts in future.

In huge contrast to the level of demand for species whose listings were the subject of Periodic Review, demand for certain crocodiles that were the subject of debate is very high. Three proposals to downlist populations of crocodile species in Thailand and Colombia were debated at length. The aim of two of these (the Thai proposals for *Crocodylus porosus* and *C. siamensis*) was not to permit trade in wild specimens, but apparently to facilitate trade in Thailand’s extensive stock of captive-bred crocodiles. The proposals were ultimately rejected, despite receiving robust support in session.

A large number of proposals (*CoP16 Props 28–38*) to amend the listings of various turtle and tortoise species were submitted, two of which involved multiple species and amendments. In considering these last-mentioned proposals, the IUCN/TRAFFIC *Analyses of the Proposals to Amend the Appendices at the 16th meeting of the Conference of the Parties*, assessed the status of each species individually against the CITES listing criteria, as seemed appropriate. However, discussions on these proposals at the CoP did not follow such lines and indeed most of the turtle proposals were accepted with very little opposition. This raises the issue of how the listing criteria should be applied in the case of multi-species proposals and it will be instructive to note whether experience at CoP16 affects the submitting of such proposals in future.

The West African Manatee *Trichechus senegalensis* was listed in Appendix I at CoP16. It appears that some international trade in this mammal goes unreported: proponents of the listing hope it will help focus attention on this elusive and vulnerable species.

Madagascar submitted numerous proposals to list ornamental endemic succulent plants species at CoP16. Several had been submitted to the previous CoP, but withdrawn or rejected at that time. This resulted (via *Decision 15.97*) in a process through the Plants Committee to review and gather further



THE TASMANIAN TIGER (TOP), WHICH HAS BEEN DELETED FROM CITES APPENDIX I, HAS BEEN CLASSIFIED BY IUCN AS EXTINCT SINCE 1982. ATTWATER'S GREATER PRAIRIE CHICKEN (CENTRE), PROTECTED BY DOMESTIC LEGISLATION IN ITS NATIVE USA, HAS BEEN TRANSFERRED FROM APPENDIX I TO II. A PROPOSAL TO TRANSFER ECUADOR'S POPULATION OF VICUÑA (BOTTOM) FROM APPENDIX I TO II WAS ADOPTED.

information on the taxa in question, which in turn led to submission of the proposals to CoP16: these were discussed as a block, and all were adopted.

Another species the subject of a renewed proposal at CoP16 following rejection at CoP15 was the Polar Bear *Ursus maritimus*. It was again proposed for transfer from Appendix II to I and discussions were, as expected, impassioned on both sides of the debate. That the Polar Bear, the icon of a "melting world", is traded comes as a surprise to many. Although there was little information to add to that from the previous proposal, recent data have shown accelerating decreases in the extent of summer sea ice coverage, an important factor for the Polar Bear's life history. During discussion of the Polar Bear proposal, there was a strong and vocal presence from Inuit communities, who made ardent pleas in favour of continued trade in this species, which provides their people with valuable income. In the end, the Polar Bear was not transferred to Appendix I. The arguments used in debate related closely to the CITES listing criteria, but there appears to be ambiguity over projection of population declines and, given that interest in the issue of the Polar Bear's status under CITES is unlikely to dissipate, this risks stalling future deliberations if not resolved.

LISTING CRITERIA by Thomasina Oldfield

The efforts to develop the criteria over the years have been significant and, although not binding, the criteria in *Resolution Conf. 9.24* give credibility to decisions that reference them. Reflecting on decisions made on proposals at CoP16, it appears that the criteria mattered and were the basis of debate when there were strong opposing views, but appeared to be less important when proposals were not controversial, or only mildly so. This is frustrating to those who uphold the criteria as the basis for assessing the merit of listing proposals. However, important decisions were taken at this CoP that should lead to real conservation benefits regarding the species concerned, in many cases because the criteria were there to guide the decisions taken.

This report was compiled by the following TRAFFIC staff:

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< DRAWINGS TOP AND BOTTOM BY HELMUT DILLER / WWF-CANON; PAUL BARRUEL / WWF-CANON (CENTRE)

LISTING PROPOSALS SUBMITTED TO CoP16 AND OUTCOMES.

Prop. No.	Species	English common name	Proposal	Result
1	<i>Rupicapra pyrenaica ornata</i>	Pyrenean Chamois	Transfer App I to App II	Adopted
2	<i>Vicugna vicugna</i>	Vicuña	Transfer Ecuador's pop.App I to App II	Adopted
3	<i>Ursus maritimus</i>	Polar Bear	Transfer App II to App I	Rejected
4	<i>Pteropus brunneus</i>	Dusky Flying-fox	Deletion App II	Adopted
5	<i>Thylacinus cynocephalus</i>	Tasmanian Tiger	Deletion App I	Adopted
6	<i>Onychogalea lunata</i>	Crescent Nailtail Wallaby	Deletion App I	Adopted
7	<i>Caloprymnus campestris</i>	Buff-nosed Rat-kangaroo	Deletion App I	Adopted
8	<i>Chaeropus ecaudatus</i>	Pig-footed Bandicoot	Deletion App I	Adopted
9	<i>Macrotis leucura</i>	Lesser Rabbit-eared Bandicoot	Deletion App I	Adopted
10	<i>Ceratotherium simum simum</i>	White Rhinoceros	Amend annotation	Withdrawn
11	<i>Loxodonta africana</i>	African Elephant	Transfer App I to App II	Withdrawn
12	<i>Loxodonta africana</i>	African Elephant	Amend annotation	Withdrawn
13	<i>Trichechus senegalensis</i>	West African Manatee	Transfer App II to App I	Adopted
14	<i>Caracara lutosa</i>	Guadalupe Caracara	Deletion App II	Adopted
15	<i>Gallus sonneratii</i>	Sonnerat's Junglefowl	Deletion App II	Rejected
16	<i>Ithaginis cruentus</i>	Blood Pheasant	Deletion App II	Rejected
17	<i>Lophura imperialis</i>	Imperial Pheasant	Deletion App I	Adopted
18	<i>Tetraogallus caspius</i>	Caspian Snowcock	Transfer App I to App II	Rejected
19	<i>Tetraogallus tibetanus</i>	Tibetan Snowcock	Transfer App I to App II	Rejected
20	<i>Tympanuchus cupido attwateri</i>	Attwater's Prairie-chicken	Transfer App I to App II	Adopted
21	<i>Campephilus imperialis</i>	Imperial Woodpecker	Deletion App I	Adopted
22	<i>Sceloglaux albifacies</i>	Laughing Owl	Deletion App II	Adopted
23	<i>Crocodylus acutus</i>	American Crocodile	Transfer Cispata Bay pop.App I to App II	Rejected
24	<i>Crocodylus porosus</i>	Saltwater Crocodile	Transfer Thailand pop.App I to App II with a zero quota for wild specimens	Rejected
25	<i>Crocodylus siamensis</i>	Siamese Crocodile	Transfer Thailand pop.App I to App II	Rejected
26	<i>Naultinus</i> spp.	New Zealand green geckos	Inclusion in App II	Adopted
27	<i>Protobothrops mangshanensis</i>	Mangshan Pit-viper	Inclusion in App II	Adopted
28	<i>Chelodina mccordi</i>	Roti Island Snake-necked Turtle	Transfer App II to App I	Maintained App II with zero quota
29	<i>Clemmys guttata</i>	Spotted Turtle	Inclusion in App II	Adopted
30	<i>Emydoidea blandingii</i>	Blanding's Turtle	Inclusion in App II	Adopted
31	<i>Malaclemys terrapin</i>	Diamondback Terrapin	Inclusion in App II	Adopted
32	Geoemydidae	Freshwater box turtles	Inclusion in App II	Adopted
33	<i>Cuora galbinifrons</i>	Indochinese Box Turtle	Transfer App II to App I	Addressed through Prop 32
34	<i>Geoemyda japonica</i>	Ryukyu Black-breasted Leaf Turtle	Inclusion in App II	Addressed through Prop 32
35	<i>Mauremys annamensis</i>	Annam Leaf Turtle	Transfer App II to App I	Addressed through Prop 32
36	Platysternidae	Big-headed turtles	Transfer App II to App I	Adopted
37	<i>Geochelone platynota</i>	Burmese Star Tortoise	Transfer App II to App I	Adopted

LISTING PROPOSALS SUBMITTED TO CoP16 AND OUTCOMES.

Prop. No.	Species	English common name	Proposal	Result
38	Trionychidae	Softshell turtles	Inclusion in App II	Adopted
39	<i>Epipedobates machalilla</i>	Machalilla Poison Dart Frog	Inclusion in App II	Adopted
40	<i>Rheobatrachus silus</i>	Southern Gastric-brooding Frog	Deletion App II	Adopted
41	<i>Rheobatrachus vitellinus</i>	Northern Gastric-brooding Frog	Deletion App II	Adopted
42	<i>Carcharhinus longimanus</i>	Oceanic Whitetip Shark	Inclusion in App II	Adopted
43	<i>Sphyrna lewini</i> , <i>S. mokarran</i> and <i>S. zygaena</i>	Scalloped Hammerhead Shark, Great Hammerhead Shark and Smooth Hammerhead Shark	Inclusion in App II	Adopted
44	<i>Lamna nasus</i>	Porbeagle Shark	Inclusion in App II	Adopted
45	<i>Pristis microdon</i>	Freshwater Sawfish	Transfer App II to App I	Adopted
46	<i>Manta</i> spp.	Manta rays	Inclusion in App II	Adopted
47	<i>Paratrygon aiereba</i>	Ceja River Stingray	Inclusion in App II	Rejected
48	<i>Potamotrygon motoro</i> , <i>Potamotrygon schroederi</i>	Ocellate River Stingray and Rosette River Stingray,	Inclusion in App II	Rejected
49	<i>Papilio hospiton</i>	Corsican Swallowtail butterfly	Transfer App I to App II	Adopted
50	<i>Yucca queretaroensis</i>	Queretaro Yucca	Inclusion in App II	Adopted
51	<i>Oberculicarya decaryi</i>	Jabihy	Inclusion in App II	Adopted
52	<i>Hoodia</i> spp.	Hoodia	Amendment to the annotation	Adopted
53	<i>Panax ginseng</i> and <i>Panax quinquefolius</i>	Ginseng	Amend the annotation to the listings in App I	Adopted
54	<i>Tillandsia kautskyi</i>	Kautsky's Tillandsia	Deletion App II	Adopted
55	<i>Tillandsia sprengeiana</i>	Sprengel's Tillandsia	Deletion App II	Adopted
56	<i>Tillandsia sucrei</i>	Sugar Tillandsia	Deletion App II	Adopted
57	<i>Dudleya stolonifera</i> and <i>Dudleya traskiae</i>	Laguna Beach Live-forever and Santa Barbara Island Live-forever	Deletion App II	Adopted
58	<i>Diospyros</i> spp.	Madagascan ebony woods	Inclusion of pop of Madagascar in App II, with annotation	Adopted
59	<i>Aniba rosaeodora</i>	Brazilian Rosewood	Modify annotation #12	Adopted
60	<i>Dalbergia cochinchinensis</i>	Thailand Rosewood	Inclusion in App II	Adopted
61	<i>Dalbergia retusa</i> and <i>Dalbergia granadillo</i>	Black Rosewood and Granadillo Rosewood	Inclusion in App II	Adopted
62	<i>Dalbergia stevensonii</i>	Honduras Rosewood	Inclusion in App II	Adopted
63	<i>Dalbergia</i> spp.	Malagasy rosewoods	Inclusion of pops of Madagascar in App II, with annotation	Adopted
64	<i>Senna meridionalis</i>	Taraby	Inclusion in App II	Adopted
65	<i>Adenia firingalavensis</i>	Lokoranga	Inclusion in App II	Adopted
66	<i>Adenia subsessifolia</i>	Katakata	Inclusion in App II	Adopted
67	<i>Uncarina grandidieri</i>	Uncarina	Inclusion in App II	Adopted
68	<i>Uncarina stellulifera</i>	Uncarina	Inclusion in App II	Adopted
69	<i>Osyris lanceolata</i>	East African Sandalwood	Inclusion in App II	Adopted for pops of KE, TZ,UG,RU, BU,ET with annotations
70	<i>Aquilaria</i> spp. and <i>Gyrinops</i> spp.	Agarwood	Delete current annotation and replace	Adopted
71	<i>Cyphostemma laza</i>	Laza	Inclusion in App II	Adopted



THE TRAFFIC BULLETIN SEIZURES AND PROSECUTIONS SECTION IS SPONSORED BY THE FORESTRY BUREAU, COUNCIL OF AGRICULTURE, TAIWAN: COMMITTED TO SUPPORTING CITES ENFORCEMENT

The *TRAFFIC Bulletin* carries a selection of seizures and prosecutions reports. Readers are referred to the seizures section of the TRAFFIC website (www.traffic.org) for regular updates on cases reported from around the world.

BIG CATS

INDIA: On 8 September 2013, Delhi police infiltrated a poaching gang who are believed to have evaded capture for over 20 years, and seized 18 kg of Tiger *Panthera tigris* (CITES I) body parts, including skulls, bones, nails and teeth. Three people were arrested, one of whom has been described as the “best supplier of Tiger skins in the country”, with contacts in 50–60 families responsible for killing the animals on his behalf.

www.deccanherald.com/content/356173/poaching-gang-busted-20-years.html, 10 September 2013

MACAU SPECIAL ADMINISTRATIVE REGION: On 25 July 2013, a man travelling from Indonesia, via Hong Kong, was arrested at Macau airport after being found in possession of 78 Tiger *Panthera tigris* (CITES I) teeth (1.7 kg), 69 Tiger claws (190 g) (plus dried bear gall bladders (300 g), frozen birds’ nests (1 kg) and frozen turtle meat (7.5 kg)). The body parts had been wrapped in foil and placed inside egg roll containers.

www.macaudailytimes.com/mol/macau/45690-tiger-teeth-claws-and-bear-bile-smuggled-as-egg-rolls.html, 26 July 2013

USA: On 11 July 2013, the US Fish and Wildlife Service announced the arrests of more than 150 people accused of operating an illegal online wildlife trade operation following an undercover investigation involving officers from 16 States, three federal agencies and three Asian countries. Items seized included the pelts of Sumatran Tiger *Panthera tigris sumatrae*, Leopard *Panthera pardus* and Jaguar *Panthera onca* (CITES I species) and other wildlife.

<http://news.sky.com/story/1114679/wildlife-trafficking-feds-bust-internet-ring>, 11 July 2013

ELEPHANTS

BURUNDI: On 27 July 2013, police announced the seizure of 28 kg of ivory (CITES I) at Bujumbura International Airport from a man from Guinea Conakry, living in Burundi.

www.cbfp.org/news_en/Traffic-News, 7 August 2013

CAMEROON: On 2 July 2013, police announced that four ivory traders had been arrested in Douala in possession of 32 elephant tusks.

On 24 September 2013, Symphorien Sangha was sentenced to three years’ imprisonment and fined USD43 000 for his role in the killing of more than 100 elephants in Central Africa.

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) establishes international controls over trade in wild plants and animals, or related products, of species that have been, or may be, threatened due to excessive commercial exploitation. Parties have their own legislative instrument by which to meet their obligations under CITES. The species covered by CITES are listed in three Appendices, according to the degree of protection they need:

APPENDIX I includes species threatened with extinction which are or may be threatened by trade. Trade in specimens of these species is permitted only in exceptional circumstances. An export permit from the country of origin (or a re-export certificate from other exporting countries) and an import permit from the country of importation are required.

APPENDIX II includes species not necessarily yet threatened, but which could become so if trade is not strictly controlled. Species are also included in Appendix II if they are difficult to distinguish from other species in Appendix II, in order to make it more difficult for illegal trade to take place through misidentification or mislabelling. An export permit from the country of origin (or a re-export certificate from other exporting countries) is required, but not an import permit.

APPENDIX III includes species that any Party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation and as needing the co-operation of other Parties in the control of trade. Imports require a certificate of origin and, if the importation is from the State that has included the species in Appendix III, an export permit is required.

All imports into the European Union of CITES Appendix II-listed species require both an export permit/re-export certificate and an import permit.

www.journalducameroun.com, 2 July 2013; <http://abcnews.go.com/International/wireStory/convicted-elephant-poacher-jailed-cameroon-20358994>, 24 September 2013

CHAD: On 14 June 2013, authorities arrested a man said to be behind the slaughter by 50 horsemen of 89 elephants (CITES I) (including 33 pregnant females and 15 juveniles) in one night (14–15 March) near Ganba; he is also thought to have headed a gang of poachers that have killed 192 elephants since August 2012. At the time of his capture he had 124 tusks in his possession.

<http://wildlifeneews.co.uk/2013/poacher-behind-march-slaughter-of-89-elephants-captured-in-chad>

CHINA: On 5 April 2013, at Heping District People’s Court, Tianjin, a person was sentenced to 68 months in gaol and fined CNY12 000 (USD1905) for selling ivory products in Shenyangdao Antiques Market in Tianjin; 21 kg of ivory products were seized. A further five ivory sellers arrested on the same day also received gaol sentences.

A man was recently sentenced to 15 years’ in gaol for smuggling 7.7 t of ivory from Africa to Fujian province, China, since 2011. Customs seized 2154 whole elephant tusks/segments.

<http://news.enorth.com.cn/system/2013/04/26/010896260.shtml>, 26 April 2013; www.jisi.gov.cn/News/ztbd/201305/20130522144336_9282.html, 22 May 2013

CONGO, PEOPLE’S REPUBLIC OF: On 15 July 2013, at Ewo Supreme Court, Ghislain Ngonjo, alias “Pépito”, was sentenced to five years in gaol for elephant poaching. He is reported to have operated in Odzala-Kokoua National Park and environs for over a decade, recruiting poachers and assisting with the killing of scores of elephants and of selling the ivory. Two others were also convicted: one received a five-year sentence and the other was gaol for two years.

www.examiner.com/article/several-elephant-poaching-arrests-congo?cid=rss; <http://ens-newswire.com/2013/07/25/congolese-ivory-kingpin-imprisoned-for-five-years/>, 25 July 2013

HONG KONG SPECIAL

ADMINISTRATIVE REGION: On 20 April 2013, Customs officials at Hong Kong International Airport seized 113 ivory tusks (300 kg) in cargo declared as “spare parts”, arriving from Burundi, bound for Singapore.

On 18 July, 1148 ivory tusks (2 t) declared as timber and concealed in a container on a vessel from Togo was seized (see Togo).

On 6 August 2013, Customs officers seized 1120 polished ivory tusks from a container arriving from Nigeria, via mainland China (and skins of five Leopards *Panthera pardus* and 13 rhinoceros horns (all CITES I)).

http://7thspace.com/headlines/436870/hong_kong_customs_seizes_ivory_tusks_at_hong_kong_international_airport.html, 30 April 2013; www.scmp.com/news/hong-kong/article/1294945/customs-seize-hk41m-ivory-rhino-horns-leopard-skins; www.traffic.org/home/2013/8/7/seizure-of-1148-ivory-tusks-underscores-hong-kongs-transit-r.html

KENYA: On 16 April 2013, at Jomo Kenyatta International Airport, a Vietnamese national in transit from Cotonou, Benin, bound for Bangkok, Thailand, was arrested after 488 painted ivory bangles (33 kg) were found in his possession, in boxes labelled as flower vases.

On 3 July 2013, officials at Mombasa port seized 775 pieces of elephant ivory (1.3 t) in a container of dried fish from Uganda, destined for Malaysia.

On 8 July 2013, three tonnes of ivory declared as bags of peanuts, for export to Malaysia, were seized at the port in what has been described as the largest illegal consignment of ivory at the port this year. Three clearing agents at Mombasa have since been arrested over their alleged involvement in the illegal ivory trade.

On 21 August 2013, a shipment of 1.8 t of ivory illegally exported in January 2012 was returned by authorities in Singapore, where it had been seized in December 2012, in transit to Viet Nam. The shipping line transporting the shipment responded to an urgent appeal by the Kenyan authorities to co-operate when it was realised that the container could be carrying illegal ivory, and a stopover was made at the vessel’s next port of call, Singapore.

On 22 August 2013, Chen Biemei was gaoled for 31 months after she pleaded guilty to attempting to smuggle to Hong Kong 6.9 kg of worked ivory, disguised as bags of macadamia nuts, on 14 August.

<http://allafrica.com/stories/201304170954.html>, 16 April 2013; www.reuters.com/article/2013/07/03/us-kenya-ivory-poaching-idUSBRE9620XU20130703; www.huffingtonpost.com/2013/07/09/illegal-ivory-kenya-poaching_n_3566779.html, 9 July 2013; www.standardmedia.co.ke/articleID=2000091567&story_title=seized-ivory-shipped-back-to-kenya, 23 August 2013; www.capitalfm.co.ke/news/2013/08/kenya-jails-chinese-ivory-smuggler/, 22 August 2013

MACAU SPECIAL ADMINISTRATIVE REGION: On 17 July 2013, two South Africans arriving from Hong Kong were arrested after failing to smuggle 34 kg of ivory into Macau that had been disguised as 583 chocolate bars.

<http://english.cri.cn/11354/2013/07/18/191s776661.htm>, 18 July 2013

NEW ZEALAND: On 10 July 2013, at Manukau District Court, Jiezheng Jiang was convicted of trading in ivory and fined NZD 12 000 (USD 10 000) after two parcels containing ivory and posted from Portugal and the UK were intercepted at the international mail centre; a further six ivory items were found at his property.

Between May 2010 and September 2011 Jiang bought ivory items online; he sold two pieces to people in China through a website and bid on and bought ivory items which he sent back to China. He told the authorities that he knew elephants were being killed for their ivory, but thought the pieces would be good investments. In sentencing, the judge said that he had taken into account an Impact Statement from TRAFFIC's Elephant and Rhino Programme Leader and Director of the Elephant Trade Information System (ETIS), Tom Milliken, who pointed out that the African Elephant population had been halved in the decade to 1999, and has been in steady decline since then because of illegal killing. Milliken said that, to a conservationist, the idea that the defendant was aware that elephants were being killed for their ivory and therefore thought that ivory would be a good investment, is an attitude that no endangered species can survive.

www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10896358, 10 July 2013

TANZANIA: On 12 July 2013, a person was charged with illegal trade in 1000+ elephant tusks. He is believed to have exported 781 tusks through Malawi in May, and was arrested in Dar es Salaam in early July in possession of 347 tusks.

www.france24.com/en/20130712-tanzanian-charged-smuggling-over-1000-ivory-tusks, 12 July 2013;

THAILAND: On 30 August 2013, Customs officials at Bangkok's International Airport seized 105 kg of ivory tusks/ivory beads from two Vietnamese nationals arriving on a flight from Angola via Ethiopia, bound for Cambodia.

<http://abcnews.go.com/International/wireStory/thai-officials-seize-illegal-ivory-airport-20130830>, 30 August 2013

TOGO: On 6 August 2013, a man was arrested at his shop in Lome and 700 kg of ivory seized from his premises. Some claim the suspect to be the kingpin in Togo's ivory trade, while others believe he is a retail dealer who serves as a

convenient scapegoat to show law enforcement action in the face of international condemnation.

It is reported that Togo has only 60 elephants and that the country has recently become a transit point for ivory dealers using Lome's harbour after finding access to other West African ports difficult. In July, Customs officials in Hong Kong seized more than two tonnes of elephant tusks hidden in cargo from Togo (see Hong Kong).

www.bbc.co.uk/news/world-africa-23599721, 7 August 2013; TRAFFIC

UK: In July 2013, at the Old Bailey, Gary Bolton was sentenced to seven years in gaol after devices he sold to detect bombs, ivory and tobacco, were found to be just empty boxes with handles and antennae. The instruments were marketed successfully to military, police and private clients around the world, including wildlife enforcement authorities in Africa, who were led to believe that efforts to control the illegal ivory trade could be strengthened by the use of these gadgets. Bolton's company was said to have an annual turnover of GBP 3 million (USD 4.7 million) selling the devices.

In a separate but similar case, James McCormick was gaoled for 10 years in May for selling more than 7000 fake detectors, which he claimed were able to detect explosives, drugs, ivory and money.

www.traffic.org/home/2013/8/27/ivory-detector-fraudster-sentenced-to-7-years-in-jail.html

UNITED ARAB EMIRATES, DUBAI: In May 2013 it was reported that almost 260 pieces of raw ivory, disguised as furniture, had been seized from a shipment arriving at Jebel Ali Port from Mombasa, Kenya.

On 4 September 2013, police announced that half a tonne of ivory had been intercepted at Dubai International Airport, which they described as one of the largest ivory seizures in the emirate. No further details as to its provenance are currently available.

www.thenational.ae/news/uae-news/hundreds-of-ivory-tusks-seized-in-dubai, 21 May 2013; www.reuters.com/article/2013/07/03/us-kenya-ivory-poaching-idUSBRE9620XU20130703; www.thenational.ae/news/uae-news/dubai-police-intercept-half-a-ton-of-smuggled-ivory, 6 September 2013

VIET NAM: On 30 June 2013, Ho Chi Minh City Customs authorities at Tan Son Hhat International Airport seized ivory handicrafts (21 kg) that had been smuggled in from France. A Vietnamese national was arrested.

On 6 August 2013, it was reported that Customs officers at Hanoi's Noi Bai International Airport had arrested two Vietnamese nationals carrying 50 kg of ivory into the country from Russia, and that another two individuals had recently been arrested after attempting to import from Singapore 122 kg of ivory.

www.thanhniennews.com/index/pages/20130701-vietnamese-man-caught-smuggling-21kg-of-ivory.aspx, 1 July 2013; <http://english.vietnamnet.vn/fms/society/81031/over-50kg-of-ivory-seized.html>, 6 August 2013

FLORA

CHINA: In May 2013, at Tianjin Second Intermediate Court, suspect Wang was sentenced to one year and six months in

prison for smuggling 45 t of Red Sanders (Red Sandalwood) *Pterocarpus santalinus* (CITES II); another defendant, Fan, was sentenced to two years' imprisonment, suspended for three years, in one of the country's largest illegal cases involving the smuggling of flora.

On 27 May 2013, an Indian national was intercepted by the Luohu Customs, Guangdong province, for illegally carrying 48 kg of Red Sanders wood. This was the largest case involving Red Sanders by Luohu Customs this year.

www.customs.gov.cn/publish/porta10/tab392671/info429667.htm, 17 May 2013; www.jisi.gov.cn/News/szsm/gd/201306/20130609095238_9398.html, 9 June 2013

INDIA: On 16 June 2013, forest department staff seized some 209 Red Sanders logs and arrested seven smugglers after conducting raids in the forest areas in Kadapa, Chittoor and Nellore districts.

On 27 June 2013, Customs officials at Chhatrapati Shivaji International Airport intercepted 11 Chinese passengers as they tried to smuggle 308 kg of Red Sanders out of the country in their luggage.

In early September 2013, at Chennai airport, three Chinese nationals bound for Bangkok were arrested, each in possession of some 50 kg of Red Sanders.

On 3 July 2013, Tirupati police seized one tonne of Red Sanders logs and arrested 45 people in Seshachalam forests, Andhra Pradesh.

On 15 July 2013, the Directorate of Revenue Intelligence (DRI) seized 133 t of Red Sanders allegedly being smuggled out to Dubai at the Jawaharlal Nehru Port Trust in Navi Mumbai. Four of the eight containers were marked as marbles and tiles, the rest as carrying onions.

On 18 August 2013, Customs officers at Pune seized 442 Red Sanders logs from vehicles in Kanhe Phata on the Pune-Mumbai highway, following the arrest of eight drivers on 16/17 August. The wood was bound for export. The drivers had fake documents stating that they were transporting mangoes and papaya.

On 19 August 2013, six people were arrested and some 30 t of Red Sanders from Andhra Pradesh, bound for Kerala, was seized near Pollachi, in Tamil Nadu's Coimbatore district.

http://newindianexpress.com/states/andhra_pradesh/Seven-smugglers-arrested-209-red-sanders-logs-seized/2013/06/17/article638558.ece, 17 June 2013; www.indianexpress.com/news/11-chinese-travellers-held-for-smuggling-bid/1137898/, 5 July 2013; www.ptinews.com/news/3957997_3-Chinese-arrested-for-trying-to-smuggle-red-sanders, 6 September 2013; www.thehindu.com/news/national/andhra-pradesh/red-sanders-smuggling-foiled/article4878322.ece, 4 July 2013; www.business-standard.com/article/pti-stories/dri-seizes-133-mt-tonnes-of-red-sanders-at-jnpt-113071501041_1.html, 15 July 2013; <http://timesofindia.indiatimes.com/city/pune/Red-sanders-worth-3-crore-seized-8-held/articleshow/21927910.cms>, 20 August 2013; http://zee news.india.com/news/tamil-nadu/six-arrested-30-tons-of-red-sanders-seized-in-tn_870054.html, 19 August 2013

UK: In August 2013, Border Force Officers at Heathrow Airport intercepted four consignments (three destined for the UK and one to Greece) on arrival from India, described as "Wooden Handicrafts". Examination revealed three consignments of sawn Red Sandalwood (Annex B / CITES II) and one of Red Sandalwood prayer beads. In total, some 100 kg of wood was seized.

UK Border Force

MARINE

AUSTRALIA: In April 2013, Van Thanh Le from Darch, Perth, was convicted of taking abalones out of season and exceeding the possession limit with 60 undersized abalones *Haliotis*. He was the second target of Operation Ratchet, a Department of Fisheries sting on people illegally taking or distributing the shellfish in the metropolitan area. He was fined AUD15 341 (USD14 400).

In May 2013, at Holden Hill Magistrates' Court, Adelaide, Dang Duong of Pooraka was found guilty of possessing 70 abalones and ordered to pay AUD9452 (USD8800), bringing to a conclusion the largest case involving the illegal trade in abalones in the State's history. The investigation, which began in 2010, has resulted in the conviction of six others involved in the trade of some 480 kg of abalones. Three were given suspended gaol sentences, and fines imposed amounted to a total of AUD28 952 and 360 hours' community service.

www.watoday.com.au/wa-news/15000-fine-for-illegal-wa-abalone-catch-20130409-2hiuk.html, 9 April 2013; www.thefishsite.com/fishnews/20552/abalone-trafficking-ring-dismantled, 20 June 2013

CAYMAN ISLANDS: During July 2013, four poachers were arrested in connection with two separate incidents involving the illegal collection of 156 and 119 Queen Conch *Tridacna gigas* (CITES II), respectively. Harvesting conch between May and the end of October is illegal; during open season, which runs from 1 November to 30 April, the daily limit is five. These restrictions are in place because the Cayman Islands' conch population, while sufficient for limited personal consumption within the law, cannot support a commercial fishery.

www.caymannewsservice.com/science-and-nature/2013/07/29/275-poached-conch-recovered-doe, 29 July 2013

CHINA: On 24 May 2013, Shekou Customs of Shenzhen seized 12 kg of dried seahorses *Hippocampus* concealed in luggage being carried by an African passenger. In the same month, suspect Zhang was sentenced to 10 months in gaol for illegally carrying 19 kg of dried seahorses from the Philippines to Jinjiang City, Fujian province, in October 2012. In July 2013, the post office branch of Jinling Customs of Nanjing, Jiangsu province, detected over 6000 dried seahorses (10 kg) in a parcel from South Asia.

www.customs.gov.cn/publish/portal0/tab39267/info431465.htm, 31 May 2013; http://qz.fjnews.com/2013-05/10/content_11356901.htm, 10 May 2013; <http://news.xinmin.cn/domestic/2013/07/18/21111645.html>, 18 July 2013

SOUTH AFRICA: On 25 July 2013, three men were arrested on a farm near Alexandria, Eastern Cape, after being found in possession of 1630 kg of abalone *Haliotis midae*. Two of the men were Chinese nationals while the third was the farm's owner.

www.enca.com/south-africa/eastern-cape-men-stash-worth-millions; <http://ewn.co.za/2013/08/27/Abalone-possession-case-postponed>

SPAIN: On 4 June 2013, authorities in Madrid investigated 13 facilities and seized some 500 000 pieces of coral, including *Acropora*, *Leptoria*, *Pocillopora*, *Fungia*, *Antipathes*, *Heliopora* (all CITES II). Two people were arrested and a further six charged.

www.interior.gob.es/press/intervenidas-mas-de-512-000-piezas-de-coral-que-eran-vendidas-vulnerando-el-convenio-internacional-sobre-especies-amenazadas-15270?set_locale=ca

UK: On 22 May 2013, at Crown Square Crown Court, Manchester, Alex Montgomery of Manchester was sentenced to six months in gaol after pleading guilty to charges of attempting to smuggle 750 kg of live hard corals through Manchester airport from Ho Chi Minh City, Viet Nam, in May 2012, in boxes labelled "Marine fish and Soft Corals". More specimens were seized from Montgomery's business premises, along with his computer, which had information regarding his business dealings with foreign suppliers.

www.gov.uk/government/news/man-jailed-for-smuggling-coral-and-clams, 22 May 2013; www.traffic.org/home/2013/5/23/uk-hands-down-custodial-sentence-for-coral-smuggling.html

VIET NAM: On 9 June 2013, Con Dao Forest Rangers arrested two local men collecting a total of 498 Green Turtle *Chelonia mydas* (CITES I) eggs from nests on a protected beach. Each person has been fined VND23 million (USD1090).

Environmental News Vietnam Newsletter, August 2013

PANGOLINS

CHINA: In April 2013, Luohu District People's Court, Guangdong province, sentenced defendant Zhu to 10.5 years in gaol (and a fine of CNY10 000 (USD1587)); defendant Wu to four years in gaol (fined CNY10 000); and defendant Zhuo to four years in gaol (fined CNY10 000). The three had been arrested in September 2012 for illegally trading a total of 122 pangolins *Manis* (CITES II) and other wildlife items.

http://sztqb.sznews.com/html/2013-04/13/content_2441852.htm

FRANCE: On 30 April 2013, Customs authorities at Charles de Gaulle Airport, Paris, announced the seizure of 50 kg of pangolin *Manis* (CITES II) scales from Cameroon bound for Viet Nam, the third pangolin seizure in April, amounting to a total of nearly 100 kg and representing between 300–400 pangolins.

www.globalpost.com/dispatch/news/afp/130430/french-customs-seize-pangolin-scales-headed-vietnam, 30 April 2013

INDIA: On 19 July 2013, Customs officers in Guwahati seized 85 kg of pangolin *Manis* (CITES II) scales in a consignment of drugs (pseudoephedrine tablets) at a house in the Beltola area.

On 31 July 2013, 70 kg of pangolin scales, reportedly from some 300 pangolins, were seized and seven people arrested in Siliguri, West Bengal. The scales had been brought from Kalka in Haryana and were to be handed over to smugglers based in Nepal, Nagaland and Manipur.

Business Standard 19 July 2013; www.business-standard.com/article/news-anil/customs-department-seizes-drugs-worth-millions-in-guwahati-113071900684_1.html; www.business-standard.com/article/pt-stories/70-kg-pangolin-scales-seized-113073101243_1.html, 31 July 2013

MALAYSIA: On 26 June 2013, at the Sessions Court, six people were each gaol for one year and fined RM330 000 (USD103 000) for attempting to smuggle 150 pangolins *Manis* (CITES II) into Thailand in 2012. The defendants were granted bail pending an appeal.

www.nst.com.my/nation/general/six-jailed-over-pangolins-in-car-1.308395, 27 June 2013; www.traffic.org/home/2013/7/15/world-experts-all-pangolin-species-at-risk-from-illegal-trad.html

THAILAND: On 16 September 2013, 200 live pangolins *Manis* (CITES II) were retrieved by police from two vehicles in Udonthani; the drivers fled. The pangolins were believed to have been destined for China or Viet Nam, via Lao PDR.

www.bangkokpost.com/breakingnews/370180/pangolins-seized-in-udon-thani, 17 September 2013

VIET NAM: In August 2013, Customs officials at Hai Phong port found more than six tonnes of live pangolins *Manis* (CITES II) inside a container purportedly containing frozen fish. The cargo, from Indonesia, was due for onward shipment to an undisclosed destination. This year to date, more than 10 t of pangolins—both live and frozen—and 1.2 t of pangolin scales, have reportedly been confiscated at Hai Phong port.

www.nst.com.my/latest/over-six-tonnes-of-rare-live-pangolins-found-in-vietnam-1.337605, 14 August 2013

RHINOCEROS

CHINA: On 18 June 2013, at Shanghai No. 1 Intermediate People's Court, Dong Fengrong was sentenced to seven years in gaol and fined CNY150 000 (USD24 000) after attempting to smuggle into the country from France seven rhinoceros (CITES I) horns and products (8 kg) (and 14 ivory items) at Pudong International Airport on 23 January.

<http://english.peopledaily.com.cn/90882/8289766.html>, 19 June 2013

CZECH REPUBLIC: On 23 July 2013, authorities seized 24 White Rhinoceros *Ceratotherium simum* (CITES I) horns and arrested members of an international gang that had hired Czech nationals to hunt rhinoceroses in South Africa to obtain their horns. Sixteen people have been charged in connection with the case, initiated after the Czech Environmental Inspectorate became suspicious that people applying for import permits for rhinoceros horns were not importing them from South Africa as personal hunting trophies, which may be allowed with a CITES permit.

www.radio.cz/en/section/curraffis/czech-authorities-seize-record-amount-of-rhino-horns, 23 July 2013

KENYA: On 17 September 2013, at Jomo Kenyatta International Airport, a Vietnamese national in transit from Maputo, Mozambique, en route to Hong Kong via Doha, Qatar, was arrested with five rhinoceros (CITES I) horns.

www.capitalfm.co.ke/news/2013/09/vietnamese-arrested-rhino-horns-kiial, 17 September 2013

NEPAL: On 19 June 2013, 12 rhinoceros poachers from Nawalparasi district were given gaol sentences ranging from 10–15 years and fines of between USD550–1100 each. The poaching of rhinoceroses (CITES I) in Nepal is reported to have significantly reduced over the last decade owing in large part to increased security and the involvement of government personnel in wildlife management.

On 16 September 2013, Sita Bahadur Dhenga Magar, of Nawalparasi district, was sentenced to 15 years' imprisonment, five years after being convicted. He had absconded following his conviction in June 2008 for killing a rhinoceros in 2005 and selling the horn; he was arrested in Chitwan National Park on 2 September.

www.shanghaidaily.com/article/article_xinhua.asp?id=148371, 19 June 2013; www.myrepublica.com/portall/index.php?action=news_details&news_id=61549, 16 September 2013

SOUTH AFRICA: In April 2013, at Phalaborwa Magistrates' Court, Inaso Makhubela of Mozambique and Jorudo Ngobeni of South Africa, were sentenced to 15 years in gaol for shooting dead and dehorning a rhinoceros (CITES I) in Limpopo in 2011.

On 10 July 2013, at Makhado Regional Court, Limpopo, three Mozambican nationals were each gaoled for five years for rhinoceros poaching in Nwandeni Resort. Augustus Nkuna, Foster Nyoni and Manyanga Shiringa were also given a 12-month suspended sentence. The trio was arrested in May 2012.

On 29 July 2013, at Makhado Magistrates' Court, Limpopo, Enock Mutungi, and Mozambican national Daniel Dumusani, were each sentenced to six years' imprisonment after being found guilty of rhinoceros poaching in Masisi, Kruger National Park (KNP).

On 15 August 2013, in Nelspruit Regional Court, Leonard Mhlongo from Mozambique was sentenced to 14 years' imprisonment for killing and dehorning a Black Rhinoceros *Diceros bicornis* (CITES I) and her calf in KNP. His sentence consisted of four years in gaol for entering the KNP illegally, 10 years for killing the rhinoceros cow, and eight years for killing the calf. The eight years would run concurrently with the 10 years.

On 30 August 2013, at Nelspruit Regional Court, Mozambican nationals Julius Ngwenya, Daniel Jadere and Antonio Malunga, were each gaoled for 16 years for killing and dehorning a White Rhinoceros *Ceratotherium simum* and her calf in KNP in May. During their arrest, a fourth suspect was shot dead.

www.thenewage.co.za/90163-1007-53-15_years_behind_bars_for_rhino_poachers, 3 April 2013; www.timeslive.co.za/scitech/2013/07/11/three-rhino-poachers-sentenced-five-years-in-limpopo, 11 July 2013; www.iol.co.za/news/crime-courts/jail-terms-for-limpopo-rhino-poachers-1.1554429#UfeAb23DJul, 29 July 2013; www.iol.co.za/news/crime-courts/mpuma-rhino-poacher-jailed-1.1563117, 15 August 2013; www.timeslive.co.za/scitech/2013/08/30/three-poachers-get-16-years-each-for-killing-rhino-and-calf, 30 August 2013

VIET NAM: On 20 May 2013, Customs officers at Ho Chi Minh City's Tan Son Nhat airport arrested a man arriving from Europe with six pieces of rhinoceros (CITES I) horn (5 kg).

www.thanhniennews.com/index/pages/20130521-vietnam-passenger-caught-with-5kg-of-rhino-horns.aspx, 21 May 2013

OTHER CASES

CANADA: On 5 April 2013, at a court in Winnipeg, four Mexican hunters were fined CAD10 000–30 000 (USD9700–29 137) for attempting to return from Nunavut to Mexico in a private jet with the skins of three Polar Bears *Ursus maritimus* (CITES I) and three Narwhal *Monodon monoceros* (II) tusks following a hunting trip; while their sport hunting trophies were in order, they had not applied for the requisite CITES permits to take the items back to Canada, nor does Mexico permit the importation of marine mammals. The fine will go to a federal programme, the Environmental Defence Fund, which distributes money to environmental groups.

www.nunatsiaqonline.ca/stories/article/65674illegal_trophy_export_attempt_of_arctic_trophies_costs_mexican_hunters/, 8 April 2013

CHINA: On 22 May 2013, Customs officers at Manzhouli border crossing with Russia in the Inner Mongolia region seized 213 bear paws from a van being driven into China. Two Russian nationals were arrested. The paws had been concealed inside five tyres and derived from at least 54 bears [species not reported]: the largest paw weighed two kilogrammes and the smallest 200 g. On 20 August 2013, 169 bear paws (138 from Brown Bears *Ursus arctos* (CITES II) and the remainder from Asiatic Black Bears *Ursus thibetanus* (CITES I)), smuggled from Russia, were seized by Harbin Customs officials, Heilongjiang province. Five suspects from a wildlife smuggling ring, which was busted on 12 July, have been arrested.

On 29 April 2013, border police in Duoma, Nagqu Prefecture, seized 102 Tibetan Antelope *Pantholops hodgsonii* (CITES I) skins and three skulls.

On 12 May 2013, Customs officials at Alashankou (on the border with Kazakhstan), detected 719 horns of Saiga Antelope *Saiga tatarica* (CITES II) on a train arriving from Kazakhstan. Four suspects were detained.

Defendant Yu was recently sentenced to five years in gaol (and fined CNY20 000 (USD3174) after being arrested in January by Gongbei Customs, Zhuhai, for smuggling 76 hornbill skulls (7.7 kg).

www.china.org.cn/video/2013-06/20/content_29175449.htm, 20 June 2013; www.globaltimes.cn/content/805314.shtml#Uhs6tj-yQ0L, 21 August 2013; http://news.2500sz.com/news/gn/2013-5/10_1987960.shtml, 10 May 2013; <http://illegal.people.com.cn/nl/2013/05/21/c203936-21559782.html>, 21 May 2013; www.chinadaily.com.cn/hqgj/jryw/2013-07-11/content_9550529.html, 11 July 2013

COLOMBIA: On 22 August 2013, it was reported that Janer de Jesús Sarmiento, of Santa Ana (Magdalena), had been sentenced at the Juez Treinta Criminal Circuit Court, Bogotá, to 56 months in gaol and fined for transporting 2.9 kg of meat and body parts of some 150 Colombian Sliders *Trachemys callirostris*. Sarmiento had been detained by the authorities in April 2012 at Salitre Transport Terminal in Bogotá.

www.elespectador.com/noticias/bogota/hombre-debera-pagar-cuatro-anos-de-carcel-traficar-carn-articulo-441712, 22 August 2013

REPUBLIC OF GUINEA: In August 2013, a man was sentenced to a fine and one year in gaol for the illegal trade of Chimpanzees *Pan troglodytes* (CITES I), Lions *Panthera leo* (I), Leopards *P. pardus* (I), hyaenas and tropical birds over the past decade. Two accomplices also received gaol sentences. During the 10-month operation to apprehend the group, some 150 seized birds were released in the wild.

http://www.panda.org/wwf_news/?210073/Kingpin-behind-bars-for-poaching-chimps, 26 August 2013

INDIA: On 1 September 2013, at Tentulberia area, West Bengal, border troops seized 952 Indian Star Tortoises *Geochelone elegans* (CITES II) from two people crossing the border into Bangladesh; the duo fled.

www.business-standard.com/article/pti-stories/big-seizure-of-952-star-tortoises-on-into-bangla-border-113090200864_1.html

ITALY: On 14 June 2013, three Maltese nationals returning to Malta were detained in transit at Linate airport, Milan, on a flight from Argentina, after their luggage was found to contain 180 dead birds, including Wattled Jacana *Jacana jacana*, Silver Teal *Anas versicolor*, Nacunda Nighthawk *Chordeiles nacunda* and Whistling Heron *Syrigma sibilatrix*.

www.maltatoday.com.mt/en/newsdetails/news/courtpolice/Maltese-nationals-stopped-at-Milan-airport-carrying-180-dead-birds-20130626, 26 June 2013

NEPAL: On 1 June 2013, police in Darchula seized skins and bones of Tiger *Panthera tigris* (CITES I) and Leopard *P. pardus* (I), ivory (I), pangolin (II) scales, and musk (III) that had been concealed in a cave. One man and two porters were arrested; seven others fled. During an exchange of fire, one of the suspected smugglers sustained bullet injuries. The porters were being paid to transport the contraband to Taklakot in Tibet Autonomous Region, China, about three days walk from Darchula.

www.nzweek.com/world/smuggler-arrested-in-nepal-with-large-cache-of-banned-animal-parts-647101, 3 June 2013

SRI LANKA: On 5 September 2013, 450 kg of sea cucumbers were seized from a van at a coastal area near Mandapam refugee camp.

www.business-standard.com/article/pti-stories/450-kg-of-sea-cucumber-seized-113090500859_1.html, 5 September 2013

TAIWAN: On 24 August 2013, in what has been described as the biggest smuggling case of its kind in Taiwan, coastguards seized 1180 Yellow Pond Turtles *Mauremys mutica* and 1446 Yellow-margined Box Turtles *Cuora flavomarginata* (both CITES II) from a vessel in the port of Kaohsiung.

www.abc.net.au/news/2013-08-25/taiwan-seizes-2500-rare-turtles-bound-for-dinner-plate/4911168, 25 August 2013

USA: On 23 August 2013, Olivia Terrance of Hogsburg, New York, was sentenced to 18 months in gaol after pleading guilty to smuggling turtles and other reptiles into Canada from the USA in 2009/2010, for sale. Her sentence includes three years' supervision after her release.

www.therepublic.com/view/story/2bba110379fb4665a5cd8019cfc9315/NY-Wildlife-Smuggling, 24 August 2013

The Use of Green Iguanas in Fonseca, Colombia

David Martínez and
Juan Ricardo Gómez

BACKGROUND

In Fonseca, a small town in La Guajira, in the Caribbean Region of Colombia, consumption of the meat and eggs of the Green Iguana *Iguana iguana* is well established in the local diet. The meat is in great demand owing to its apparent good flavour and the common belief that consumption confers medicinal and aphrodisiacal benefits; the eggs are also widely eaten. In the last 30 years, the hunting of and trade in Green Iguanas in La Guajira have reportedly declined by up to 80% according to the only investigation undertaken in this town into the harvest and trade of this species (Palacio *et al.*, 1999). This decline has been compounded by low rates of reproduction and the rapid transformation of the species's habitat (Peters, 1993). To make up for this shortfall, specimens are brought to Fonseca from neighbouring regions which, in turn, has contributed to a decline of the species in other parts of the Caribbean region by some 40% to 50%, according to Palacio *et al.*, 1999. The Green Iguana is listed in Appendix II of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), which includes species not necessarily yet threatened, but which could become so if trade is not strictly controlled. Although the species is classified in the Colombian Red Book of Reptiles as of Least Concern (LC) nationally (Castaño-Mora, 2002), it is highly exploited (Muñoz *et al.*, 2002) and trade in the species is a profitable business (Echeverri, 2004). A government permit is required for all forms of hunting of this species in Colombia, apart from hunting for subsistence purposes to allow indigenous groups and poorer members of the community to continue to use wildlife in traditional ways. The law in relation to commercial hunting is seldom enforced however (B. Bock, *in litt.* to TRAFFIC International, 1 February 2013), and consumption of iguanas is widespread in the town, with specimens commonly available in Fonseca's restaurants.

A study into the status of the Green Iguana has never been undertaken in the department of La Guajira in any detail and



GREEN IGUANA. IGUANA IGUANA. DAVID LAWSON / WWF UK

no qualitative data are available. The authors set out to determine the extent of the trade and to find ways to establish a management strategy based on the perceptions of Fonseca's residents and scientific knowledge of the species and its habitat requirements. They explored a range of measures following Ojasti and Dallmeier, 2000, with a view to developing a project to ensure that use is linked to the region's cultural traditions, enabling communities to manage this resource sustainably and legally.

INTRODUCTION

The principal market for the trade in Green Iguanas is along the Atlantic coast, mainly in the municipalities of San Marcos, Cienaga, and Talaigua Nuevo, where wholesalers handle iguana meat and an estimated 18 million iguana eggs a year (Baptiste *et al.*, 2002). While the consumption of the meat takes place year-round, eggs are only available during the animals' reproductive period (February to April). The high income derived from these sales has resulted in an increased interest in this commodity from traders in the region, and an apparently thriving illegal trade.

Research for this study was carried out in the municipality of Fonseca, south-east of La Guajira in northern Colombia, approximately 120 km from Riohacha, the capital of La Guajira. The municipality has a population of 30 000 inhabitants, 78% of whom live in urban areas



Fig. 1. Location of the municipality of Fonseca, La Guajira, Colombia.

and the remainder in rural locations. The department of La Guajira shares a border with Venezuela at the city of Maicao (118 km from Fonseca), creating an economic bridge between the two nations (Alvarez *et al.*, 1998). In cities near the border, many struggle for a secure livelihood, which adds to the appeal for quick and easy business, boosted by a black economy, thereby increasing illegal street sales (Alvarez *et al.*, 1998).

METHODS

Surveys were conducted between 24 July and 12 August 2011 by way of direct observation of the study area and semi-structured interviews (Bonilla-Castro and Rodríguez, 1997) designed to determine the general knowledge, perception and use of the species by the inhabitants of Fonseca. Some 90 surveys were undertaken in urban areas throughout the town, and a further 90 surveys took place in the rural villages of Potrerito, Hatico and Confusión.

Nine people with an apparent deeper understanding of this species in the region were selected for interview, including a police officer, a veterinarian, three people who profit from the preparation and sale of iguanas, an illegal trafficker, a former iguana hunter, and an animal trader; a Catholic priest was questioned about any religious beliefs attached to the consumption of iguanas during Easter. The small number of people selected for these more in-depth interviews was owing to the fact that most people appeared uneasy discussing the subject, and believed the authors to be police or environmental control officials. The interviews were documented in written form as the respondents did not allow the use of voice recorders.

A project management software programme, Miradi, was used to design conservation strategy methodologies to define the scope and objectives of the project. Data were analysed and the results adapted into a work plan that could be shared with the community to enable more effective and efficient implementation (FOS, 2008).

In addition to a literature search in libraries, the authors undertook research for the study at the Ministry of Environment and Sustainable Development.

DISTRIBUTION AND STATUS

The Green Iguana is a herbivore that feeds on leaves, fruit and seeds. It is found mainly in forests of the countries of the Caribbean Sea, from Mexico through the Orinoco and Amazon drainages and into Paraguay (Bock, 2013), and can grow to 1.65 m and weighs about 3.5 kg. Sexually mature at two years, mating occurs in October and November, with young usually produced between January and February. The reproductive season varies but is always timed so that eggs are laid in mid-dry season so that hatchlings emerge just as the rainy season begins (Bock, 2013); initially eight eggs are produced on average, but mature adults can lay up to 60 eggs; the average is 30.

LEGISLATION

The Green Iguana is classified in the Colombian Red Book of Reptiles as LC (Least Concern) (Castaño-Mora, 2002). The species is listed in CITES Appendix II which includes species not necessarily yet threatened, but which could become so if trade is not strictly controlled. In Colombia, all forms of hunting, with the exception of hunting for subsistence purposes, requires the issuance of a permit under *Decree Law 2811* of 1974 of the Código Nacional de los Recursos Naturales Renovables y de Protección del Medio Ambiente (National Code for Renewable Natural Resources and Protection of the Environment). This law recognizes six types of hunting: subsistence; commercial; “promotion” (to obtain stock for zoos or farms); scientific; sport; and for the control of pest species (B. Bock, *in litt.* to TRAFFIC, 1 February 2013).

Despite the ban on commercial sale without a licence, legislation in Colombia relating to the harvest and trade in bushmeat is rarely implemented, and violations are seldom prosecuted. Green Iguanas and their eggs are openly on sale in local markets; animals that are being transported or offered for sale are confiscated only occasionally and fines/imprisonment for such offences are rarely imposed. According to *Decree Law 906* of 2004, offenders are not permitted to be kept in custody for more than 36 hours without being prosecuted.

CONSERVATION AND ENFORCEMENT EFFORTS

In order to mitigate the human impact on the species, some non-governmental organizations, government wildlife agencies and the national police have sought solutions to the trafficking. Non-commercial animal breeding farms have introduced individuals into their natural habitats to replenish populations. These farms are a conservation tool (Primack, 2001), however illegal trafficking has not been successfully eradicated. An investigation into the conservation value of iguana farming in Central America concluded that it is extremely unlikely that the release of iguanas (*Iguana iguana* and *Ctenosaura* spp.) have benefited local populations (Stephen *et al.*, 2011). The report cites the potential for spread of disease into wild populations, genetic mixing of populations and outright futility of releasing captive-bred iguanas into areas where they already exist, as meriting consideration owing to their potential negative impact on iguana conservation.

Decree Law 611 of 2000, Article 3 (ADA, 2000), refers to the farms as being used for maintenance, breeding, promoting and/or use of wildlife species in an area clearly determined, for scientific, commercial and industrial, rehabilitation or subsistence purposes. This has led some authors to believe that it is possible to achieve a balance between conservation and the sale of products from animals raised in captivity (Damania and Bulte, 2006; Abbott and van Kooten, 2011). This strategy promotes conservation from the generation, promotion and implementation of sustainable productive alternatives (Ministerio del Medio Ambiente, 2002).

In the region of La Guajira, there are often reports of arrests of people involved in the illegal trade of iguanas or iguana eggs that have been imported from neighbouring departments owing to the local shortage of specimens. These individuals are taken into custody but released after a short time and the meat and eggs are confiscated.

RESULTS

In the rural and urban areas of the town, the authors implemented a survey of 180 people on the uses, perceptions and illegal trade of Green Iguanas. Nine people with greater knowledge of the subject were later interviewed in more depth to provide any additional insights and to elaborate the information gathered from the surveys.

From the surveys conducted in urban areas, 82% of respondents believed that iguana numbers in the region were depleted, which they attributed to overhunting (62%), consumption (35%) and other factors (3%), including poor regulation by the authorities and a lack of education in the population. In rural areas, 77% of the people thought that iguanas were depleted, which they attributed to hunting (77%) and consumption (23%); 87% of respondents stated that they would be willing to purchase captive-bred specimens to eat if this took pressure off wild populations.

Consumption of Green Iguanas for food was the most common use given by respondents: some 97% of those surveyed eat or had eaten the reptile's meat or eggs; all of this meat was derived from hunted specimens. While egg consumption was a recognized practice by those approached during the surveys, this study was not conducted during the egg harvesting season, so little information on this harvest was gathered, with the exception that 66% of people related the time of iguana reproduction to the period for iguana egg consumption.

Robinson and Redford (1997) and Ojasti and Dallmeier (2000) noted that Green Iguanas are kept as pets, but the authors found such use to be uncommon in the survey area, occurring only when an individual had hunted very small specimens which were raised for consumption once the animal had reached a suitable size; some eight per cent of respondents (14 people) kept an iguana in captivity at home for such purposes. The use of the skin appeared to be non-existent in the town. One respondent said that the iguana was heavily hunted and that because so few remained in Fonseca, specimens were brought in from Valledupar, in north-east Colombia; he felt that if the hunting of iguanas continued at the current rate, the species would become extinct. One of the main reasons for the depleted numbers was, he maintained, that the iguana is an important, free source of food for many poor people with few alternative resources.

Furthermore, the perceptions of the nine people interviewed in depth were diverse, which contributed to the data collected from the surveys. Three of them believed that the reptiles contain aphrodisiacal properties, while another four believed that the consumption of the animal's fat could treat coughs and asthma.

Some 83% of all respondents believed that tourism would help the conservation of the iguana by providing

USES OF GREEN IGUANA IN FONSECA:



DAVID MARTINEZ

Food: Three of the nine respondents interviewed reported that they prepare the traditional dish of iguana stewed in coconut milk. According to one, the animals are thrown into boiling water to remove the skin; the meat is returned to the pot, together with tomato, onion, paprika and annatto—an orange seed which grows in the area, and coconut milk. The dish is served with Cassava *Manihot esculenta*. Stewed iguana can cost the equivalent of between USD1.5 and 2.5. During the course of discussions with people in the street, it was stated that iguana stew is the main dish served at the Festival of Return, which is celebrated at the end of August. The eggs are usually boiled for consumption.

Medicinal: The animal's fat is sometimes taken to alleviate coughs and asthma. According to one respondent, the fat from adipose tissue is extracted from the iguana with boiling water, heated with garlic, and a tablespoon of the oil is taken orally. Another said the fat is used to treat a "tight chest".

greater controls in relation to iguana consumption. They believed that increased tourism would generate development of iguana breeding farms, which would provide individuals with job opportunities.

Hunting

The Green Iguana is hunted year-round. It was mentioned that children are often seen gathering to hunt iguanas. One woman, who cooks iguanas for sale, said that during the week she would sometimes purchase iguanas from children for between three to four dollars each, depending on the animal's size, and then cook and sell them over the weekend. While the first author was told that there were no restrictions on hunting during the breeding season, some of those interviewed spoke of the "rules of hunting". A local shopkeeper interviewed mentioned that guns and slingshots are most commonly used to hunt specimens. Dogs were also frequently used to catch iguanas falling out of trees that the hunter shakes in order to dislodge specimens. Another hunting technique described the use of a long pole with a rope



Top: iguanas prepared for cooking;

Bottom: policeman talking to iguana street seller.

noose at the end that is placed around the neck of the sleeping animal and tightened. The animals are also killed with bow and arrow, and stones, which are among hunting methods described by Corpogujaira (1993) and Palacio *et al.* (1999).

The authors interviewed an illegal dealer who explained aspects of the trade in detail, from methods of transport, prices, and earnings. For example, he had been arrested eight times for committing illegal wildlife trade offences and had been in and out of gaol. He became involved in the illegal trade of iguanas owing to the lack of job opportunities in the area: “Selling iguana is like selling gasoline, it is illegal but people do it”, he said. In Fonseca, the lizards are typically sold to restaurants and he is responsible for bringing specimens to Fonseca from the municipalities of Cesar, Atlántico, Bolívar and Magdalena. He explained that most iguanas come from Magdalena, in the municipality of Tenerife, which he claims to be the major source of iguanas. He purchased small specimens for USD0.50 and larger specimens for USD1.00, which he sold in Fonseca for USD3.00 and USD5.00, respectively. He said he spent USD250 bringing the iguanas into Fonseca, which covered the costs of petrol and other transport costs, leaving him with a profit of 120%. “How can I say that this is not good business?”, he said.

When the primary author first met this dealer, he had just received a shipment of 170 dead iguanas, with 200 specimens arriving on the day of the interview, less than three weeks later. The authors were told that during the egg-laying season—between December and February—it was possible to obtain 3000 eggs for USD50.00 and sell them for USD200 in Fonseca, which the dealer had done the previous season. Up to 36 000 eggs were once offered to him to sell, he stated, but he had declined the offer owing to fears of being gaoled.

In order to transport the iguanas, this dealer would either tape up the specimens so that they can be closely packed into suitcases, or live animals are placed under ice in styrofoam coolers to kill them, and fish are placed on top to prevent the iguanas being detected during any police checks. He indicated that this method was used to transport specimens from the municipality of Tenerife (Magdalena) to Fonseca.

When asked whether he would continue trafficking iguanas if he was arrested again, he said that the business was “100% profitable” and that if he were to be caught with live specimens, he believed that the iguanas would be released in the wild and he would be allowed to go free; if the animals were dead, he said that he would be taken into custody but released within 36 hours. He stated that the business was essential to enable him to support his family and that he would be glad if the trade was legal without the fear of being caught and convicted of a crime. He also hoped that the trade in meat and eggs could be managed as specimens were not reaching the age of reproduction. “In Magdalena, iguanas are killed and thrown into the river as they eat crops”, he explained. “Why can’t they just eat them if they are going to do that? In Fonseca people are dying of hunger, and not everyone has the chance to eat every day.”

Five of the nine people interviewed in depth said that the resource had been exhausted by overuse, while others believed that hunting had not depleted populations. Two of the people interviewed considered that the resource was still viable since the lizard produces many eggs, and consequently many iguanas. The illegal dealer said that while iguana populations had been depleted in La Guajira, there were still many iguanas in other departments such as Cesar, Magdalena, and Bolívar, which meant that iguanas would never become extinct, he said.

The iguana dealer was the only respondent to mention that consumption of iguana in the departments of Magdalena, Bolívar, Atlántico, among others, was believed to be akin to eating dog meat (which is considered to be a lesser meat), and that this animal is not hunted to be eaten, but rather because it is considered a crop pest in these locations.

DISCUSSION

In the municipality of Fonseca, the nine interviewees were aware of the hunting of iguana for meat and eggs that occurs in the area and a number mentioned the importance of the iguana in Fonsequero culture. An 89-year-old former iguana hunter said that a Fonsequero can forego any meat dish for one of iguana, which is considered unique, stating that “he who does not eat iguana is not Fonsequero”.

Many of those interviewed said that the tradition of iguana consumption was passed down from the Wayuu, an ethnic indigenous group, many of whom inhabit mountainous areas where the iguana is commonly available and the animal of choice for hunting.

One person explained how the culture of eating iguana was viewed with mixed feelings by the people of the municipality. Fifty years ago, eating iguana was looked down upon by the upper classes, who viewed its consumption to eating dog food, practised only by the poor, and carried out in secret. Today, however, everyone consumes iguana regardless of social class, the man stated.

When polled, fewer than half of the 180 respondents attributed eating iguana meat or eggs with conferring aphrodisiac effects. In Fonseca, fat derived from iguanas, and also from shark *Carcharhinus* species, is used to treat coughs and asthma; there is evidence that similar customs have been preserved in other cultures: in Brazil, it is reported that fat from the following species is extracted to treat asthma: *Dasyatis* sp., *Boa constrictor*, *Eunectes marinus*, *Caiman latirostris*, *Trichechus inunguis*, *Dasytus novemcinctus*, *Sotalia fluviatilis*, *Sotalia guianensis*, *Inia geoffrensis* (Alves and Rosa, 2007). There is evidence that Honduran Indians used iguana oil to protect their skin from the sun (Flores, 1994).

CONCLUSIONS

The high consumption of Green Iguanas in Fonseca has generated a widespread perception that the species is in decline, a concern that needs to be investigated. It is clear that this species is exploited and almost all respondents, both in urban and rural areas, agreed that consumption for food was the primary use for this species in Fonseca. The animal is considered to be of cultural importance, with both medicinal and aphrodisiacal properties. It is therefore important that, as well as the value of this species as a food resource, its cultural significance be taken into account in any conservation strategy.

The apparent widespread decline of the Green Iguana in this area has prompted suggestions by residents about how to conserve this resource (Fig. 2). In urban locations, the establishment of breeding centres has been proposed and rural communities have suggested that regulation and public awareness need to be improved. These perceptions show that in both areas, people are aware of the need for conserving this species.

Conservation strategies obtained by implementing the methodology of The Conservation Measures Partnership (CMP, 2013), include environmental education, breeding farms, the use of coal-fired ovens (to prevent deforestation of

the iguanas' habitat for the purposes of wood burning), and ecotourism strategies. These are the most viable strategies in the area and should be implemented simultaneously. Funding for these should be sought from corporate environmental funding groups such as the Ministry of Environment and Sustainable Development and NGOs.

In conclusion, it is apparent that the trade in iguanas is having an impact on populations in other departments of the Colombian Atlantic coastal region, where the animal is not consumed but captured to meet the demand in La Guajira. The problem is exacerbated by the fact that offenders are not permitted to be kept in custody for more than 36 hours without being prosecuted, which means that law enforcement relating to this issue is negligible.

RECOMMENDATIONS

Owing to the extirpation of Green Iguanas in Fonseca, a study of the country's population of Green Iguanas needs to be undertaken to determine the impact of the trade and to establish which conservation strategies are required. To perform such a task, it is important to conduct a financial feasibility study so that the effectiveness of the strategy can be established.

The cultural importance of this species needs to be taken into account in any conservation strategy. If all social and political parties can be more united on the matter of wildlife management, these resources have a better chance of being sustained. However, it must also be considered that a growing population will make it increasingly difficult to manage the area's natural resources.

Environmental education programmes must be promoted in order to sensitize and engage civil society on the issue. This will help to control the resource and reflect the points made in the National Strategy of Illegal Traffic (Ministerio de Medio Ambiente, 2002), where it states that improving environmental education and teaching people how to assist in the conservation of the resource will help address overexploitation of this reptile species. An education strategy is one of the most important tools that can be used to mitigate the problem of overharvesting and one which can be applied to other species.

Ecotourism would be a valuable tool for conservation of the species as it would control the use of this resource, bring a new source of employment for local people and generate economic development of the region.

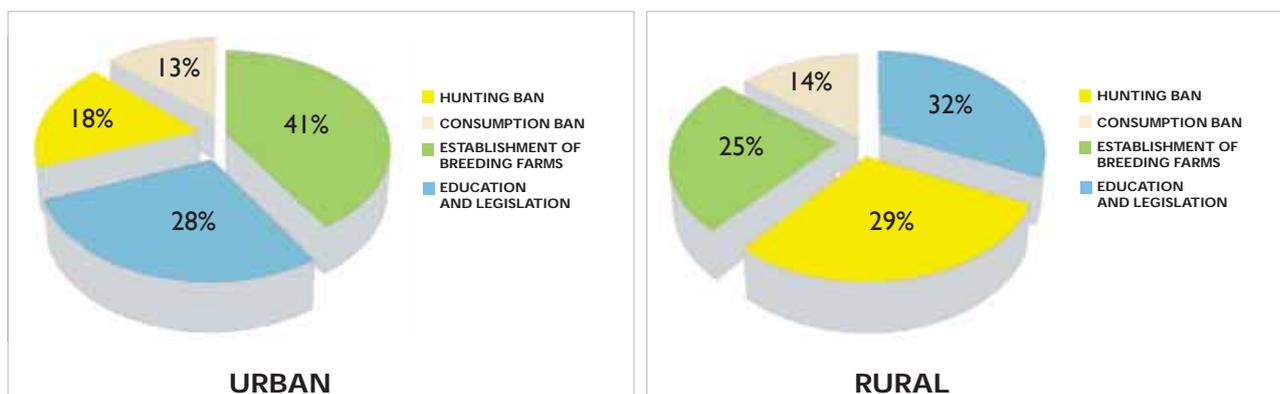


Fig. 2. Proposals for conservation strategies by respondents living in urban (n=90) and rural (n=90) areas.

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Reduction in Demand for Ivory in Singapore, but Transit Trade Vigilance Needed

Lola Webber, Chris R. Shepherd and Kanitha Krishnasamy

INTRODUCTION

Singapore, the small South-east Asian nation on the tip of the Malay Peninsula, was a major entrepôt for African raw ivory until it joined the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), effective 9 February 1987. An attempt to quantify the Singapore ivory trade in 1989 revealed that, from 1983 through 1987, over 536 tonnes (t) of ivory entered the country from various African nations, based on records maintained by Singapore Customs (Martin and Stiles, 2002). During this period, Singapore was infamous for being an important trade centre for legal and illegal ivory exports from Africa and a distribution point for ivory to other Asian destinations. It also had a significant domestic ivory retail trade.

In 1985, CITES Parties agreed an ivory export quota system which, among other things, allowed a one-off opportunity for ivory stocks held outside African Elephant range States to be registered with the CITES Secretariat by 1 December 1986. As a result, the CITES Secretariat reported in 1987 that 11 countries or territories (Belgium, Burundi, China, Germany, Hong Kong, Japan, Macau, Portugal, Singapore, Spain and the UK) had registered 700 501 kg of ivory pursuant to this policy. Although the CITES Secretariat had issued a Notification to the Parties on 23 July 1984 calling for a prohibition on all ivory trade with Singapore, and this appeal had remained in effect until the registration deadline, 270 474 kg of raw ivory (comprising 55 819 elephant tusks), plus another 26 757 kg of 1986 cut ivory pieces, was nonetheless registered in Singapore—some 42% of the total registered stock by weight (Anon., 1987; Milliken and Melville, 1989). This ivory was subsequently eligible for trade under the CITES export quota system and most was quickly released onto the international market and exported mainly to Hong Kong and Japan (Milliken, 1989; Milliken and Melville, 1989). Fortunately, Singapore's notoriety in the illicit ivory trade has waned in the intervening years.

Legal status of ivory in Singapore

Both African Elephants *Loxodonta africana* and Asian Elephants *Elephas maximus* are listed in Appendix I of CITES. International commercial trade in ivory has been banned under the Convention since 1990. However, domestic trade in ivory is permitted in Singapore under two conditions: i) if traders can prove that the ivory is pre-Convention; or ii) the ivory was acquired before elephants were listed as a protected species under Singapore's law, i.e., before 1990. Consequently, an undisclosed amount of pre-Convention worked ivory remains in Singapore. According to the Agri-Food and Veterinary Authority

(AVA)—Singapore's CITES Management Authority—the government has registered all retailers selling worked ivory and continues to conduct periodic checks to monitor the sale of this stock; however, a request by the authors for information on the registered stock was declined on the grounds that such information is confidential (AVA, *in litt.* to TRAFFIC, 22 October 2012).

As a Party to CITES, Singapore is obliged to implement and enforce the requirements of the Convention through its national legislation. To this end, the *Endangered Species (Import and Export) Act* was enacted in March 1989 under the administrative and enforcement authority of the AVA to support CITES implementation in Singapore. Under this Act—which lists all CITES species—the Singapore Government banned the sale of raw and carved ivory in the country, except for the registered ivory stock noted above.

Article 4 of the Act specifically prohibits, without a permit, the import, export, re-export, transport by sea, possession, sale or display of any scheduled species or specimen, with a fine of up to SGD5000 (USD4000) and up to a year in gaol for violations. In order to strengthen wildlife protection efforts, the *Endangered Species Act* was reviewed several times from 2000 to 2013, with the most notable revision regarding the strengthening of penalties coming into force on 1 March 2006; at this time, maximum penalties for the unauthorized import, export, re-export or introduction from the sea, of CITES-listed species were increased ten-fold (Singapore Attorney-General's Chambers, 2013). Any violation carries a maximum penalty of SGD50 000 (USD40 000) fine per scheduled species not exceeding an aggregated fine of SGD500 000 (USD410 000) and/or two years' imprisonment imposed for infractions. These penalties apply to any import, export or transshipment of ivory through Singapore without CITES permits.

Under the CITES National Legislation Project, all Parties to CITES have been categorized (1–3, with 1 being the best rating) based on the competency of their national legislation to implement and enforce CITES (CITES, 2012b). Singapore's CITES implementing legislation, the *Endangered Species Act*, is accorded Category 1 status as the legislation is “believed generally to meet the requirements for the implementation of CITES” (CITES, 2011).



Almost two tonnes of illegal raw ivory tusks, in transit in Singapore from Africa, bound for Viet Nam, were intercepted by the Agri-Food and Veterinary Authority and Singapore Customs in January 2013.

ETIS and Singapore

Monitoring the illegal trade in elephant products and the illegal killing of elephants was first mandated at the 10th meeting of the Conference of the Parties (CoP10) in 1997, when CITES Parties adopted *Resolution Conf. 10.10 on Trade in elephant specimens*. Through this mandate, the Elephant Trade Information System (ETIS) was created. ETIS is a comprehensive global information system that was developed as a tool to monitor the pattern and scale of illegal trade in ivory and other elephant specimens. The database holds numerous details regarding illegal ivory trade since 1998, including law enforcement records for seizures or confiscations of elephant ivory and other elephant specimens (CITES, 2013). ETIS is managed by TRAFFIC on behalf of CITES Parties. Comprehensive analyses of ETIS records have been provided to CITES CoPs as a formal agenda item since 2002. Currently, nearly 20 000 records of elephant product seizures have been recorded.

Analysis of ETIS data from 2009 and 2012 illustrates several important trends. Illicit trade in ivory has been increasing since 2007, with a much sharper increase since 2009 when the upward escalation began to surge (Milliken *et al.*, 2012). ETIS records show that this is primarily attributed to the rapidly increasing demand for ivory from China, where 83% of China’s ivory trade since 2006 has occurred over the last three years (Milliken *et al.*, 2012). Since ETIS reporting began, three of the five years with the greatest volumes of seized ivory occurred in 2009, 2010 and 2011 (CITES, 2012a). From 2009 through 2011, a record number of 34 large-scale ivory seizures have been documented in ETIS, resulting in the confiscation of nearly 60 t of ivory, though almost none of these seizures has resulted in successful investigations of the criminals behind these transactions (Milliken *et al.*,

2012). The frequency and scale of large ivory seizures (more than 800 kg seized at a single time) has increased in recent years and is what is driving the escalating trend. Such seizures are indicative of the presence of organized crime in the illicit trade in ivory.

ETIS analyses over the years have identified Singapore as a transit country through which consignments of illegal ivory flow. The 2012 ETIS report also notes that Singapore, among other countries, also possesses a domestic ivory trade. Since CITES *Resolution Conf. 10.10* was adopted in 1997, all countries, including Singapore, are compelled to report the details of elephant product seizures to the CITES Secretariat, or to TRAFFIC directly, for inclusion in ETIS. In July 2012 however, it was reported at the 62nd meeting of the CITES Standing Committee that Singapore’s participation in ETIS has been poor, with the government very rarely providing reports to ETIS.

Singapore and the illegal ivory trade

From 1989 through 2009, Singapore reported 13 ivory seizures, accounting for more than seven tonnes of illegal ivory (Milliken *et al.*, 2009). June 2002 saw Singapore making the largest single ivory seizure after the CITES ivory trade ban came into effect (Wasser *et al.*, 2008). Falsely declared as marble sculptures, a shipment from Malawi of over 7.1 t of ivory packed in wooden crates was seized by Singapore’s AVA, comprising 542 large tusks and 40 810 cylindrical name seals. This consignment was ostensibly destined for Japan. Investigations by AVA found that the shipping bill for the container listed a Singapore-based company, Delight Harvest, as involved in preparing documentation that facilitated the shipment. The shipping agent was later prosecuted

Year	Seizures	Trade route	Country/territory of seizure	Min/estimated weight (kg)
1996	13 800 name seals	SG–JP	JP	-
1997	352 kg of name seals	SG–JP	JP	352
1997	raw ivory, Kobe port, JP	SG–JP	JP	500
2000	132 ivory pieces, JP, via post	SG–JP	JP	500
2000	2 tonnes+ of raw ivory, TW, shipped from Douala (CM) in transit through SG	CM–SG–TW	TW	2000
2002	7 tonnes+ of ivory in wooden crates (comprising 542 large tusks + 40 810 name seals) seized in SG; falsely declared as marble sculptures	MW–SG–JP	SG	7100
2012	405 raw tusks concealed in shipment of plywood seized in Johor (MY), having passed through SG port. Exported or re-exported from KE	KE–SG–MY	MY	2974
2012	677 raw ivory pieces (19 kg) from Africa, seized from hand luggage in Hanoi, VN, plus 15 ivory bracelets, 90 pairs of chopsticks, and 10 necklaces.	Africa–SG–VN–	VN	19
2012	6 tonnes+ of ivory seized by MY Customs at Port Klang, arriving from TG, in transit to SG, bound for CN	TG–ES–MY– SG–CN		6034
2013	1099 pieces of raw ivory tusks declared as waste paper packed in 65 gunny sacks, seized SG by AVA and SG Customs	Africa–SG	SG	1800
2013	122 kg of ivory seized by authorities at Noi Bai airport, Hanoi, arriving from SG. Two arrests.	SG–VN	VN	122
	TOTAL			21 401

Table 1. Summary of seizures implicating Singapore. * grey text denotes the two significant seizures in Singapore. CM–Cameroon; CN–mainland China; ES–Spain; KE–Kenya; JP–Japan; MY–Malaysia; MW–Malawi; SG–Singapore; TG–Togo; TW–Taiwan; VN–Viet Nam

and fined SGD5000 (USD4000) under the *Endangered Species Act*, the highest penalty to be imposed under this legislation at the time. More recently, on 23 January 2013, 1099 pieces of raw ivory tusks, weighing close to two tonnes, were seized in Singapore by AVA and Singapore Customs. The consignment, declared as waste paper, had been shipped from Kenya and was reportedly destined for Viet Nam.

Although domestic seizures are few and far between, Singapore has been implicated as a transit country in a number of ivory seizures that have occurred elsewhere. In July 2011, a shipment by sea transited Singapore before arriving at the port of Pasir Gudang in Malaysia where it was seized by the Royal Malaysian Customs Department (Ganesh, 2011). The shipment of 405 raw tusks (2974 kg) had been exported from Kenya. In September 2012, it was reported that 19 kg of ivory from Africa had been seized from a woman outside Noi Bai International Airport, Hanoi, Viet Nam, who had arrived on a flight from Singapore. Another shipment, in December 2012, saw the largest ivory seizure in South-east Asia in a decade, when the Royal Malaysian Customs at Port Klang intercepted over six tonnes of ivory that originated from Togo. This consignment had been bound for China via Singapore's Pasir Panjang Port (Jayagobi Narayanan pers. comm. to K. Krishnasamy, October 2013).

On 6 August 2013, it was reported that Customs officers at Hanoi's Noi Bai International Airport had recently arrested two Vietnamese nationals attempting to import 122 kg of ivory; they had arrived on a flight from Singapore.

Table 1 highlights some of the ivory shipments that have passed through Singapore undetected, or that were seized en route to the country, or have been seized in the country since 1996 to date. There have been two notable seizures in Singapore, and another nine have occurred outside the country, including eight ivory shipments that passed through Singapore's ports, and one in 2000 that was sent by post from Singapore to Japan. These data indicate that the country has been implicated in a minimum of 21 t of illegal ivory over this 18-year period.

Contextualizing trade in Singapore's ports

Employing some 170 000 people with a contribution of seven percent to the country's gross domestic product, Singapore is one of the world's busiest ports. The volume of cargo moving through Singapore's major seaports has few rivals worldwide—vessel arrival tonnage was at a record 2.12 billion gross tonnes in 2011, while container traffic in 2011 totalled close to 30 million twenty-foot equivalent units (Anon, 2012; World Bank, 2013). The volume and frequency of goods transported in and out of the country makes detection of ivory through Singapore extremely challenging.

A spot check of Singapore's domestic ivory trade

In addition to its past role as an entrepôt, and more recently as a transit point, Singapore has also had a domestic demand for carved ivory. The Singapore

Government banned the domestic sale of ivory, raw or carved in 1989, except for stocks registered with the Primary Production Department (formerly the CITES Management Authority in Singapore—now AVA) prior to November 1986 (Martin and Stiles, 2002). Historically, there is no tradition of ivory carving in Singapore and carvers probably did not establish themselves there until well into the 20th century (Martin and Stiles, 2002). During surveys carried out in 1979, 30–50 ivory carvers were found in Singapore (Martin and Stiles, 2002), but during surveys carried out in 2000/2001 (Martin and Stiles, 2002), and by TRAFFIC in 2002 and 2012, no carvers were found. It is therefore highly likely that ivory carving in Singapore had come to an end in the early 1990s (Martin and Stiles, 2002).

In 2000/2001, Martin and Stiles reported finding 23 shops selling ivory, out of 158 shops surveyed (Martin and Stiles, 2002), with a total of 2700 pieces observed. Compared to the numerous shops selling ivory in Singapore in 1979, the numbers of retail outlets selling ivory had decreased considerably. In 2001/2002, TRAFFIC carried out a countrywide survey of ivory availability in Singapore's retail outlets (unpublished) and reported the results to the CITES Management Authority of Singapore. In 2012, TRAFFIC set out to update understanding of the ivory trade in Singapore's retail outlets to compare ivory availability with the survey conducted a decade earlier. This report documents the observations of trade in ivory in Singapore from these two surveys.

METHODS

For the 2012 market survey, data on a range of indicators on the scale and trends in ivory trade in Singapore were collected, including the price of ivory products, the number of retail outlets selling ivory items, and the number of ivory items seen for sale. In addition, the size and type of ivory product for sale was recorded and qualitative information about sources, age and demand for ivory was collected.

Researchers visited retail outlets in Singapore, largely in the central and south-east parts of the city, where, during a TRAFFIC study in 2002, ivory was frequently being offered for sale. The current survey assessed all the shops surveyed in 2002, excepting some in major hotels that had since closed or moved. In such cases, the immediate area was surveyed and any shops selling ivory were then recorded. The types of outlets visited included souvenir, jewellery, handicraft and antique shops, and art galleries. Vendors were interviewed regarding the age and origin of the ivory, their awareness of the international ban on the sale of elephant products, and how well it was selling, in order to assess turnover. Openly displayed ivory items were identified and counted as accurately as possible. In some instances, when there were large numbers of smaller items, such as rings or pendants kept in bowls, estimates of their numbers were made.

Items made of ivory substitutes, such as mammoth ivory, resins or bone, were also noted. The word "ivory" in this report always refers to extant elephant ivory unless

Type of outlet	Total no. surveyed	No. of outlets selling ivory
Antiques shop	23	9
Art gallery	2	0
Handicraft	8	1
Jewellery shop	54	8
Souvenir shop	13	1
Total	100	19

Table 2. Number and types of outlets surveyed and number selling ivory products.

Type of products	Quantity found	No. of outlets selling ivory
Jewellery	215	17
Ornaments	126	6
Snuff bottles	5	2
Carved tusks	2	1
Uncarved tusks	1	1
Uncarved seals	15	1
Others	1 (chess set)	1
Total	365	29

Table 3. Type of ivory products for sale and number of outlets selling specified products.

otherwise stated. The collected data were analysed and the counts, types and prices of ivory items are presented in tables following the system used in earlier ivory trade studies in Singapore to allow for comparisons of the indicators over time (Anon., 2002). The retail prices used are the asking prices without bargaining, and the exchange rate was SGD1.23=USD1.

RESULTS

In total, 100 retail outlets of various types were surveyed in 21 localities in Singapore that were thought to be representative of the overall ivory trade in Singapore. Outlets that had the greatest number of ivory products were found on Tanglin Road, Orchard Road and in Chinatown, a finding that is consistent with the survey conducted by Martin and Stiles (2002).

Outlets where ivory was typically found for sale included antique, handicraft, jewellery and souvenir shops (Table 2). Of the outlets surveyed, 19 (19%) had ivory for sale (Table 2), totalling 365 items (Table 3). Most consisted of various types of jewellery and small (<10 cm) to large (>30 cm) ornaments (Table 3; Table 5). Of the types of outlets surveyed, ivory products were most common in jewellery and antique shops.

Various types of ivory jewellery were for sale in 17 (17%) outlets surveyed, and a wide range of different types and sized ornaments (ranging from less than 10 cm in height to over 30 cm in height) were found in six (6%) outlets (Table 5).

Jewellery: Ivory jewellery was usually displayed openly in glass tables or cases, with rings and pendants often being stored in bowls. In most outlets, jewellery was

displayed openly, but in one, it was kept out of view and only brought out when interest in ivory was expressed by the researcher. Most vendors stated that the ivory originated from Africa and was carved in China or Japan. Of the jewellery for sale, pendants were observed in the greatest quantity, followed by bracelets, but necklaces were sold in the greatest number of outlets. Pendants varied in size from 5–10 cm in height, with a width of 3–5 cm, and a thickness of 1–2 cm. They were usually small carvings with holes carved through the piece to allow for stringing. Rings had a width no broader than 5 mm. Bracelets were often entwined with gold, contributing to a significant range in price (Table 6), whilst necklaces were usually made of threaded ivory beads with large pendants, at varying prices (Table 6).

Ornaments: Four shops sold large numbers of ornaments (ranging from 10–60 pieces), which vendors claimed were imported from China 20 to 30 years ago. Ornaments were usually kept in glass cases or found in shop window displays. In several instances, large ivory pieces were no longer for sale. Small ornaments (<10 cm in height) were often carvings of Chinese characters, children, animals of the Chinese zodiac, elephants or Buddhas. Medium- and large-sized ornaments were often intricate carvings of ivory, for example the famous Canton balls—ivory carved into large spheres. Other large or medium-sized ornaments consisted of carvings of Chinese goddesses or saints.

Other products: Carved and uncarved tusks, snuff bottles, name seals and other ivory products were found in very small quantities (Table 3). Name seals were sold as cylindrical blocks, approximately 6–10 cm in length and 1.5–3 cm in diameter, usually bundled together with elastic bands and kept in glass cabinets. No name seals with hallmarks were observed for sale.

Table 6 presents the range of prices asked for various items throughout Singapore. These varied significantly and were dependent on the size, craftsmanship involved, and incorporation of gold or gemstones.

All vendors reported that they were selling old stocks of worked ivory, and claimed the ivory was from the “pre-Convention ban”. Vendors reported that ivory was no longer popular in Singapore and that their stocks were old and difficult to sell. One vendor claimed an ivory ornament to be “fake ivory” when it was in fact real ivory, and only one shop had labelled products as “ivory”.

Most outlets claimed to have only small supplies of ivory and sold more jade—advertised as Burmese—and bone products (claimed to be fish, camel or cow). One retailer was also selling a snuff bottle made from the ivory casque of the Helmeted Hornbill *Buceros vigil* (the only hornbill species with ivory). Another vendor was observed to be selling fake ivory made from resin.

Singapore has no indigenous or working elephants, and there are no known ivory carvers in Singapore. According to the vendors that were interviewed, all the ivory was imported from China or, in one case, Japan, 20 to 30 years earlier, and there is apparently no new ivory entering the local market.

DISCUSSION

Many of the shops found to be selling ivory in the 2002 survey no longer stocked ivory. While six hotel shops were found with ivory in 2002, none was found in the recent survey. Consistent with results from surveys carried out by TRAFFIC in 2002, this survey similarly found that all the ivory being sold in Singapore was allegedly acquired before the international ivory trade ban. When interviewed, vendors reported poor sales of ivory products, with little demand from either Singaporeans or tourists, claiming that ivory sales have declined. Vendors stated that the two main factors responsible for this decline were decreased demand and the 1989 CITES ivory trade ban. The sale of ivory products was occasionally discreet. One vendor claimed to keep an unknown quantity of ivory out of public view until an interest in ivory was expressed; this behaviour perhaps reflects an awareness of the stigma associated with ivory following numerous anti-ivory campaigns designed to make buying ivory ethically unacceptable. In general, these results suggest that most of the ivory observed during this study was accumulated unsold stock that had been obtained before the international ivory trade ban.

The number of surveyed retail outlets openly selling ivory products decreased from 55% in 2002 (Anon., 2002) to 19% in 2012. In addition, the variety of ivory products observed decreased significantly in the same period. In 2002, 18 different types of products were observed, including chopsticks, letter holders and picture frames, compared to seven product types found in 2012. As in 2002, ivory products were most common in jewellery and antique shops, which comprised the majority of shops surveyed. It is worth noting that the 2002 survey found that just over 50% of the souvenir shops surveyed were selling ivory products, whereas in 2012 just one souvenir shop was found with ivory products. This finding seems to confirm vendors' reports that ivory is not popular amongst tourists visiting Singapore.

The quantity of different products observed has also decreased significantly: in 2002, a total of 8121 ivory products was observed for sale, compared to 365 in 2012. This represents an almost 95% reduction in the number of products found for sale during the two studies. On average, the prices of ivory products are higher now than they were in 2002, perhaps to compensate for the infrequency of sales.

CONCLUSIONS

Overall results from this survey portray a positive picture. Changes in the way vendors stock and display ivory, possibly in conjunction with the CITES trade ban, appears to have brought a corresponding decrease to the scale of Singapore's ivory market. In the decade since TRAFFIC's 2002 survey, the reduced availability of ivory products observed on sale and the decrease in the number of outlets that sell ivory suggests a decline in the domestic ivory trade. This trade, perhaps residual, is of a

Jewellery	Quantity found	No. of outlets selling ivory
Pendants	74	3
Necklaces	26	5
Rings	36	4
Bracelets	49	3
Brooches	30	2
Total	215	17

Table 4. Type and quantity of jewellery surveyed, and number of outlets selling various products.

Size	Quantity found	No. of outlets selling ivory
Small (<10 cm)	52	4
Medium (<15cm–30 cm)	36	5
Large >30 cm)	38	4
Total	126	13

Table 5. Number of different sized ornaments for sale, and number of outlets selling various sized products.

Product	Price range (SGD)	Price range (approx USD)
Rings	45–80	35–65
Pendants	20–300	15–245
Brooches	20–120	15–95
Necklaces	75–300	60–245
Bracelets	85–780	70–635
Uncarved tusk	3500	2845
Carved tusk	12 000–15 000	9755–12 195
Small ornaments	50–650	40–530
Medium ornaments	250–15 700	200–12 765
Large ornaments	1000–95 000	815–77 235
Others: chess set	30 000	23 500
Snuff bottles	100–350	80–285
Name seals	40–45	30–35

Table 6. Price range of retail ivory items in Singapore.

minor scale, relative to the ivory trades recently observed elsewhere in the region such as in Thailand, Viet Nam and Lao PDR (see Stiles, 2008; Stiles, 2009; Nijman and Shepherd, 2012).

This is an important finding considering the fact that 75% of Singapore's 5.3 million people are ethnic Chinese (Index Mundi, 2013). Demand for ivory in mainland China is currently driving the illegal trade in ivory (Milliken *et al.*, 2012), but Singapore's Chinese community seems to be decisively moving away from ivory consumption based on the findings of this study. It is worth noting that the median age of Singapore's population—33.5 years—is only marginally lower than China's median age of 35.9 years, indicating a fairly similar age structure. This suggests that a generational shift in ivory consumption habits has already occurred in Singapore, providing hope that major demand reduction is also possible in China.

That said, more transparency in the management of existing worked ivory stockpiles would allow for

a clearer judgement on the scale of domestic trade in Singapore. At the recently concluded CITES meeting of the Conference of the Parties in Bangkok, in March 2013, all Parties were mandated to declare ivory stocks to the CITES Secretariat each year by 28 February, indicating the number of pieces and weight per type of ivory (raw or worked) (CITES, 2013). Consequently, Singapore will be obliged to provide information on its registered worked ivory stockpiles in the future.

Perhaps the greater challenge facing Singapore, given its excellent port facilities, is to address the problem of ivory transiting through the country. As highlighted in Table 1, as well as in the 2009 and 2012 ETIS reports, Singapore remains an important transit country for high volume consignments of illicit ivory between Africa and Asia, or within Asia. Indeed, the 2013 seizure of 1800 kg of ivory is evidence that Singapore is still being used as a transshipment point in the illicit ivory trade chain. The enormous volume of goods moving through ports in Singapore makes it extremely difficult to intercept illegal shipments. Only through intelligence-led investigations, the profiling and targeting of certain kinds of cargo and other international co-operative efforts, will the illicit ivory trade be significantly reduced. For a variety of reasons, authorities in most countries typically fail to apply the level of scrutiny to goods passing through their territory in transit, as they do to direct imports, unwittingly creating opportunities for the movement of illicit goods without detection.

While the global ivory trade can sometimes appear random and be challenging to fathom owing to constantly changing routes, seizures to date have already provided a basis for basic analysis in trade patterns of illegal shipments. To increase the effectiveness of law enforcement efforts, authorities should focus attention on shipments originating from key ivory export countries in Africa and establish direct co-operative links with these countries. Authorities must also remain cognizant of the fact that contraband ivory has been hidden amongst shipments of a wide range of commercial commodities, and should therefore pay attention to certain declared commodities (Milliken *et al.*, 2009).

Efforts to improve and integrate data collection require greater participation from all of the States along the international trade chain in order for decision-making to be better informed. A fundamental aspect to this is the lack of information on the size of ivory stockpiles held in the custody of CITES Parties and their relative contribution to the illegal ivory supply chain. This remains an important gap in the current understanding of the dynamics of the chain, which has now been achieved through mandatory inventories being undertaken annually, and declaration to the CITES Secretariat of all ivory stockpiles (CITES, 2013). This marks an important step forward in addressing the global ivory trade, especially within countries like Singapore that possess a domestic ivory trade.

Results from this survey highlight a decline in the domestic ivory market in Singapore, a positive indication of demand reduction in a country that was once one of the most significant ivory trading entrepôts in the world. It is essential that Singapore maintains and increases vigilance to reduce further the risk of illegal ivory moving through its airports and seaports.

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