ILLEGAL TRADE IN BARBARY MACAQUES

Universiteit Utrecht

Author: Drs. D.P. van Uhm
Willem Pompe Institute
Commissioned by Stichting AAP
2014

Contents

ABSTRACT 3
1. HISTORY AND DECLINE 4
2. LEGISLATION 5
3. CULTURAL CHANGE 7
4. METHODOLOGY 7
5. TRADE IN MACAQUES 8
5.1 Legal trade in macaques 8
5.2 Illegal trade and confiscations 9
5.3 Trade route: origin, transit and destination 11
6. MODUS OPERANDI 12
6.1 Hunting 12
6.2 Smuggling 13
6.3 Communication 15
7. NETWORKS AND ORGANIZATION 15
7.1 Perpetrators 15
7.2 Network 16
7.3 Crime groups 18
7.4 Links with other forms of crime 19
8. ENFORCEMENT AND PREVENTION 19
CONCLUSION 21
RECOMMENDATIONS 21
LITERATURE 22

Abstract

While Morocco is well known as the main port between Africa and the EU for the illegal drugs trade and migration, the illegal trade in wildlife is flourishing as well. Next to the illegal large-scale trafficking of tortoises and birds, it is estimated that as few as 5,000 Barbary macaques remain in Morocco, partly as a result of the illegal trade. Moreover, the Barbary macaque is the most seized CITES mammal in the EU, accounting for almost 25% of live mammal-related seizures. Of all the confiscations of illegal shipments with Barbary macaques, 90% originate from Morocco and are confiscated in Spain due to a lack of CITES documentation. Although it was believed that the trade was loosely based on the tourist industry, a high degree of (criminal) organization has been found in this study on the illegal trade in Barbary macaques. Sophisticated methods combined with high profits and large ordered numbers of Barbary macaques, coordinated by well-organised, semi-loose networks characterize this type of crime.

1. History and decline

Barbary macaques have been associated with humans for thousands of years. They have been found mummified in Egyptian pyramids and petrified in Pompeii.[1] In historic times, the Barbary macaque was an inhabitant of parts of Europe and virtually all of North Africa.[2] [3] The species was once widespread throughout North Africa from Libya to Morocco, but its current distribution is limited solely to small relict patches of forest and scrub, in the rocky and mountainous parts of the Rif and Atlas Mountains (Morocco) and in parts of the Tellian Atlas (Algeria).[4] [5] [6] [7] A semi-wild population of around 200 macaques live in the Upper Rock Nature Reserve of Gibraltar in Europe.[8]

The total population size of Barbary macaques decreased from an estimated 21,500 individuals in 1974 (Morocco; 17,000 and Algeria; max. 5,500)[9] [10] to 15,000 in the 1990s,[11] 10.000 in 2003,[12] [13] and 5,000-6,000 in 2009.[14] The numbers of macaques in Morocco are currently estimated to be around 5,000 individuals, whereas in comparison to 1975 it was about 17,000.[15] [16]

[1] Waters, S.S. (2011). *Europe's other primate. Barbary macaques are still being taken from the wild and sold as pets; Zoos can help to put a stop to it.* EAZA.
[2] Lindburg, D.G. (1980). *The Macaques: Studies in Ecology, Behavior, and Evolution.* New York, NY: Van NostrandReinhold.
[3] Camperio Ciani, A. (1986). La Macaca sylvanus in Marocco: soprav- vivenza o estinzione. Osservazioni personali e dati storico-demog- rafici. *Antropologia contemporanea*, 9 (2), 117–132.
[4] Fa, J.E., Menard, N., Steward, P.J. (1984). The distribution and current status of the Barbary Macaque in North Africa. In Fa, J.E. (Ed.), *The Barbary Macaque. A Case Study in Conservation* (pp. 79–101). New York, NY: Plenum Press.
[5] Camperio Ciani, 1986.
[6] Scheffrahn, W., Menard, N., Vallet, D., & Gaci, B. (1993). Ecology, demography, and population genetics of Barbary Macaques in Algeria. *Primates*, 34(3), 381–394.
[7] Menard, N., Vallet, D. (1993). Population dynamics of Macaca sylvanus in Algeria: an 8-year study. *American Journal of Primatology*, 30, 101–118.
[8] Fa, J.E. (1981). The apes on the Rock. *Oryx*, 16(1),73–76.
[9] Taub, D.M. (1977a). Geographic distribution and habitat diversity of the Barbary Macaque (Macaca sylvanus L.). *Folia Primatologica*, 27, 108-133.
[10] Taub, D.M. (1977b) The Barbary macaque in North Africa. *Oryx*, 14(3), 245-253.
[11] Von Segresser. F., Menard, N., Gaci, B. & Martin, R.D. (1999). Genetic differentiation within and between isolated Algerian subpopualtions of Barbary macaques (Macaca sylvanus): evidence from microsatellites. *Molecular ecology*, 8, 433-442.
[12] Modolo L., Salzburger W., & Martin R.D.(2005). Phylogeography of Barbary macaques (Macaca sylvanus) and the origin of the Gibraltar colony. *Proceedings of the National Academy of Sciences*, 102, 7392–7397.
[13] Camperio Ciani, A. (2003). *Antropol. Mediterran*, 1 , 57-68.
[14] Lavieren, E. van. (2009). Titel. Unpublished manuscript.
[15] Butynski, T.M., Cortes, J., Waters, S., Fa, J., Hobbelink, M.E., van Lavieren, E., Belbachir, F., Cuzin, F., de Smet, K., Mouna, M., de Iongh, H., Menard, N. & Camperio-Ciani, A.(2008) *Macaca sylvanus*. In: IUCN 2012. IUCN Red List of Threatened Species.
[16] Radhakrishna, S., Huffman, M. A., & Sinha, A.(2012). The Macaque Connection: Cooperation and Conflict between Humans and Macaque. New York, NY: Springer.

Barbary macaque population

Location	Population	Year of survey	Source
Morocco	17.000	1974	Taub (1975)
	10.000	2002	Camperio Ciani et al. (2003)
	6.000-10.000	Unknown	Ross (2004)
	5.000		Camperio Ciani (pers. Comm. 2006)
Algeria	≥4.500	1974	Taub (1975)
Global	≥21.500	1974	Taub (1975)
	10.000-16.000	1992	Lilly & Mehlman (1993)
	≥15.000	Unknown	Segesser et al. (1999)
	10,000	2003	Modolo (2005) and Camperio Ciani (2003)
	5.000-6.000	2009	Van Lavieren (2009), unpublished

Source: Radhakrishna, S., Huffman, M. A., Sinha, A. (eds.) (2012)The Macaque Connection: Cooperation and Conflict between Humans and Macaque. Series: Developments in Primatology: Progress and Prospects, Vol. 43. Springer Publishing and Van Lavieren, E. and Wich, S.A. (2010) Decline of the Barbary macaque Macaca sylvanus in the cedar forest of the Middle Atlas Mountains, Morocco. Oryx, Volume 44, Issue 1, January 2010, pp 133-138

Overall, the population of Barbary macaques is estimated to have declined at a rate exceeding 50% over the last 3 generations (24 years). According to the International Union for the Conservation of Nature (IUCN) this decline is expected to continue in the future.[17]

While the main threat to the Barbary macaque populations is habitat loss, caused by intensive (illegal) logging, land clearance for agriculture and overgrazing by livestock,[18] [19] additionally, the illegal trade in macaques for the pet trade has become one of the greatest threats to the survival of the species.[20] [21] Although the Barbary lion *Panthera leo leo* and (possibly) the leopard *Panthera pardus panthera* have already become extinct in the wild due to overhunting,[22] the Barbary macaque is now on the brink of extinction.

2. Legislation

The International Union for Conservation of Nature (IUCN) has classified the Barbary Macaque as "endangered" on the Red List of Threatened Species since 2009 and the Barbary macaque has been listed in Appendix II of CITES (EC 338/97, Annex B) since 1975.[23] CITES is the Convention on International Trade in Endangered Species of Wild Fauna and Flora, an international agreement between governments that came into force in 1975 to ensure that no species of wild fauna or flora becomes or remains subject to unsustainable exploitation because of international trade. CITES Appendix I species are threatened with extinction, Appendix II species must be controlled in order to avoid utilization which is incompatible with their survival and Appendix III species are

[17] IUCN. (2013). Red List of Threatened Species. Retrieved from http://www.iucnredlist.org/
[18] Fa, J.E. (1984). Habitat distribution and habitat preference in Barbary Macaques (Macaca sylvanus). *International Journal of Primatology*,5,273-286.
[19] Camperio Ciani, A., Palentini, L., Arahou, M., Martinoli, L., Capiluppi, C. & Mouna, M. (2005). Population decline of Macaca sylvanus in the middle atlas of Morocco. *Biological Conservation,* 121, 635-641.
[20] www.iucn.org, 2013
[21] Radhakrishna et al., 2012.
[22] Burger, J., & Hemmer, H. (2006). Urgent call for further breeding of the relic zoo population of the critically endangered Barbary lion (Panthera leo leo Linnaeus 1758). *European Journal of Wildlife Research*, 52, 54–58.
[23] Butynski et al., 2008.

protected in at least one country which has asked other CITES Parties for assistance in controlling the trade.[24]

While the populations of great apes on the CITES I list, such as chimpanzees *Pan troglodytes* (population: between 299,700 - 431,100), orangutans *Pongo pygmaeus* and *Pongo abelli* (population: 54,000 and 6,600) and bonobos *Pan paniscus* (population: 15,000–20,000),[25] [26] are estimated to have a larger population, the Barbary macaques still remain on the CITES list II.

Nevertheless, in 2000, the European Community suspended imports of Barbary macaques from Algeria and Morocco under the provisions of Article 4.6b of EC Regulation 338/97 because such trade was deemed to have a harmful effect on the species' status i.e. for conservation reasons and this was reconfirmed in 2006 (Regulation (CE) N°605/2006).[27]

The Barbary macaque is protected by national legislation in Morocco and Algeria as well; this means that their capture, possession, sale and hunting are prohibited.[28] The collection and export of Barbary macaques are regulated by a system of permits, but enforcement of the legislation is inadequate and the illegal trade is a serious problem.[29]

Additionally, it is apparent that in Morocco certain numbers of individual macaques are found in public places for sale (illegally), to take pictures with tourists and to perform with trainers of monkeys (for example, in Djeema El - Fna square in Marrakech, classified by UNESCO as a world heritage site). Law No. 29-05 provides for measures to regulate the possession of this species for cultural purposes, particularly in Marrakech, through a certificate of ownership per specimen.[30]

The legal situation within the EU on the keeping of Barbary macaques as pets varies considerably between individual Member States. For instance, Bulgaria,[31] Sweden,[32] Belgium,[33] the Netherlands,[34] Italy, Portugal, Latvia, Lithuania, Estonia, Hungary and Andalucía, an autonomous community in Spain,[35] have implemented bans on the keeping of primates as pets. Denmark prohibits the import and private keeping of all primates, except marmosets and tamarins, while Austria and Poland prohibit the private keeping of Great Apes.[36] [37] In the UK a licence is required to keep primate

---

[24] European Commission. (2010). *Wildlife Trade Regulations in the European Union: An Introduction to CITES and its Implementation in the European Union.* Luxembourg: Publications Office of the European Union.

[25] United Nations Environment Programme. (2013). *Stolen apes. The illicit trade in chimpanzees, gorillas, bonobos and orang-utans. A rapid response assessment.* UNEP.

[26] Oates, J.F., Tutin, C.E.G., Humle, T., Wilson, M.L., Baillie, J.E.M., Balmforth, Z., Blom, A., Boesch., . . .Walsh, P.D. (2008). *Pan troglodytes*: IUCN Red List of Threatened Species (Version 2012.2.).

[27] www.iucn.org, 2013

[28] Royaume du Maroc. (2012). *Conservation Action Plan for the Barbary macaque (Macaca sylvanus) in Morocco*. MPC.

[29] www.iucn.org, 2013

[30] Royaume du Maroc, 2012.

[31] Articles 21 and 27(1), Animal Protection Law, 2008

[32] Föreskrifter om ändring i Djurskyddsmyndighetens DFS 2005:8 föreskrifter och allmänna råd (DFS 2004:16) om villkor för hållande, uppfödning och försäljning m.m. av djur avsedda för sällskap och hobby. 28 June, 2005

[33] Arrêté royal du 7 décembre 2001 fixant la liste des animaux qui peuvent être détenus. 7 December 2001

[34] Flora and Fauna Act 1998

[35] DECRETO 42/2008, de 12 de febrero, por el que se regula la tenencia de animales potencialmente peligrosos en la Comunidad Autónoma de Andalucía. 12 February 2008.

[36] RSPCA. (2012). *Primates as pets: Is there a case for regulation?* RSPCA.

species listed under in the Dangerous Wild Animals Act (1976) as pets;[38] between 2,500-7,500 may be kept by private individuals in the UK alone.[39]

3. Cultural change

While in 1975 the CITES regulations provided a legal framework, in the years before this, in the 1960s and 1970s, the popularity of keeping exotic animals as pets resulted in a high demand for eccentric and unusual species in Europe. Moreover, exotic animals were sold, perfectly legal, in department stores all over Europe. For example, 'Harrods', the largest luxury department store in London, had its own zoo department with Brazilian tapirs, vultures, fruit bats and racoons, but even elephants and leopards were offered for sale as 'fashion' items. At this time it was relatively common to keep primates as pets and even a couple of students could keep a lion cub above a convenience store in London.[40]

Although nowadays it is prohibited in many countries in Europe to keep monkeys as pets, this cultural change has taken place in a relatively short period of time. The criminalization of keeping monkeys as pets is still in progress in certain European countries, while other countries still allow monkeys to be kept as pets, resulting in different standards between countries; it can be quite normal to have a monkey as a pet in the UK, while this is prohibited in the Netherlands.

However, even if it is prohibited by law, there appears to be little awareness of fuelling the illegal trade in and the damaging of the species during the purchase of a baby monkey. According to Goodall (2009), the world's most famous expert on chimpanzees, monkey infants are irresistibly cute, and it might seem that raising one would be just like raising a human child, but, most importantly, they are meant to live in the wild, not in our homes.[41]

4. Methodology

This research focuses on the trade route, modus operandi, organization and enforcement of the illegal trade in Barbary macaques. Quantitative data were gathered from the United Nations Comtrade database[42], EU-TWIX database[43], CITES database[44]

---

[37] Endcap. (2012). *Wild Pets in the European Union.* An information document provided to the European Commission, the European Parliament, the European Council and the Council of Europe highlighting the impacts of the trade in and keeping of wild animals as pets on the environment, people and animals.
[38] Department for Environment, Food and Rural Affairs. (2009). *Code of Practice for the Welfare of Privately kept Non-Human Primates.* London, UK: DEFRA.
[39] Soulsbury C.D., Iossa G., Kennell S. & Harris S. (2009). The welfare and suitability of primates kept as pets. *Journal of Applied Animal Welfare Science*, 12 (1), 1-20.
[40] Bourke, A., & Rendall, J. (Producer). (2009). *A Lion Called Christian [youtube].* Retrieved from http://www.youtube.com/watch?v=4enNZqNrwYc
[41] Goodal, J. *Want to Raise a Chimp? Think Again*, retrieved from website.
[42] The United Nations Commodity Trade Statistics Database (UN Comtrade) contains detailed import and export statistics reported by statistical authorities from close to 200 countries or areas.
[43] EU-TWIX is a tool developed to facilitate information exchange and international co-operation between law enforcement officials across the European Union.
[44] The CITES Trade Database, managed by the UNEP World Conservation Monitoring Centre, contains all data on the trade in CITES-listed species submitted annually to the CITES Secretariat by Contracting Parties.

and a questionnaire that was sent to rescue centres for Barbary macaques in order to obtain an overall picture of the (illegal) trade.

The primary research carried out for this project was in the form of semi-structured interviews with 24 people in Morocco in relation to the illegal trade in Barbary macaques in order to strengthen the data with substantive information based on the current situation. Next to the value of additional and confirmatory information, this qualitative research method creates a link between theory and the actual situation and, moreover, increases the reliability and validity of the research.

The method of semi-structured interviews was chosen due to the fact that it accommodates flexibility, which allows specific issues to be addressed in more detail with a clear focus on the organization and modus operandi of the illegal trade in Barbary macaques.

Eventually, 2 hunters in Azrou, 9 traders in Marrakesh, Tanger, Oujda, Azrou and Nador, 2 ex-traders in Azrou, 2 ex-smugglers in Azrou and Nador and 1 intermediary in Fez, 2 guides in Cascades d'Ouzoud and Fez, 1 primate scientist in Tétouan and 5 animal traders were interviewed in different Moroccan cities. These respondents were collected by snowball sampling; the future participants were recruited from among their acquaintances and through the first point of access.[45] The interviews were conducted between March and April 2013 and provided key information about the trade.

5. Trade in macaques

5.1 Legal trade in macaques

In the 20th and 21st century macaques are the most traded protected mammals in the world; within the EU, more than 80% of the traded CITES mammals were macaques between 2001-2010. The legal trade in macaques is mainly related to the demand for laboratory animals, such as the crab-eating macaque *Macaca fascicularis* and the Rhesus macaque *Macaca mulatta.*[46] [47] For example, the trade in Rhesus macaques began about half a century ago with large imports into Europe for the production of polio vaccine.[48]

Although in the past Barbary macaques were taken from the wild for biomedical research as well, the certificates which hunters needed to capture Barbary macaques were misused to catch more macaques for the retail trade. According to a former hunter: "This was the beginning of the large-scale illegal trade in Barbary macaques. Sometimes ten monkeys were captured, while only one was needed for biomedical research and the remaining monkeys were sold for the pet industry".[49]

Nevertheless, there is still a demand for macaques as pets, especially the Barbary macaque. From the late 1990s onwards zoological parks and sanctuaries in Europe started to notice a significant increase in the number of Moroccan Barbary macaques

[45] Goodman, L.A. (1961). "Snowball sampling". *Annals of Mathematical Statistics*, 32 (1),148–170.
[46] UN Comtrade database and WCMC database, 2012.
[47] CITES (2011). *Selection of the long-tailed macaque (Macaca fasciculatis) for inclusion in the review of significant trade* (Resolution Conf. 12.8 [REV. COP13]).
[48] Nijman, V. (2009). *An assessment of trade in gibbons and orang-utans in Sumatra, Indonesia.* Petaling Jaya, Selangor, Malaysia: TRAFFIC Southeast Asia.
[49] Interview with a former hunter of Barbary macaques, Azrou, Morocco, March 15, 2013.

being offered for shelter, after being seized by law enforcement authorities, mainly in France, Belgium, Spain, Italy and the Netherlands.[50]

5.2 Illegal trade and confiscations

Morocco is well known as the main port between Africa and the EU for the illegal drugs trade (cocaine, heroin, cannabis and synthetic drug precursors) and migration,[51] [52] [53] as well as the illegal wildlife trade.[54] [55] Between 2001-2010, 22,205 illegal wildlife shipments were confiscated in the EU and registered within the EU-TWIX. Most of these illegal wildlife shipments came from Africa, with Morocco (612 illegal shipments) as the main port between Africa and the EU.[56] According to Interpol (1996) Morocco has always been an important transit country for wildlife and appears to be the main country of origin worldwide for illegal shipments of reptiles, especially spur-thighed tortoises.[57]

According to EU-TWIX (2013) the Moroccan border is one of the most used smuggling routes for wildlife to Europe and is still the main country of origin worldwide for illegal shipments of reptiles to the EU.[58] Algeria is an important export country as well for the illegal wildlife trade with 446 confiscated illegal shipments being registered.

The illegal shipments from Morocco and Algeria to the EU consisted (mainly) of:

- Reptiles (3.038); spur-thighed tortoises *Testudo graeca*, Hermann's tortoises *Testudo hermanni* and common chameleons *Chamaeleo chamaeleon*
- Birds (80); African grey parrots *Psittacus erithacus* and common kestrels *Falco tinnunculus*
- Mammals (55); Barbary macaques *Macaca Sylvanus*

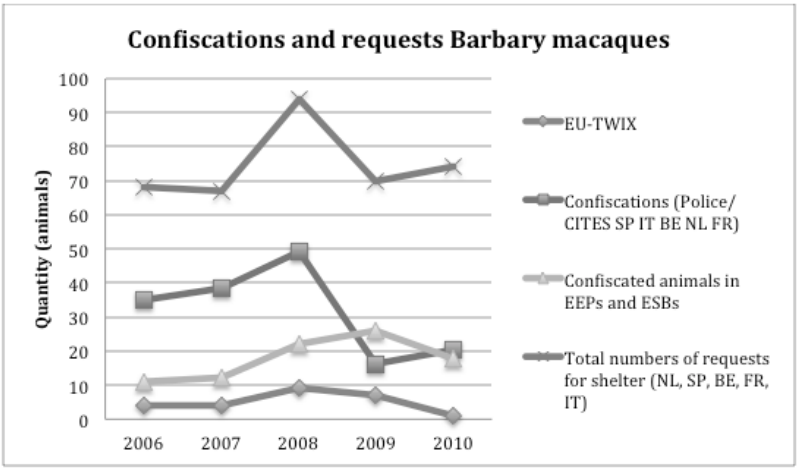
According to EU-TWIX (2013) the Barbary macaque is the most seized CITES mammal in the EU, accounting for almost 25% of live mammal-related seizures between 2001-2010. During this 10-year period 49 seizures of 55 Barbary macaques occurred in the EU with 90% originating from Morocco and 8% from Algeria. Most macaques are confiscated in Spain because of the lack of CITES documents.[59]

According to the data on confiscations from the CITES management authorities of Belgium, France, Italy and the Netherlands and the 'Seprona' Police (Guardia Civil) from Spain, the actual number of confiscations is substantially higher with 159 Barbary

[50] Lavieren, E. van. (2008). The illegal trade in Barbary macaques from Morocco and its impact on the wild population. *Traffic Bulletin*, 21, 123-130.
[51] UNODC. (2006). *Organized Crime and Irregular Migration from Africa to Europe.* This document was prepared by the Regional Office of West and Central Africa and the Research and Analysis Section of the United Nations Office on Drugs and Crime.
[52] Europol. (2011). *Organised Crime Threat Assessment (OCTA).* The Hague: Europol.
[53] Carpenter, A. (2012, March). *Security and Europe's Sea Ports: threats and issues facing maritime gateways to Europe.* Paper presented at the Policing and European Studies research conference, Dundee, Scotland.
[54] Cowdrey, D. (2002). *Switching Channels. Wildlife trade routes into Europe and the UK.* A (Report WWF/TRAFFIC) Wolverhampton, UK: University of Wolverhampton.
[55] Highfield, A.C., & Bayley, J. R. (1996). The trade in tortoise-derived souvenir products in Morocco. *Traffic Bulletin*, 16(1),33-35.
[56] EU-TWIX, 2013.
[57] Interpol. (1996). *Project NOAH (internal report).* Lyon, Fance: Interpol.
[58] EU-TWIX, 2013.
[59] EU-TWIX, 2013.

macaques being confiscated in the respective countries between 2006-2010 with a peak in 2008. The same trend is observed in the figures from the EU-TWIX database and the numbers of requests for shelter (figure 1).

Figure 1 Confiscations of and shelter requests for Barbary macaques



Source: EU-TWIX database, 2013; Seprona Guardia Civil, 2013; CITES Belgium, France, Italy and the Netherlands; Lavieren, 2011; European Association of Zoos and Aquaria, 2011

Furthermore, illegal (former) hunters of and traders in Barbary macaques confirmed this trend as well; the peak in this trade took place in late 2000 with annual numbers of 500 to 600 illegally traded Barbary macaques from the Azrou area.[60] Law enforcement experts estimate that no more than 10 per cent of all contraband is seized;[61] based on this information around 500 Barbary macaques (50 confiscated animals) were indeed illegally traded in 2008 and 200 Barbary macaques are traded nowadays. The decrease in trade (and confiscations) from 2008 onwards is possibly caused by the economic crisis in Europe.[62]

The figures on confiscations show that there is still an illegal market for Barbary macaques. According to the questionnaire that was sent to sanctuaries in Belgium, France, Italy, the Netherlands and Spain, 219 Barbary macaques were rescued between 2006-2010 (while rescued macaques are occasionally moved to another shelter in the EU, double counting may explain the higher number of rescued animals compared to seizures). A large proportion of rescued macaques have been privately owned (65%) or have been found wandering as stray animals (24%). Other purposes for this illegal trade include circuses, gifts and zoos.[63] While it is unknown how many Barbary macaques are left with their owners or are euthanized, there are strong indications that customs officials sometimes do not confiscate these animals due to a lack of rescue facilities.[64]

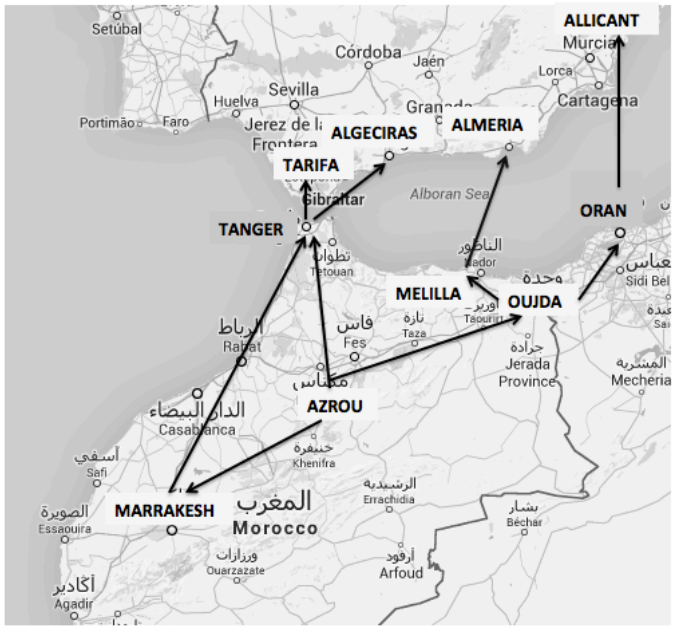
[60] Interviews with traders in Azrou and Oujda, Morocco, March 15 and April 27-29, 2013.
[61] United Nations Environment Programme, 2013.
[62] Interview with (ex-)traders in Azrou and Tanger, Morocco, April 25 and 29, 2013.
[63] Kranendonk, G., Veen, M. van der and Huiskes, R. (2013). *Knock knock who's there? Analysis of AAP rescue data 2001-2012.* AAP report, April 2013, Almere, the Netherlands.
[64] Interview with a primate scientist of Barbary Macaque Conservation in the Rif, Tetouan, Morocco, April 25, 2013.

5.3 Trade route: origin, transit and destination

The Strait of Gibraltar operates as a gateway for illegal wildlife from Africa to the EU, on the border of Morocco and Spain. [65] [66] This route is used for the illegal trade in Barbary macaques to Europe as well, which is indicative of the seizures of Barbary macaques between 2006-2010 mainly from ports in Spain (102).[67]

In addition, Morocco attracts a huge number of foreign visitors, 9.3 million in 2010, which was more than twice the amount of visitors in 2001, mostly originating from Western Europe. According to Esmond and Chryssee (2012) foreign tourists support an almost totally illegal retail wildlife trade in live species and their products.[68] The Strait of Gibraltar is the main port of entry being the route that millions of Europeans choose for their (annual) holiday in Morocco.[69]

Figure 2 Trade routes for Barbary macaques



Source: Interviews with (ex-) traders and (ex-) smugglers in Marrakesh, Tangier, Nador, Oujda and Azrou, Morocco, March and April, 2013

The illegal trade in macaques to Europe originates mainly from Morocco.[70] According to EU-TWIX (2013) 90% of confiscated illegal shipments of Barbary macaques were from Morocco and 8% from Algeria.[71] The majority of the confiscated macaques in Spain between 2006-2012 were captured in the ports of Algeciras (27), Cadiz (14), Alicante (13) and Melilla (10).[72]

Based on data from interviews with illegal (former) hunters of and traders in Barbary macaques, from Morocco the macaques are largely smuggled by coastal ferry to (mainly) Spain, France or Italy or incidentally by air to other (EU member) countries.[73]

According to multiple respondents, Azrou and its surroundings (Middle Atlas in Morocco) seems to be the main centre of the illegal trade in Barbary macaques, with structural orders (4-10 macaques every two months) from Tangier, Marrakesh, Oujda, Casablanca and Fez for the retail trade.[74] According to a (former) trader around 200

[65] Cowdrey, 2002.
[66] Highfield, 1996.
[67] CITES Belgium, France, Italy, the Netherlands and Seprona Guardia Civil, 2013.
[68] Esmond, M., & Chryssee, P.M. (2012). *Tourists underwrite Morocco's illegal trade in wildlife artefacts.* SWARA.
[69] Lavieren, 2008.
[70] Radhakrishna, 2012.
[71] EU-TWIX, 2013.
[72] Confiscations by the Seprona Guardia Civil, Spain between 2006-2012.
[73] Interviews with (illegal) traders in Marrakesh, Tangier, Oujda and Azrou, Morocco March and April 2013.
[74] Interviews with (animal) traders, hunters and experts in Marrakesh, Casablanca, Fez, Tangier, Nador, Oujda and Azrou, Morocco, March and April 2013.

macaques are currently captured in the Azrou area for trade, which confirms the estimation based on the statistics (figure 1).[75]

1. Tangier – most macaques are transported to Tangier where every 45 minutes a ferry departs to Tarifa and Algeciras in Spain. Several pet shops and animal traders arrange for macaques on demand, even more than 50 annually.[76]
2. Marrakesh - more than 10 Barbary macaques are present daily for entertainment and sale in Djeema El-fna square in the heart of Marrakesh. According to conversations with the sellers, more than 30 macaques are sold every year in the square.[77]
3. Oujda – there is a structural trade in Barbary macaques to Oujda near the Algerian border. From there the monkeys are smuggled via Melilla to Spain and via Oran (Algeria) to Spain, France and probably Italy. Between 50-80 macaques are sold every year in Oujda.[78]
4. Casablanca and Fez - while at the beginning of 2013 the open trade in Barbary macaques seemed to have disappeared in Casablanca and Fez, there are still possibilities to arrange this by making an inquiry with intermediaries.[79]

From these destinations European traders or tourists buy the macaques and smuggle them to Europe. The common smuggling route is by road and ferry through the ports of Tangier, Ceuta and Melilla to Tarifa, Cadiz, Algeciras, Almeria and Alicante in Spain.[80] [81] Another trade line is from Oujda to Oran in Algeria and then to Alicante and even Marseille in France (figure 2).[82]

The Schengen treaty provides trade lines to other EU countries with very limited border controls,[83] with equally limited seizures of Barbary macaques in Spain (102), France (28), Belgium (21), Italy (5) and the Netherlands (3) between 2006-2010.[84] According to the (former) traders the macaques are mainly transported within the EU to France, Italy and Spain.[85]

6. Modus operandi

6.1 Hunting

Illegal hunting or poaching refers to a variety of offences that criminalize the unlawful taking of wild animals. [86] As in the case of the Barbary macaque, poaching involves the illegal hunting of animals that belong to a protected species (CITES II).

Although hunting occurs all the year round, the big hunting season starts in April as there are many infant monkeys. According to a hunter in Azrou: "There is a demand for young monkeys for two reasons. First, young monkeys get used to people better than

[75] Interview with a former trader in Azrou, April 29, 2013.
[76] Interviews with (animal) traders in Tangier and Azrou, Morocco, March and April 2013.
[77] Interviews with traders in Djeema El-Fna Square, Marrakesh, Morocco, March 13 and 16-18, 2013.
[78] Interviews with a trader and convicted drug trader in Oujda, Morocco, April 27-28, 2013.
[79] Interviews with traders in Azrou and a guide in Fez, Morocco, March 14-15 and April 29, 2013.
[80] Confiscations by the Seprona Guardia Civil, Spain between 2006-2012.
[81] Interviews in Marrakesh, Casablanca, Fez, Tangier, Nador, Oujda and Azrou, Morocco, March and April 2013.
[82] Interview with a trader in Azrou and a convicted drug trader in Oujda, Morocco, April 27-28, 2013.
[83] Cowdrey, 2002.
[84] EU-TWIX database, 2013; Seprona Guardia Civil, 2013; CITES Belgium, France, Italy and the Netherlands; Lavieren, 2011; European Association of Zoos and Aquaria, 2011.
[85] Interviews in Marrakesh, Casablanca, Fez, Tangier, Nador, Oujda and Azrou, Morocco, March and April 2013.
[86] United Nations Office on Drugs and Crime. (2012). *Wildlife and Forest Crime Analytic Toolkit.* New York, NY: United Nations.

older ones and, secondly, they are easier to smuggle in suitcases or bags",[87] but the cuddly cuteness of and the personification of baby monkeys plays a role as well.[88] A study in the Middle Atlas between 2007 and 2009 shows an unusually significant drop in the number of juvenile macaques and females, most likely believed to be the result of poaching.[89]

In addition, hunters are quick to anticipate the demand and orders; they could even arrange for more than 10 monkeys within a week.

There are three common methods of capturing Barbary macaques:

1. Hunters (6-7 people) isolate female macaques with infants from the group by trained dogs. They goad them from the dense forest into a solitary tree, then saw the branches and harass the mother with sticks and stones, until the babies are dropped.
2. Hunters place grids on the ground and wait until macaques walk over them. They then pull on a rope that is connected to a net that hangs from trees and it falls to the ground so that the monkey is caught in the net.
3. Hunters entice Barbary macaques with fruit or coconuts until they are close enough to catch them.[90]

Nowadays, illegal hunters have made agreements with other local people to hunt outside the tourist spots in the Cedar Forest in Azrou, because of the financial benefits in relation to tourism. Although, according to several respondents, Azrou is still the centre of the illegal trade, there are indications that this illegal trade is moving to other areas in the Middle Atlas, such as Béni-Mellal.[91] Nevertheless, guides, lumberjacks and forest rangers are still involved in the illegal trade and obtain commission (100 Dirham) if they refer potential buyers of macaques.[92]

6.2 Smuggling

Smuggling live animals is very different from smuggling wildlife products such as ivory or rhino horn. To hide live monkeys and to keep them alive during the smuggling process requires systematic planning and logistics.[93]

While most cases (> 85% of confiscated illegal shipments) involve one Barbary macaque,[94] there are several cases of smuggling large quantities to the EU. For instance, on the 29th of October 2012, 6 Barbary macaques were confiscated at the border between Hungary and Serbia.[95]

---

[87] Interview with a hunter in Azrou, Morocco, April 29, 2013.
[88] Laufer, P. (2010). *Forbidden creatures. Inside the world of animals smuggling and exotic pets.* Guilford, CT: Lyons Press.
[89] Haut Commissariat aux Eaux et Forêts et à la Lutte Contre la Désertification. (2012). *Conservation Action Plan for the Barbary macaque (Macaca sylvanus) in Morocco*. Rabat, Morocco: Eaux et Forêts.
[90] Interviews with (former) hunters in Azrou, Morocco, March 15 and April 29, 2013.
[91] Interviews with (former) hunters and traders in Marrakesh and Azrou, Morocco, March and April 2013.
[92] Interviews with (former) hunters and traders in Azrou and a guide in Fez, Morocco, March and April 2013.
[93] United Nations Environment Programme, 2013.
[94] EU-TWIX, 2013.
[95] MPC Foundation (2012, November 1). Barbary macaques confiscated in Serbia. Retrieved from http://mpcfoundation.nl/6-barbary-macaques-confiscated-in-serbia/

Unfortunately, most of the Barbary macaques that are confiscated are infants hidden in suitcases, bags, on the body or under a car seat. To keep the macaque quiet and to decrease the macaque's stress levels, the monkeys are anesthetized with a sleep aid for children, which can be bought from a regular pharmacy. This syrup can anesthetize the monkey for up to 16 hours during the border crossing.[96]

Four transport methods

Transport	Modus operandi
Transport over land by car/van	Anesthetized monkeys hidden in suitcases, bags, on the body, under a car seat or in special compartments in vehicles
Transport over land by bus	Anesthetized monkeys hidden in suitcases or bags in the luggage department of buses
Transport by sea by ferry	The car/van in which the monkeys are hidden is transported by ferry to the EU
Transport by air	Anesthetized monkeys hidden in checked-in baggage

Sources: Interviews with (former) traders in Marrakesh, Tangier, Nador, Oujda and Azrou, Morocco, March and April, 2013

Generally, the macaques are transported over land by car/van or bus and by sea by ferry. Opportunistic tourists (and small-scale traffickers) smuggle one or two macaques hidden in suitcases or in bags under a car seat in their own car or van to one of the ports in northern Morocco (Tangier, Ceuta or Melilla) and then by ferry to the EU. However, in some cases tourists smuggle the monkeys by aircraft where they are hidden in checked-in baggage.[97]

More organized forms of the illegal trade demonstrate the involvement of additional actors, like bus drivers or customs officers, and the large-scale traffickers smuggle between four to ten monkeys at a time. For example, one modus operandi between Azrou and Oujda is as follows: one person gets on the bus in Azrou and registers suitcases or bags, with monkeys hidden inside, as checked-in baggage and then gets off the bus at the second or third stop, while leaving the luggage on the bus. If the bus is held for a police check and they find the macaques, the bus driver has an alibi, because he has a receipt for the suitcases or bags that have been 'forgotten' by the traveller in question. Without a police check the bus arrives in Oujda where someone else will pick up the suitcases or bags with the monkeys and the bus driver is then paid.[98]

Sometimes customs officers are involved in the trade as well or simply do not want to confiscate monkeys, because of a lack of priority or no shelter being available.[99] When encountering the monkeys, the customs officers could be bribed for around 200 to 500 Dirham (20 to 50 euros) and the smuggling process can continue.[100]

[96] Interviews with (former) traders in Marrakesh, Casablanca, Tangier, Nador, Oujda and Azrou, Morocco, March and April 2013.
[97] For example, the confiscation of a Barbary macaque from Morocco by a routine check on freight at Zaventum Airport, Belgium, 08-10-2010.
[98] Interview with a bus ticket seller in Oujda and a former trader in Azrou, Morocco, April 27-28, 2013.
[99] Interview with a primate scientist in Barbary Macaque Conservation in the Rif, Tetouan, Morocco, April 25, 2013.
[100] Interview with a former smuggler in Azrou, Morocco, March 15, 2013.

6.3 Communication

Although the use of the Internet is increasing in the illegal wildlife trade,[101] according to the interviewees communication between hunters, middlemen and traders generally proceeds by mobile phone. Furthermore, the use of mobile phones is relatively safe as prepaid cards can be easily bought and changed without registration.[102]

However, organized criminals have order lists from potential consumers in Europe. Presumably, consumers and illegal traders also get in touch through the Internet or secret networks via Freenet or TOR (The Onion Router) networks, since the Internet is used with increasing sophistication to facilitate the illegal trade in wildlife.[103] Nevertheless, in this study no indications to this effect were found during the interviews and, moreover, a search through Freenet and TOR did not produce any results.

Generally, the illegal trader contacts the middleman or hunter by mobile phone to pass on the order, before he travels to Morocco (or instructs a smuggler). When he returns to Europe, after the deal, he calls again to confirm that the mission has been accomplished.[104] There seems to be a clear communication network with appointments and tasks in the more organized form of the illegal trade in Barbary macaques.

7. Networks and organization

7.1 Perpetrators

The primary motivating factor for wildlife traders is economic, ranging from small-scale local income generation to major profit-oriented business.[105] The high prices paid for rare species, such as the Barbary macaque, will fuel the illegal market (as confirmed by the next section). The fact that law enforcement is generally lacking in both effort and efficiency plays an important role as well;[106] high profits (an attractive target) with low risks and sentences (low enforcement) result in an attractive illegal wildlife market with rational cost/benefit considerations by (motivated) perpetrators.

Besides that, the opportunity to remove Barbary macaques from the Azrou area is created by the fact that these monkeys are among the highest density of the population (available), are accustomed to people and are not afraid as opposed to macaques in the Rif and High Atlas (removable), are worth more than € 2000 in the EU (valuable), are attractive to people as endangered, eccentric species (enjoyable and disposable) and are quite easily anesthetized and smuggled in bags and suitcases (concealable).[107]

---

[101] Interpol. (2013). *Project Web. An investigation into the ivory trade over the Internet within the European Union.* Lyon, France: Interpol.
[102] Council of the European Union. (2008). *Council Conclusions on combating the criminal misuse and anonymous use of electronic communications*. Council of the European Union.
[103] Europol, 2011.
[104] Interview with (former) traders in Marrakesh and Azrou, Morocco, 2013.
[105] Nijman, V. (2010). An overview of international wildlife trade from Southeast Asia. *Biodiversity and Conservation,* 19, 1101–1114.
[106] Nijman, 2009.
[107] Clarke, Ronald V. (1999). *Hot Products: Understanding, Anticipating and Reducing Demand for Stolen Goods.* Police Research Series, Paper 112. Policing and Reducing Crime Unit, Research Development and Statistics Directorate. London: Home Office.

In the illegal trade in Barbary macaques two types of perpetrators are involved[108]:

- The first type is the opportunist, usually the (European) tourist, who buys a macaque and smuggles the monkey to keep it as a pet back home or to reduce the costs of the holiday by reselling it. The perpetrator is often a middle-aged man living in a EU country. While other studies refer to European Moroccans as consumers or perpetrators, this could not be confirmed by this study.
- The second type is the organised trader, who has a network with several contacts to smuggle the monkeys on a structural basis many times a year. Involved in this illegal trade are relatively young (between 20-30 years old) and middle-aged men from Europe and Morocco. The trader is able to speak, not incidentally, several languages, such as Spanish, English or French, and purchases the monkeys on a structural basis as a financial business.

Although opportunists generally smuggle macaques for themselves or for small-scale business purposes, it also occurs that systematic trade starts with an occasional purchase, which then develops into a structural trade line over many years.[109]

7.2 Network

Between collectors of wildlife and the ultimate users, middlemen may be involved in the wildlife trade.[110] [111] The network of the more organized form of the illegal trade in Barbary macaques seems to be similar to the market network; market networks are likely to function as a combination of chain and hub networks where illegal trade persists and flourishes.[112] The animals are moved along a line of contacts (a chain) but where key aspects of the movement may be overseen by one or two central players.[113]

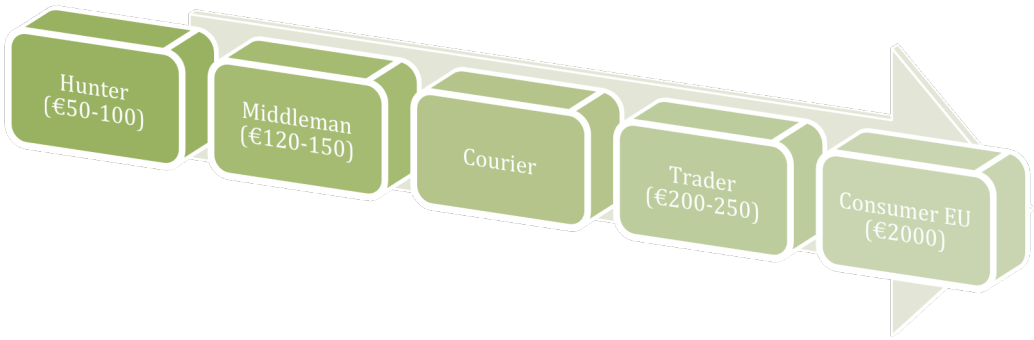
In the illegal trade in Barbary macaques different groups operate independently and communicate by phone through intermediaries. The illegal trade in Barbary macaques is carried out by a chain of actors who collect, buy, transport, and sell animals. The first step is to order the macaques and to deposit around € 75[114] with the intermediary or middleman (1). In the second step the middleman arranges for these monkeys to be caught by a harvest group (2). Next, the macaques must be smuggled out of the region to the illicit trader (3). The trader buys the macaques and then sells them or retransfers them to the destination country, often crossing multiple borders (4). In the last step (the end of the chain) the consumer buys the monkey (5).

The illegal wildlife trade is driven by high profit margins and the high prices paid for rare species, such as the Barbary macaque. While the hunters are paid about € 50-100 for a Barbary macaque, at the end of the chain, the consumer in Europe will pay € 2000 for the same Barbary macaque.[115]

---

[108] Based on different interviews with (former) traders, smugglers and experts, Morocco, 2013.
[109] Interviews with a trader in Tangier and a former trader in Azrou, Morocco, April, 2013.
[110] Uhm, D.P. van. (2012a). De illegale handel in beschermde diersoorten In: Groene Criminologie. *Justitiële verkenningen*, 28 (2), 91-100.
[111] Nijman, 2010.
[112] Arquilla, J., & Ronfeldt, D. (2001). The Advent of Netwar. In Arquilla, J., & Ronfeldt, D. (Eds.), *Networks and Netwars: the Future of Terror, Crime and Militancy*. Santa Monica, CA: RAND.
[113] United Nations Interregional Crime and Justice Research Institute. (2009). *Eco-crime and justice: essays on environmental crime.* Turin, IT: UNICRI.
[114] Interview with a former smuggler in Nador, Morocco, April 26, 2013.
[115] The amounts are based on interviews with traders and former traders in Morocco, 2013.

There is obviously a significant difference between the source and the destination and each link in the chain increases the price. Although intermediaries who mediate between hunters and traders ask for € 120-150 and the traders sell the monkeys for € 200-250, the discrepancy between prices in Morocco and the EU for a Barbary macaque is significant with a tenfold increase from € 200-250 to € 2000.



In this way, each actor has his own task and profit within the network. Sometimes there are additional intermediaries or smugglers in the chain. For example, a former smuggler of Barbary macaques, who bought a house in Spain with the profits (€ 1000 per monkey), purchased the monkeys from a seller in Tangier and sold them to a dealer in Algeciras who then traded the monkeys to Northern Spain. His task was to smuggle monkeys across the border for a period of eight years.[116]

Another example is a seller near Barcelona who bought monkeys and sold them to customers. In this case, a consumer could choose in 2008 between six young macaques, his task was to sell the monkeys.[117]

The traders, collectors and dealers are from this point of view intentional exploiters; they are aware of the illegal hunting, trading and selling.[118]

Three examples of different chains in the trade

Opportunistic trade	European tourist buys the macaque in a square (in Marrakech) or along the road (Azrou or Oudja) directly from a dealer or orders a macaque from an animal broker (Casablanca and Fez). In the latter case the trader orders one or two macaques from the intermediary, who then arranges for these monkeys to be caught by a harvest group within a couple of days. The tourist smuggles the macaque with a van through the Strait of Gibraltar or incidentally by plane to Europe.
National organised trade	Moroccan traders ordering 4-10 macaques every two/three months from the intermediary, who then arranges for these monkeys to be caught by a harvest group. (Azrou to Oujda, Tangier and Marrakesh) The traders sell the macaques to customers.
Transnational organised trade	European traders driving on a structural basis every two/three months to Morocco (Marrakesh, Oujda and Tangier) to buy one to six macaques. They smuggle the macaques with a (company) van through the Strait of Gibraltar to Europe. Sometimes they have orders from consumers and sometimes the monkeys are sold to other traders in Europe.

Source: Interviews with (former) traders in Marrakesh, Tangier, Oujda and Azrou, Morocco, 2013

[116] Interview with a friend of a former smuggler, Tétouan, Morocco, April 25, 2013.
[117] Interview with a primate scientist, Tétouan, Morocco, April 25, 2013.
[118] Herbig, J. (2010). The illegal trade as a form of conservation crime: a South Africa criminological investigation. In White, R. (Ed.), *Global Environmental Harm. Criminological perspectives* (pp. 115-118). Cullompton, England: Willan Publishing.

7.3 Crime groups

Organized crime is defined by the United Nations Convention against Transnational Organized Crime in Article 2(a) as a group of three or more persons, existing for a period of time and acting in concert with the aim of committing one or more serious crimes or offences, in order to obtain, directly or indirectly, a financial or other material benefit.[119]

Although the penalties vary between European countries, recently the United Nations has recognised wildlife trafficking as a "serious crime" (Article 2b); an offence punishable by a maximum custodial sentence of at least four years or a more serious penalty.[120]

Moreover, crime syndicates in the wildlife trade have become more sophisticated and organized in recent years,[121] [122] with the EU being the foremost destination market in the world.[123] Besides that, the illegal wildlife trade is said to be in the financial top three illegal enterprises worldwide, along with the global drugs trade and the trade in illegal arms.[124] [125]

While organised crime is involved in the trade in great apes,[126] a high degree of organization has been found in the illegal trade in Barbary macaques as well. Sophisticated methods in combination with high profits and large orders of Barbary macaques, coordinated by well-organised, semi-loose networks characterize this type of crime. Their operations are based on a structural basis with the involvement of three or more people in the chain.

There is a regular movement of captured macaques smuggled by road from the rural area of Azrou to urban areas, such as Tangier, Oujda and Marrakesh. From there direct lines to Europe are organised by different groups of criminals. Moreover, the degree of organization is visible by the fact that it is even possible for the organizations to enter into a trade agreement to deliver more than 50 monkeys per year to Europe.[127]

Example of a crime group involved in the illegal trade in Barbary macaques

There is one direct line between Marrakesh and Europe. Once every two months a European criminal group orders monkeys from traders in Marrakesh, then the macaques are caught in Azrou and transported to Marrakesh, where couriers are waiting with a van to smuggle the anesthetized macaques in suitcases across the border of the Strait of Gibraltar to Europe. When they arrive in Europe they call to indicate that the mission has been accomplished.[128]

---

[119] United Nations. (2004). *United Nations Convention against Transnational Organized Crime.* New York, NY: UNODC.
[120] The International Consortium on Combating Wildlife Crime (ICCWC) Sixteenth meeting of the Conference of the Parties to CITES. Roundtable on combating transnational organized wildlife and forest crime for Ministers and high-level representatives. Queen Sirikit National Convention Center (QSNCC), Bangkok, Thailand 4 March 2013.
[121] Bennett, E.L. (2005). Another inconvenient truth: the failure of enforcement systems to save charismatic species. *Oryx*, 45(4), 476-479.
[122] Uhm, D.P. van. (2012b). Organised Crime in the Wildlife Trade. *Centre for Information and Research on Organised Crime Newsletter,* 10 (2), 2-4.
[123] Europol. (2013). *EU Serious and Organised Crime Threat Assessment (SOCTA).* The Hague: Europol.
[124] Economic and Social Council United Nations. (2003). Illicit trafficking in protected species of wild flora and fauna and illicit access to genetic resources (E/CN.15/2003/8).
[125] International Consortium on Combating Wildlife Crime, 2012.
[126] United Nations Environment Programme, 2013.
[127] Interviews with traders in Tangier and Azrou, Morocco, April 25 and 29, 2013.
[128] Interview with a trader, Marrakesh, Morocco, March 16, 2013.

Furthermore, the high profits are very attractive to criminal organizations,[129] while the benefits are significant, as macaques are purchased in Morocco for around 2000 Dirham (€ 200) and sold in Europe for € 2000 (10 times more). Assuming that the profit for the illegal trade in 50 monkeys per year would amount to around € 100,000, the potential profit to be made would be around 42 times the minimum yearly wage by Moroccan standards.[130] The incentives for smuggling wildlife are thus obvious.

7.4 Links with other forms of crime

The Strait of Gibraltar is well known, next to the illegal trade in wildlife, for both the illegal drugs trade and migration from Morocco to the EU. This kind of parallel trafficking of illegal wildlife, drugs and immigrants involves moving environmental contraband along the same smuggling routes used for other illegal commodities.[131] [132] This is confirmed by Europol (2011): Trade routes for other forms of crime, such as drugs trafficking and illegal immigration, are nowadays more often used for the illegal trade in wildlife.[133]

According to a trader in Oujda, the illegal trade in Barbary macaques is associated with the illicit trade in counterfeit products. "Counterfeit clothes and shoes are smuggled hidden in the car along with the monkeys."[134]

Besides that, the trade could probably be linked to the illegal trade in drugs (hashish) as well. Barbary macaques are incidentally used to smuggle drugs (hashish) across the border to Europe and it can be expected that the monkeys are sold in Europe as a by-product.[135]

Although the interviews revealed no substantiated interdependence between the illegal trade in Barbary macaques and other forms of crime, there are, as mentioned above, several examples that highlight the interconnectedness.

8. Enforcement and prevention

The main portion of the trade in Barbary macaques has been driven by demand from Western European countries. Although it was already clear from the 1990s onwards that significant quantities of wildlife were being smuggled from Morocco to the EU, according to various illegal traders the border is still quite poorly controlled. Besides anesthetized Barbary macaques, illegal wildlife traders smuggle huge amounts of spur-thighed tortoises (*Testudo graeca*) from the Middle Atlas and dozens of leopard skins

[129] Zimmerman, M.E. (2003). The Black Market for Wildlife: Combating Transnational Organized Crime in the Illegal Wildlife Trade. *Vanderbilt Journal of Transnational Law* 36, (5), 1657-1690.
[130] United States Department of State. (2012). Country Reports on Human Rights Practices. United States Department of State.
[131] United Nations Interregional Crime and Justice Research Institute, 2009.
[132] United Nations Office on Drugs and Crime. (2010). *The Globalization of Crime: A Transnational Organized Crime Threat Assessment.* Vienna, AT: United Nations Office on Drugs and Crime.
[133] Europol, 2011.
[134] Interview with a trader in Oujda, Morocco, April 27, 2013.
[135] Lavieren, E. van. (2004). *The illegal trade in the Moroccan Barbary macaque (Macaca sylvanus) and the impact on the wild population* (Master's thesis). Oxford Brookes University.

(*Panthera pardus*) from wildlife markets in Mali across the border without being stopped.[136]

In addition, corruption is a major problem in Morocco; according to Transparency International (2009) 58% of households who had contact with the police in 2008 reported paying bribes.[137] According to the interviewees corrupt police officers, customs officials and forest rangers are sometimes involved in the illegal trade in Barbary macaques.[138] As mentioned before, the illegal trade probably started with misused certificates by officials and presently forest rangers and official guides obtain commission if they refer potential buyers and customs officers can be bribed for 200-500 Dirham (€ 20-50). There are even customs officials who confiscate monkeys and keep them for themselves.[139] This culture of corruption results in a complex array of concerns and powers, which makes it more difficult to tackle this illegal trade.

While, occasionally, captured Barbary macaques are placed in zoos, it does occur that customs officials do not confiscate wildlife due to a lack of shelters or because of low priority.[140] As with many forms of trafficking in wildlife, enforcers underestimate the degree of organization. Next to opportunistic tourists, there are sophisticated criminal networks which are active in the illegal trade in Barbary macaques. However, as long as enforcers insist that only tourists bring macaques to Europe, the structural lines will remain.

Especially the free trade agreement between EU states seems to provide opportunities for the illegal wildlife trade. Once they have arrived in the EU, the Barbary macaques can be smuggled quite easily to the destination countries, such as France and Italy.

For many years the sale of monkeys in public was allowed in Morocco, but nowadays open sales are no longer tolerated; there are examples of traffickers being arrested and imprisoned for months. According to the traders the deterrence of imprisonment shifts the business to the dark circuit; nowadays the big deals in Azrou are made in the late evening to avoid the attention of the police.[141]

Finally, according to the interviewees there seems to be a lack of awareness concerning the threat to the survival of the Barbary macaque; trading in monkeys appears to smugglers to be no different from trading in cats and dogs. Endangered species such as tortoises, parrots and monkeys are believed to be an item of trade, regardless of the fact that these species may be close to extinction. This awareness is lacking among consumers in the EU as well. Subsequently, the consequences of extinction are unclear, while the value of the Barbary macaque to an ecosystem (species are irreplaceable once they become extinct) is incalculable.[142]

---

[136] Interviews with animal traders in Marrakesh, Casablanca, Fez, Tangier and Oujda, Morocco, March and April, 2013.
[137] Transparency International. (2009). *National Integrity System* – Morocco.
[138] Interviews with (former) traders in Azrou, Morocco, March 15 and April 29, 2013.
[139] Interview with a primate scientist in Barbary Macaque Conservation in the Rif, Tétouan, Morocco, April 25, 2013.
[140] Interview with a primate scientist in Barbary Macaque Conservation in the Rif, Tétouan, Morocco, April 25, 2013.
[141] Interviews with traders in Tangier, Oujda and Azrou, Morocco, April, 2013.
[142] Griffin, A.M. (1999). Beyond "harm": Abandoning the actual injury standard for certain prohibited takings under the endangered species act by giving independent meaning to "harassment". *Vanderbilt Law Review*, 52(6), 1831-1868.

Conclusion

While Morocco is well known as the main port between Africa and the EU for the illegal drugs trade and immigration, the illegal trade in wildlife is flourishing as well. Besides the illegal large-scale trafficking of tortoises and birds, it is estimated that only 5,000 Barbary macaques remain in Morocco, partly as a result of the illegal trade as pets.

In addition, the Barbary macaque is the most seized CITES mammal in the EU, accounting for almost 25% of live mammal-related seizures and it is estimated that nowadays the illegal trade to the EU consists of around 200 Barbary macaques every year.

Based on data from interviews with illegal (former) hunters of and traders in Barbary macaques, from Morocco the macaques are largely smuggled by coastal ferry to (mainly) Spain, France or Italy or incidentally by air to other (EU member) countries.

Next to opportunistic traders, organised traders are involved in the trade as well, smuggling on a structural basis several times a year. This regular movement of captured macaques is going by road from the rural area of Azrou to urban areas, such as Tangier, Oujda and Marrakesh. From there direct lines to Europe are organized by different groups of criminals. These organizations can even deliver up to 50 monkeys per year.

Although it was thought that the trade was based on the tourist industry, a high degree of organization has been found in this study of the illegal trade in Barbary macaques. Sophisticated methods have been found in combination with high profits and large orders for Barbary macaques, coordinated by well-organised, loose networks.

While demand from consumers (with a lack of awareness) ensures a structural trade in Barbary macaques to the EU, a combination of high profits and low priority in enforcement results in a lucrative business for criminal organisations.

Recommendations

- **EU regulation** - While discrepancy in legislation regarding the keeping of monkeys in the EU results in unclear standards, unambiguous EU guidelines should be developed so as ensure clarity for consumers and enforcement.
- **CITES** - With a very small wild population, the Barbary macaque should be included in CITES I to save the species from extinction.
- **Enforcement** - It is clear that the Strait of Gibraltar is one of the main gates of the illegal wildlife trade to the EU, while efficient control at the borders is lacking. Sharing information between EU enforcers and the use of wildlife detection dogs could interrupt illegal trade routes and improve detection and enforcement.
- **Confiscations** - Although figures confirm the significant role of Morocco in the illegal wildlife trade, such as in Barbary macaques, there is a discrepancy between seizures recorded in the EU-TWIX database and registered through CITES authorities and the police. While data may indicate the scale and nature of this illegal trade, Member States should adequately record seizures.
- **Education** - Despite the fact that the vulnerability of the Barbary macaque is becoming more transparent, there is still a significant demand. Educating local people and, perhaps more importantly, consumers in the EU, is more than necessary.

Literature

- Arquilla, J., & Ronfeldt, D. (2001). The Advent of Netwar. In Arquilla, J., & Ronfeldt, D. (Eds.), *Networks and Netwars: the Future of Terror, Crime and Militancy*. Santa Monica, CA: RAND.
- Bennett, E.L. (2005). Another inconvenient truth: the failure of enforcement systems to save charismatic species. *Oryx*, *45(4)*, 476-479.
- Burger, J., & Hemmer, H. (2006). Urgent call for further breeding of the relic zoo population of the critically endangered Barbary lion (Panthera leo leo Linnaeus 1758). *European Journal of Wildlife Research*, *52*, 54–58.
- Butynski, T.M., Cortes, J., Waters, S., Fa, J., Hobbelink, M.E., van Lavieren, E., Belbachir, F., Cuzin, F., de Smet, K., Mouna, M., de Iongh, H., Menard, N. & Camperio-Ciani, A.(2008) Macaca sylvanus. In: IUCN 2012. IUCN Red List of Threatened Species.
- Camperio Ciani, A. (1986). La Macaca sylvanus in Marocco: soprav- vivenza o estinzione. Osservazioni personali e dati storico-demog- rafici. *Antropologia contemporanea*, *9 (2)*, 117–132.
- Camperio Ciani, A. (2003). Antropol. *Mediterran*, *1* , 57-68.
- Camperio Ciani, A., Palentini, L., Arahou, M., Martinoli, L., Capiluppi, C. & Mouna, M. (2005).Population decline of Macaca sylvanus in the middle atlas of Morocco. *Biological Conservation*, *121*, 635-641.
- Carpenter, A. (2012, March). *Security and Europe's Sea Ports: threats and issues facing maritime gateways to Europe.* Paper presented at the Policing and European Studies research conference, Dundee, Scotland.
- CITES (2011). *Selection of the long-tailed macaque (Macaca fasciculatis) for inclusion in the review of significant trade* (Resolution Conf. 12.8 [REV. COP13]).
- Clarke, Ronald V. (1999). *Hot Products: Understanding, Anticipating and Reducing Demand for Stolen Goods*. Police Research Series, Paper 112. Policing and Reducing Crime Unit, Research Development and Statistics Directorate. London: Home Office.
- Council of the European Union. (2008). *Council Conclusions on combating the criminal misuse and anonymous use of electronic communications*. Council of the European Union.
- Cowdrey, D. (2002). *Switching Channels. Wildlife trade routes into Europe and the UK*. A (Report WWF/TRAFFIC) Wolverhampton, UK: University of Wolverhampton.
- Lindburg, D.G. (1980). *The Macaques: Studies in Ecology, Behavior, and Evolution.* New York, NY: Van NostrandReinhold.
- Department for Environment, Food and Rural Affairs. (2009). *Code of Practice for the Welfare of Privately kept Non-Human Primates*. London, UK: DEFRA.
- Economic and Social Council United Nations. (2003). *Illicit trafficking in protected species of wild flora and fauna and illicit access to genetic resources* (E/CN.15/2003/8).
- Endcap. (2012). *Wild Pets in the European Union.* An information document provided to the European Commission, the European Parliament, the European Council and the Council of Europe highlighting the impacts of the trade in and keeping of wild animals as pets on the environment, people and animals.

- Esmond, M., & Chryssee, P.M. (2012). *Tourists underwrite Morocco's illegal trade in wildlife artefacts.* SWARA.
- European Commission. (2010). *Wildlife Trade Regulations in the European Union: An Introduction to CITES and its Implementation in the European Union*. Luxembourg: Publications Office of the European Union.
- Europol. (2011). *Organised Crime Threat Assessment (OCTA)*. The Hague: Europol.
- Europol. (2013). *EU Serious and Organised Crime Threat Assessment (SOCTA*). The Hague: Europol.
- Fa, J.E. (1981). The apes on the Rock. *Oryx*, *16(1),*73–76.
- Fa, J.E. (1984). Habitat distribution and habitat preference in Barbary Macaques (Macaca sylvanus). *International Journal of Primatology*,*5*,273-286.
- Fa, J.E., Menard, N., Steward, P.J. (1984). The distribution and current status of the Barbary Macaque in North Africa. In Fa, J.E. (Ed.), *The Barbary Macaque. A Case Study in Conservation* (pp. 79–101)*.* New York, NY: Plenum Press.
- Goodall, J. *Want to Raise a Chimp? Think Again,* retrieved from website.
- Goodman, L.A. (1961). "Snowball sampling". *Annals of Mathematical Statistics, 32 (1),*148–170.
- Griffin, A.M. (1999). Beyond "harm": Abandoning the actual injury standard for certain prohibited takings under the endangered species act by giving independent meaning to "harassment". *Vanderbilt Law Review*,*52(6)*, 1831-1868.
- Haut Commissariat aux Eaux et Forêts et à la Lutte Contre la Désertification. (2012). *Conservation Action Plan for the Barbary macaque (Macaca sylvanus) in Morocco*. Rabat, Morocco: Eaux et Forêts.
- Herbig, J. (2010). The illegal trade as a form of conservation crime: a South Africa criminological investigation. In White, R. (Ed.), *Global Environmental Harm. Criminological perspectives* (pp. 115-118). Cullompton, England: Willan Publishing.
- Highfield, A.C., & Bayley, J. R. (1996). The trade in tortoise-derived souvenir products in Morocco. *Traffic Bulletin*, *16(1)*,33-35.
- International Consortium on Combating Wildlife Crime. (2012). *Wildlife and Forest Crime: Analytic Toolkit.* Vienna, AT: United Nations Office on Drugs and Crime.
- Interpol. (1996). *Project NOAH* (internal report). Lyon, Fance: Interpol.
- Interpol. (2013). *Project Web. An investigation into the ivory trade over the Internet within the European Union*. Lyon, France: Interpol.
- IUCN. (2013). Red List of Threatened Species. Retrieved from http://www.iucnredlist.org/
- Kranendonk, G., Veen, M. van der and Huiskes, R. (2013). *Knock knock who's there? Analysis of AAP rescue data 2001-2012.* AAP report, April 2013, Almere, the Netherlands.
- Laufer, P. (2010). *Forbidden creatures. Inside the world of animals smuggling and exotic pets.*Guilford, CT: Lyons Press.
- Lavieren, E. van. (2004). *The illegal trade in the Moroccan Barbary macaque (Macaca sylvanus) and the impact on the wild population* (Master's thesis). Oxford Brookes University.
- Lavieren, E. van. (2008). The illegal trade in Barbary macaques from Morocco and its impact on the wild population. *TRAFFIC Bulletin, 21*, 123-130.
- Lavieren, E. van. (2009). Titel. Unpublished manuscript.

- Menard, N., Vallet, D. (1993). Population dynamics of Macaca sylvanus in Algeria: an 8-year study. *American Journal of Primatology, 30,* 101–118.
- Modolo L., Salzburger W., & Martin R.D.(2005). Phylogeography of Barbary macaques (Macaca syl- vanus) and the origin of the Gibraltar colony. *Proceedings of the National Academy of Sciences, 102,* 7392–7397.
- MPC Foundation (2012, November 1). Barbary macaques confiscated in Serbia. Retrieved from http://mpcfoundation.nl/6-barbary-macaques-confiscated-in-serbia/
- Nijman, V. (2009). *An assessment of trade in gibbons and orang-utans in Sumatra, Indonesia*. Petaling Jaya, Selangor, Malaysia: TRAFFIC Southeast Asia.
- Nijman, V. (2010). An overview of international wildlife trade from Southeast Asia. *Biodiversity and Conservation, 19*, 1101–1114.
- Oates, J.F., Tutin, C.E.G., Humle, T., Wilson, M.L., Baillie, J.E.M., Balmforth, Z., Blom, A., Boesch., . . .Walsh, P.D. (2008). *Pan troglodytes: IUCN Red List of Threatened Species* (Version 2012.2.).
- Radhakrishna, S., Huffman, M. A., & Sinha, A.(2012). *The Macaque Connection: Cooperation and Conflict between Humans and Macaque.* New York, NY: Springer.
- Royaume du Maroc. (2012). *Conservation Action Plan for the Barbary macaque (Macaca sylvanus) in Morocco.* MPC.
- RSPCA. (2012). *Primates as pets: Is there a case for regulation?* RSPCA.
- Scheffrahn, W., Menard, N., Vallet, D., & Gaci, B. (1993). Ecology, demography, and population genetics of Barbary Macaques in Algeria. *Primates, 34(3),* 381–394.
- Soulsbury C.D., Iossa G., Kennell S. & Harris S. (2009). The welfare and suitability of primates kept as pets. *Journal of Applied Animal Welfare Science, 12 (1),* 1-20.
- Taub, D.M. (1977a). Geographic distribution and habitat diversity of the Barbary Macaque (Macaca sylvanus L.). *Folia Primatologica, 27,* 108-133.
- Taub, D.M. (1977b) The Barbary macaque in North Africa. *Oryx, 14(3)*, 245-253.
- The International Consortium on Combating Wildlife Crime (ICCWC) Sixteenth meeting of the Conference of the Parties to CITES. Roundtable on combating transnational organized wildlife and forest crime for Ministers and high-level representatives. Queen Sirikit National Convention Center (QSNCC), Bangkok, Thailand 4 March 2013.
- Transparency International. (2009). National Integrity System. Morocco.
- Bourke, A., & Rendall, J. (Producer). (2009). *A Lion Called Christian* [youtube]. Retrieved from http://www.youtube.com/watch?v=4enNZqNrwYc
- Uhm, D.P. van. (2012a). De illegale handel in beschermde diersoorten In: Groene Criminologie. *Justitiële verkenningen, 28 (2),* 91-100.
- Uhm, D.P. van. (2012b). Organised Crime in the Wildlife Trade. *Centre for Information and Research on Organised Crime Newsletter, 10 (2)*, 2-4.
- United Nations. (2004). *United Nations Convention against Transnational Organized Crime*. New York, NY: UNODC.
- United Nations Environment Programme. (2013). *Stolen apes. The illicit trade in chimpanzees, gorillas, bonobos and orang-utans. A rapid response assessment*. UNEP.
- United Nations Interregional Crime and Justice Research Institute. (2009). *Eco-crime and justice: essays on environmental crime*. Turin, IT: UNICRI.

- United Nations Office on Drugs and Crime. (2010). *The Globalization of Crime: A Transnational Organized Crime Threat Assessment.* Vienna, AT: United Nations Office on Drugs and Crime.
- United Nations Office on Drugs and Crime. (2012). *Wildlife and Forest Crime Analytic Toolkit*. New York, NY: United Nations.
- United States Department of State. (2012). *Country Reports on Human Rights Practices*. United States Department of State.
- UNODC. (2006). *Organized Crime and Irregular Migration from Africa to Europe*. UNODC.
- Von Segresser. F., Menard, N., Gaci, B. & Martin, R.D. (1999). Genetic differentiation within and between isolated Algerian subpopualtions of Barbary macaques (Macaca sylvanus): evidence from microsatellites. *Molecular ecology, 8,* 433-442.
- Waters, S.S. (2011). *Europe's other primate. Barbary macaques are still being taken from the wild and sold as pets; Zoos can help to put a stop to it.* EAZA.
- www.iucn.org, 2013
- Zimmerman, M.E. (2003). The Black Market for Wildlife: Combating Transnational Organized Crime in the Illegal Wildlife Trade. *Vanderbilt Journal of Transnational Law 36, (5)*, 1657-1690.