

## In defence of the ivory trade ban

In the run-up to the 1992 CITES conference the African elephant ivory trade has once again become a major issue, with six Southern African states intending to resume ivory trading. The fate of the elephant will hang in the balance at Kyoto, Japan. At stake is whether the ban should proceed unaltered, or whether some Southern African states should be allowed to resume ivory trading.

The ban was put into place at the 1989 CITES conference in Lausanne, because the Parties believed that, overall, the elephant had become an endangered species. There were three lines of evidence that convincingly demonstrated a continental elephant population crash: population trend data from all over the African continent showed widespread falls in elephant numbers, accompanied by high carcass ratios (ratio of dead to dead plus live animals); ivory export curves increased until the mid-1980s and then rapidly collapsed in what could be most plausibly explained as a classic case of 'overfishing'; data from samples of ivory seized from poachers in Africa, and from ivory imports abroad, indicated a major drop in mean tusk weight. This reflected destruction of the males and older females. In East Africa this was backed up by age structure records for key populations, which, with the exception of the well-protected Amboseli population, showed a distortion in the sex ratio and a lack of older age classes.

Africa probably lost at least half its elephants, mainly to the ivory trade, in the decade 1979–1989. Elephant specialists of the African Elephant and Rhino Specialist Group agreed in 1987 that the ivory trade was the major cause of the decline and that if the trends continued the elephant would become an endangered species in many parts of its range. By 1989 the continental estimate had fallen to a maximum of 609,000 and even this figure was thought to be high by some authorities. Detailed data for each region were summarized by Douglas-Hamilton (1987) and by the Ivory Trade Review Group (1989).

The only exceptions to general decline were to be found in parts of Southern Africa, but it

was feared that if the ivory offtake continued, poaching would inevitably spread to these remaining untouched elephant populations. By then the elephant populations in the rest of Africa would have been largely eradicated.

All the data were considered by the Parties who took the decision to ban the trade in 1989. Increases in Southern Africa, in particular in Botswana and Zimbabwe, of the order of 50,000 animals, were weighed against decreases for the whole continent of the order of 700,000. Population models of the ITRG concluded that current hunting rates would lead to the near extinction of the elephants. An independent analysis of trade export data by CITES consultant, Graeme Caughley, came to essentially the same conclusion. Both these models predicted that negative trends would accelerate the then current demand for ivory, which was confirmed by long-term East African elephant census data.

Unfortunately, the differences between the regions have perpetuated a see-saw in perception about the status of the African elephant. In 1989 the pendulum swung decisively, and with good reason, in the direction of those worried by the overall decline in elephants. Although the elephant populations have had no time to make significant changes, the pendulum is now swinging again to suggest that they are well on the road to recovery.

### *Trends since 1989*

Since 1989 a new questionnaire survey has elicited new data from across the continent. In July 1991 the African Elephant Specialist Group met in Botswana and experts from each region individually reviewed elephant population estimates.

The ban has been of the greatest benefit to those elephant populations that were most heavily poached. Not only is the ban policeable but, contrary to the opinions of some economists, instead of rising sharply as ivory became illegal, the price of ivory in East and Central Africa collapsed, along with Western and Far Eastern markets. The ban has led to an effective cease-fire for the elephants.

In East Africa a typical post-1989 Lausanne

scenario is found in the Tsavo National Park, where formidable and highly armed poachers have been confronted and defeated. In September 1991 6800 elephants were counted, an apparent increase of 9.6 per cent from 1989. The number of recently dead elephants had declined to only four, compared with 160 in 1988. Poaching has also greatly diminished in Uganda and Tanzania, where no recent carcasses were seen in 1990 and 1991 surveys of the parks and reserves, including those formerly most heavily poached.

In Zimbabwe, however, it is reported that the ivory price has increased and elephant poaching in Zimbabwe is at an all time high, having increased by 300 per cent since the ban came into force (*New African*, June 1991). The Zimbabwe authorities blame the ban, but it was predicted that poaching would spread (ITRG, 1989) unless the ivory trade was closed, and in Zimbabwe the ivory trade is still open and seen as a profitable enterprise. Despite the reported increase in poaching, the Zimbabweans still assume that their elephant population is increasing overall at a rate of 5 per cent, suggesting that the poaching is having a negligible effect.

Elsewhere the picture is mixed, but with the exception of Cameroon, poaching seems to have diminished since the height of the ivory rush immediately prior to the ban. A current WWF study will reveal further information on this in the near future.

#### Discussion

Despite the initial successes of the ivory ban, a counter-reaction has now set in. In the course of what looks like a determined press campaign by pro-traders, a number of misleading articles have been published. We learn that 200,000 elephants in Southern Africa are 'as safe as babies in their beds' (*Time* magazine). In more than half the elephant's range they are shown to be either stable or flourishing (*Newsweek* magazine). We are asked the question, 'Are we being too sentimental about elephants?' (*The Independent* newspaper). Finally, any pro-banner is dismissed as a 'sentimental bunny-hugger' or an 'out-of-touch non-African do-gooder' and so on.

In fact all these perceptions are incorrect. At most 115,000 elephants are in a relatively 'safe' condition in South Africa, Zimbabwe, Botswana and Namibia. The remainder in Angola, Mozambique and Zambia are highly at risk. North of the Zambesi River there is no scientific evidence to overturn the verdict of the CITES Parties that the elephant is an endangered species.

It is curious that the pro-traders, while vociferous in condemning the 'emotionalism' of the pro-banners, ignore hard scientific evidence on negative trends in elephant populations and resort to emotional language themselves. In 1989 there was no need to be a 'bunny-hugger' to be appalled by the conservation mismanagement that took place in the heyday of the ill-conceived ivory quota system. Furthermore, these critics tend to highlight the limited successes in parts of Southern Africa, although these do not apply to the vast majority of elephants in Africa.

A frequent ploy has been to accentuate the necessity to cull and to tie this inextricably to trading in ivory. The pro-banners are then represented as being against all culling and all forms of utilization of elephant products. This is far from the truth. In the spectrum of opinions held by those conservationists and conservation groups against the ivory trade there is a large body who single out the trade as being a special issue, but who do not in principle object to culling and utilization.

The main argument of the pro-traders is that without ivory sales they will lose finances that could have been used to benefit conservation, by either benefiting local people or by supplementing the coffers of the wildlife departments. In practice, however, it seems that very little of the money made by selling ivory ever came back into conservation. It was mostly swallowed up by the central government treasuries, or by ivory traders.

Furthermore, the gains to Southern States from the sale of ivory, which are trivial in terms of their national economies, would be greatly outweighed by the extra cost that other nations, especially in East Africa, would have to pay in terms of increased law enforcement activities. The success of the ivory trade ban in

East Africa so far has meant that development money for wildlife can be spent on other more productive budgets than anti-poaching. It would be tragic for Kenya, for example, if the major initiative now under way in the Protected Areas and Wildlife Services programme, which is supported by the World Bank and EEC, were to be undermined or even destroyed by a renewed wave of ivory poaching on the scale of 1989. Kenya has shown that tourist revenues from elephant viewing in the long term have greater potential than any ivory trade revenues.

The South Africans have tabled a proposal to the CITES Parties for downlisting their elephants to Appendix II. The idea is to trade only in ivory from the well-managed Kruger National Park directly with the Japanese. Unfortunately, there is great danger that any such limited trade would be the thin end of the wedge for a general resumption of trade.

It is true that the South African endangered wildlife police have made strides in apprehending ivory poachers and smugglers, but the fact that a previously unknown South African entrepreneur recently bought the embargoed Burundi ivory stock and arranged for it to be shipped out of Africa shows how vulnerable CITES controls are even in their present strict form. South Africa, as probably every state in Africa, has unscrupulous businessmen waiting to exploit any smallest flaw in any ivory control system. However much some economists argue for lifting the ban on ivory they appear to forget that 80 per cent of the trade in the past came from illegal ivory. This is a crucial point against lifting the ban.

Once the trade is open for South African ivory there is danger the price will go up everywhere, as South Africa on her own is unlikely to satisfy world demand. Even talking about opening the trade is already associated with an increase in the ivory price in East Africa. If, however, the South Africans were only talking of trading in skins and meat, and legitimate sport hunting, then granting them Appendix II status for their elephant populations would be another matter, provided they were prepared to give cast-iron guarantees that ivory would not be traded.

In addition to the South African proposal, Botswana and Zimbabwe have joined forces with Malawi, Namibia and Zambia to form a cartel called the Southern African Centre for Ivory Marketing. The SACIM countries have submitted a proposal to CITES for an exemption from the ivory ban next year. The group hopes to export tusks to Japan, Taiwan and other markets in the Far East. To cut out black-market middlemen, SACIM ivory would be shipped from a single Botswanan airport aboard specially commissioned planes.

Both the South Africans and SACIM countries argue that they can keep the ivory legal by using new techniques for determining the origin of tusks, by analysis of isotopes of carbon, nitrogen and strontium. The method is at an early stage of development and has severe problems. It is very expensive, at some \$200 per tusk, which would probably tax the few honest traders out of business. Even when the technique is ready it would take years to translate it into a practical procedure for Customs and it will never solve the problem of the corruption that has surrounded the commerce of ivory in Africa.

The inclusion of Zambia in the SACIM cartel will seem a particularly weak link. This country has been a centre for illegal trade of ivory and rhino horn, has suffered a major collapse in its elephant populations from poaching, and does not currently have an up-to-date scientific estimate of its elephant numbers.

Finally the SACIM proposal simply does not take into account the effects it will have on elephants in other African countries. By seeking new markets and aggressively marketing ivory SACIM will promote demand and push the price up. Within the SACIM proposals is the same loophole that undermined the previous Ivory Quota System, that is the provision to legalize ivory confiscated from poachers. This would allow ivory from non-SACIM countries to enter the market under the guise of 'confiscated stock'.

### *Conclusion*

The most effective way of reducing the killing of elephants has been to lower demand

through the ivory trade ban supported by a general feeling of revulsion against the possession of ivory.

The main danger to African elephants now is that by lobbying to open the trade, the Southern African countries appear to be sending out a signal worldwide to the trade and the poachers that 'trading is legitimate again and poaching ivory is profitable and worth the risk'. Poachers are well aware of the price of ivory. The higher the price the more worthwhile the risk.

While there will always be controversy over the figures a convincing case was made in 1989 to put the elephant on Appendix I. The benefit of the doubt now rests with the elephants, which are enjoying a cease-fire for the first time in many years. If a resumption of elephant poaching is to be avoided the CITES Parties should remain firm on the Appendix I decision. In this respect the European Community, along with the US and Japan, as the former largest ivory markets, carry a heavy responsibility.

#### References

- Douglas-Hamilton, I. 1987. African elephants: population trends and their causes. *Oryx*, **21**, 11–23.
- Ivory Trade Review Group. 1989. *The Ivory Trade and the Future of the African Elephant*. Typescript report to the CITES Parties, Lausanne.
- Iain Douglas-Hamilton, *EEC African Elephant Survey and Conservation Programme*, P. O. Box 54667, Nairobi, Kenya.

#### Mass mortality of Mediterranean dolphins

In recent years 'mass mortalities' in marine mammals have become commonplace. In the summer of 1990, abnormally high numbers of dead and dying striped, or Euphyrosyne, dolphins *Stenella coeruleoalba* started to appear on shores in the Valencia region and in the Balearic Islands. In the autumn bodies were also reported from the Mediterranean coasts of France, Morocco, Algeria and from the west coast of Italy.

Over the winter the mortality seemed to

subside, but in July 1991 indications of a new, or continued, mortality were reported from the neighbouring Ionian Sea. Hundreds of striped dolphins, mostly dead, but some debilitated and dying, became stranded along the Italian coast around Bari, and the Golfo di Taranto and on the neighbouring Sicilian coast. Large numbers were later reported in September, on the far side of the Ionian Sea on the Greek Islands.

Very little is known about the dolphin populations in the Mediterranean. The striped dolphin is a deep-water species so the numbers reaching shore will only represent a fraction of the actual death toll. During the peak of the 1990 die-off fishing boats and helicopters reported dead bodies floating out at sea. A survey in the western Mediterranean in October 1990 found the remaining striped dolphin schools to be very depleted (Aguilar *et al.*, in press). Average school size in the area before the die-off was in the region of 25 animals and sometimes many more (A. Aguilar and X. Pastor, pers. comm.). In autumn 1990, the maximum school size was depleted to only eight and scattered individuals were also noted. In total, several thousand animals are thought to have died in 1990 (Aguilar and Raga, 1990) and the same scale of mortality seems likely to have been repeated in 1991.

The most plausible explanation for these mortalities would seem to be that the virus that is thought to have precipitated the 1990 deaths reached another adjacent, but distinct, striped dolphin population in the summer of 1991. Even before these die-offs in the Mediterranean striped dolphin populations were reported to be suffering from an incidental fisheries take which was 'not sustainable' (Perrin *et al.*, 1991). The combined impact of continued incidental capture and the mass mortalities makes the future look bleak for this species in the Mediterranean.

The striped dolphin mortality is the latest in a series of mass deaths of marine mammal species. Similar events occurred in populations of harbour seals *Phoca vitulina* in 1988 (Simmonds, 1991); in 1987–1988 at least 2500 bottlenose dolphins *Tursiops truncatus* died on the eastern seaboard of the US; during the

same period some 8000–10,000 Baikal seals *Phoca sibirica* died in Lake Baikal; and in 1990 hundreds of bottlenose dolphins were washed up dead and dying in the Gulf of Mexico (Simmonds, in press). There were also abnormally high numbers of harbour porpoises *Phocoena phocoena* stranding in Northern Europe, particularly Denmark, in the summer of 1991. The factors causing these events need to be determined urgently along with their implications for the species concerned.

Important factors involved in the Mediterranean mortality, probably the most serious ever reported in a cetacean species, are becoming apparent. Since the beginning of the 1990 die-off the distribution and rapid spread of deaths indicate that the primary cause is an infectious agent; at least two viruses have been found, a morbillivirus and a herpes virus (Aguilar and Raga, 1990). A morbillivirus was the primary disease agent in the 1988 seal epizootic in Northern Europe (Osterhaus and Vedder, 1988) and morbilliviruses have also been implicated in other die-offs (Simmonds, in press). It seems to be widely accepted that a morbillivirus will also prove to be important in the striped dolphin mortalities.

Other factors will, inevitably, have been contributory. Post-mortem examination has revealed an unusual type of liver damage in practically all the dead dolphins examined. It appears to be of toxic origins (Aguilar and Raga, 1990). Moreover, it has been shown that the first Spanish die-off did not affect all age classes equally. Mature dolphins (11–20 years old) displayed the highest mortality (Calzada *et al.*, in press). This is the section of the population that would have been most highly contaminated with man-made pollutants. Indeed, the PCB levels determined in the striped dolphins that died in 1990 were about twice as high than values determined before the event (this cannot be explained by differences in their nutritional condition) (Borrell and Aguilar, in press). Levels in the dead dolphins were as high as 2500 parts per million PCBs (Aguilar and Raga, 1990).

This lends considerable support to the growing body of evidence indicating that pollution is exacerbating this and other marine

mammal mass mortalities. There is also some evidence that proportionally more harbour seals died in 1988 in the more highly contaminated colonies in Europe than in the cleaner areas (Simmonds, in press). Indeed from our understanding of the toxicology of the accumulated compounds and the physiology of marine mammals, it would actually be anticipated that pollution is a significant factor. In the event of an attack by a virulent disease agent, such as a morbillivirus, the contaminants would impair the animals' ability to both fight the initial infection and to recover from it, leading to higher mortality.

The distribution of PCBs in the dead dolphins' bodies also indicates that the animals were in poor physiological condition before the virus reached them (Borrell and Aguilar, in press). A complex set of interacting variables other than disease agents and pollution are likely also to be at work in any epizootic (Eis, 1989), including climate, food availability and so forth. The condition of the animals could, for example, indicate particularly low prey availability in the period prior to the die-off.

Determining absolute causes and effects in these mortalities is impossible. There appears, however, to be substantial evidence that man-made alterations to marine mammal habitats are an important factor. This needs to be addressed by the international community and all the plans for the conservation of seal and cetacean species need now to take into account that thousands of animals, representing large proportions of whole populations, can be lost in just a few weeks.

#### References

- Aguilar, A. and Raga, J. A. 1990. Mortandad de dolfines en el Mediterraneo. *Politica Cientifica*, **25**, 51–54.
- Aguilar, A. and Raga, J.A. In press. The striped dolphin die-off in Spanish Mediterranean waters. *Proceedings of the European Cetacean Society Meeting, Norway, 1991*.
- Aguilar, R., Pastor, X. and Forcada, J. In press. Results of the Greenpeace cetacean survey cruises during the western Mediterranean striped dolphin epizootic. *Proceedings of the European Cetacean Society Meeting, Norway, 1991*.
- Borrell, A. and Aguilar, A. In press. Were PCB levels in striped dolphins affected by the Western

- Mediterranean die-off abnormally high? *Proceedings of the European Cetacean Society Meeting, Norway, 1991.*
- Calzada, N., Lockyer, C., Grau, E. and Aguilar, A. In press. Age and sex composition of striped dolphin die-off in the western Mediterranean. *Proceedings of the European Cetacean Society Meeting, Norway, 1991.*
- Eis, D. 1989. Simplification in the etiology of recent seal deaths. *Ambio*, **18** (2), 3.
- Osterhaus, A. and Vedder, E.J. 1988. Identification of virus causing recent seal deaths. *Nature (Lond.)*, **335**, 20.
- Perrin, W.F., Donovan, G.P. and Barlow, J. (editors). 1991. Report of the Workshop on Mortality of Cetaceans in Passive Fishing Nets and Traps. *Reports of the International Whaling Commission.*
- Simmonds, M. 1991. What future for European seals now the epidemic is over? *Oryx*, **25**, 27–32.
- Simmonds, M. In press. Cetacean mass mortalities and their potential relationship with pollution. *Proceedings of The Symposium on Whales: Biology; Threats; Conservation. Brussels, 5–7 June 1991.*

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### European Bat Agreement

An Agreement on the Conservation of Bats in Europe was concluded at the third meeting of the Conference of the Parties to the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals) in September 1991. Tony Hutson represented the FFPS at the meeting and this account is extracted from his report (a fuller account appears in *Bat News*, October 1991).

A part of the function of the Bonn Convention is to develop agreements on the conservation of migratory species that would benefit from international co-operation and management, where 'migratory' means regular or predictable movements of individuals across state boundaries. A number of bat species regularly undertake long-distance migrations, such as Nathusius's pipistrelle *Pipistrellus nathusii* from Estonia to The Netherlands, or the noctule *Nyctalus noctula* from northern Germany to Switzerland.

Others move shorter distances, such as the bats that spend the summer in Germany and winter in Poland's Nietoperek Bat Reserve.

The initial proposal for a bat Agreement was made at the first meeting of the Parties in 1985, with John A. Burton (then FFPS's Executive Secretary) playing a major part in preparing the first draft. Further work with UK government and non-government co-operation resulted in a draft Agreement that was broadly accepted by representatives of 11 European countries at a meeting hosted by the FFPS in London in 1987. Subsequent progress was slow due to procedural matters and general points on the nature of such Agreements, because this was the first to go through the whole process. Problems were resolved by the summer of 1991 and on 10 September nine states signed the Final Act, followed by another two the next day. Arrangements have been made for the Agreement itself to be signed in London on 4 December 1991 and it will come into force 90 days later.

The Agreement is a legal document, but it does not lay down detailed specific actions and targets. Rather it gives broad objectives, which Parties to the Agreement are obliged to take steps to implement in their own state. There is a requirement to report on progress at the meetings, which are held every 3 years. The obligations under the Agreement include: prohibiting the deliberate capture, keeping or killing of bats, except under permit; identifying and protecting sites important for bat conservation; promoting the conservation of bats and public awareness of the importance of this; assigning to an appropriate body responsibilities for advising on bat conservation and management, particularly with regard to bats in buildings; promoting research related to bat conservation; considering the potential effects of pesticides on bats when assessing pesticides for use, and endeavouring to replace timber treatment chemicals that are highly toxic to bats with safer alternatives.

As sponsoring government, the UK will act as host to the Agreement for at least its first 3 years and will arrange the first meeting in early 1995.

*Editor.*