

The EU and Europe's Zoos



An investigation into the synergy between the policies and philosophy of the European Union, and the practice and potential of Europe's progressive zoos, aquaria and allied institutions

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Preface

I am very pleased to offer a few words of support to this document setting out the relevance of Europe's zoos and aquaria in so many areas of crucial interest to the policies and practices of the European Union.

For many years I lived in the vicinity of the UK's most attended zoo at Chester, and The Deep Submarium lies within my parliamentary constituency of Kingston upon Hull. In 1999 I was awarded the Gold Medal of the North of England Zoological Society at Chester Zoo, an honour previously presented to Sir David Attenborough. I led the UK's entry into the India based Global Tiger Forum, as the first participating country not actually within the wild range of this species, and subsequently received the prestigious Priyadarshani award in terms of contribution to the global environment. I commend all of these excellent organisations for highlighting the pressing needs of biodiversity and the environment.



In addition to these several personal connections, as Deputy Prime Minister of the United Kingdom, I recognise that the social and ethical contribution of zoos and aquaria across Europe.

As a former Secretary of State for the Environment I was able to offer encouragement to potential partnerships involving the European Association of Zoos, Colchester Zoo and colleagues in our EU partner States, Hungary and Bulgaria. Naturally the concept of trans-national European partnerships and the sharing of experience, skills and resources are very welcome, especially where it involves the Accession, Candidate, Pre-Candidate and 'New Neighbourhood' states.

Clearly, the work of progressive zoos and aquaria, involving close cooperation on a European level, is consistent with the collaborative founding principles of the European Union. Zoos' environmental and

conservational role must be of interest to policy makers at both Member State and EU level. As this document explains, education, training, scientific research, international development etc are all within the remit of forward looking zoological institutions.

I equally recognise the contribution of zoos and aquaria in tourism and leisure. It is hugely significant to Government, both on the national and European scale, that the annual zoo visiting public is so vast (140 million across Europe and 18 million within the UK), includes the overwhelming majority of our schoolchildren and is unrivalled in its socio-economic and ethnic inclusiveness.

In conclusion, I urge European decision makers to take greater notice, and indeed advantage, of the capacity of our progressive zoos and aquaria to deliver agreed policy in so many critical areas.

A handwritten signature in black ink, appearing to read 'John Prescott', written in a cursive style.

The Rt Hon John Prescott, Deputy Prime Minister of the United Kingdom

26th June 2007

Introduction

This document is a first attempt to lay out the actual and potential role of Europe's progressive zoos, aquaria and similar organisations¹ in the context of the policies, activities, philosophy and vision of the European Union.

The immediate prompt has been discussions around the environmental offer of zoos and aquariums in the context of the LIFE+ financial instrument. However, this paper looks to initiate an exploration of the zoo role in all EU areas of interest where these organisations have positive existing or unrealised roles. It finds that there is an enormous unused potential inherent within the strong network of zoos and similar institutions, and that this might be unlocked and harnessed much more effectively in a number of areas.

The document has been compiled through discussions with representatives of the European Parliament and the European Commission with special reference to DG Environment, AIDCO, DG Culture & Education and SANCO. It has been initiated and financed by the following individual zoo organisations, whose leadership is amongst the most progressive within the overall European zoo community:

- Allwetterzoo Münster, Germany (Münster Zoo)
- Apenheul Primate Park, Netherlands (Apenheul)
- Artis Royal Zoo, Netherlands (Artis Zoo)
- Bristol Zoo Gardens, UK (Bristol Zoo)
- Budapest Zoo & Botanical Garden, Hungary (Budapest Zoo)
- City of Belfast Zoo, UK (Belfast Zoo)
- Dierenpark Emmen, Netherlands (Emmen Zoo)
- Dublin Zoo, Ireland (Dublin Zoo)
- Fota Wildlife Park, Ireland (Fota Wildlife Park)
- Naturschutz-Tierpark Görlitz, Germany (Görlitz Zoo)
- Nordens Ark, Sweden (Nordens Ark)
- Quinta de Santo Inacio, Portugal (Park & Zoo S. Inacio)
- Riga National Zoo, Latvia (Riga Zoo)
- Twycross Zoo, UK (Twycross Zoo)
- Veszprém Zoo, Hungary (Veszprém Zoo)
- Zoo Antwerpen, Belgium (Antwerp Zoo)
- Zoo de Doué-la-Fontaine, France (Doué Zoo)
- Zoo Děčín, Czechia (Děčín Zoo)
- Zoo København, Denmark (Copenhagen Zoo)

¹ The expression 'zoo' in this document should henceforth be taken as also representing aquaria and other institutions which accommodate and present non domestic fauna.



Discussions have also taken place with the Zoological Society of London, The Deep Submarium and the North of England Zoological Society.

All of these visionary organisations deserve special recognition for their forward looking stance and commitment to the European ideal, and the various positive deliveries of the zoo sector as aligned with EU policy are informally illustrated throughout the document by examples drawn from these specific institutions.

This core group and this initiative however are symptomatic of a wider and very robust movement within the overall 300 strong European Association of Zoos and Aquaria (EAZA). The project has involved consultation with EAZA Executive Director, Harry Schram.

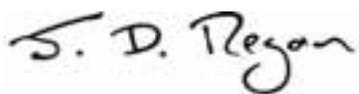
The study also looks to redress an outmoded and clichéd perspective on zoos where, without any great

consideration, these organisations are sometimes mentally categorised/ relegated to the status of rather trivial leisure attractions with an outmoded attitude to animal welfare. The reality is on the contrary that Europe's close community of zoos represents an enormous and comprehensive untapped resource. This is true not only in perhaps obvious areas of increasing critical import such as the environment, the bio-sciences and Europe's overall competitive tourism offer, but also in education & skills, cultural heritage, holistic socio-economic development, and overseas development in Africa, Asia and Latin America etc. Europe's zoos and allied organisations already have links across the existing EU especially with the New States, and have partnerships with the Candidate and New Neighbourhood Countries. They would seek to develop their role in European cohesion, skills exchange, and partnership projects across the Euro-Mediterranean and Central Asia theatres.

There are also important activities carried out by Europe's zoos which do not link to explicit policies of the European Union. These might include, for example, the ex situ conservation of non-European species. Such programmes are however generally accepted by Society at large as ethically and environmentally important. They are therefore referenced here to offer the chance to influence future EU policy direction.

Finally and perhaps most tellingly of all, Europe's zoo sites as a whole welcome some 140 million visitors every year. This audience is derived from all walks of life and all elements of society. They arrive with an active wish to engage with new knowledge and new issues. It is hard to point to any other network of public sites that represents such a unique and unexploited medium of connectivity with the citizens of Europe.

The EU was founded to overcome division on the continent and to bring together its peoples to promote sustainable development and a sound environment. The most important overall contention of this document is that Europe's network of zoos and aquaria offers an overlooked, multi-stranded role within this vision.



John Regan on behalf of the EU Interest Group of EAZA Members

3rd December 2007

I. The EU's environmental and biodiversity policies and the role of Europe's progressive zoos

The European Union places special stress on the environmental agenda in terms of quality of life for its current and future citizens. It looks to integrate its environmental policy into sustainable economic growth and social development, and places a special emphasis on the need to combat biodiversity loss.

The Sixth Environmental Action Programme has four priorities:

- Climate change and global warming
- The Natural habitat and wildlife
- Environment and health issue
- Natural resources and managing waste

In addition, the current draft statement on 'Halting the Loss of Biodiversity by 2010' recognises the ethical and economic imperatives that mandate prevention of further loss of species and habitat. It proceeds to detail the EU's past and future commitment in both internal and external policy.



Europe's progressive zoos have a strong environmental mission at their heart and are willing and qualified to make a contribution in all the four above areas. The first three objects in EAZA's (European Association of Zoos and Aquaria) constitution all revolve around direct action to protect nature, as well as the scientific research needed to support this.

All of the zoos who have specifically supported this document make major individual commitments to the environmental and biodiversity agenda in the following ways:

I. Europe's zoos and aquaria contribute to 'in situ' conservation all around the world with funds, personnel, expertise and, crucially genetically managed populations. Copenhagen Zoo is an especially

active conservation facilitator and, through Deputy Director Bengt Holst, co-chairs the EAZA Conservation Committee. Copenhagen Zoo supports in particular the in situ conservation of the Golden Lion Tamarin, a highly endangered primate species successfully reintroduced to its native Brazil. Görlitz Zoo, Germany collaborates with WWF Germany on the conservation of the Red Panda in the Eastern Himalayas. Děčín Zoo, Czechia works with Flora & Fauna International in the Philippines, Munster Zoo, Germany, is very committed towards Vietnamese projects around endangered Langurs.

The Species Conservation Foundation 'Stiftung Artenschutz', a joint initiative of currently 43 European zoos and several nature conservation organisations, preserves highly endangered animal species and their habitats worldwide.

These examples of course merely represent only the tip of the iceberg in terms of European zoos' commitment to in situ conservation beyond Europe. Several hundred examples could be listed.

2. The zoo community also cooperates closely on 'European Endangered Species Programmes' (EEPs) to collectively maintain, genetically manage and develop the above populations as an insurance against their total extinction, and as ambassadors for the threatened wild populations. Veszprém Zoo, Hungary for instance is very active in the cooperative breeding at European level of a genetically managed population of Chimpanzees.

3. It is not enough, of course, to protect individual species, entire eco-systems must be catered for. A consortium of European zoos is currently looking at establishing a new protected area in Madagascar. Antwerp Zoo is involved in preservation of the Atlantic Rainforest, whilst Budapest Zoo supports work around the Pannonian eco-system (flora as well as fauna). Fota Wildlife Park in Ireland is keen to promote dialogues to help zoos, other NGOs, private and public sector concerns have better tools and share experience in the management of nature reserves across Ireland and Europe.

4. Progressive zoos also wish to contribute to the wider environmental and sustainability agenda by profiling important ecological messages and demonstrating model projects on their sites. Twycross Zoo in the UK is planning a new €15 million eco-demonstration centre to expose its half million annual visitors to a variety of sustainable living approaches. Emmen Zoo, globally famous for its educational work, is planning a number of large scale eco-innovation and demonstration elements within a strategic re-deployment of the zoo site in the region of perhaps €150 million.

Apenheul and Artis Zoo in the Netherlands, Dublin Zoo in Ireland, Munster Zoo in Germany, Veszprém Zoo in Hungary, Bristol Zoo in UK, Dčín Zoo in Czechia, and many other zoos all have major ground breaking awareness raising projects to deliver sustainability issues and effect behaviour changes within the unique audience at their disposal. The environmental awareness raising role is also dealt with in section 6 on the EU's educational programme.

Finally zoos are often miscategorised as exclusively occupied with exotic species. Increasingly however they work with native species and European eco-systems. As this feeds into an important EU agenda in its own right, the overall natural heritage of our continent, the zoo role in this area is dealt with fully in the next section.

Espécies únicas
 A vida selvagem de Madagascar é única. É muito diferente das espécies de outros países e plantas, animais e insetos. Mas também são muito importantes para a vida selvagem de Madagascar.

Exemplos em Madagascar:

| | | | |
|-----|-----|-----|-----|
| 67% | 84% | 93% | 99% |
|-----|-----|-----|-----|

Exemplos de evolução paralela

Uma espécie de lemur
 Outra espécie de lemur

Como podes ajudar Madagáscar?

De toda Europa, membros da EAZA estão a trabalhar em conjunto para ajudar a vida selvagem de Madagáscar. Existem muitas formas de ajudarem também. Podem doar dinheiro ou coisas especiais que existem neste tipo de viagem selvagem de Leje do Zoo. Com o teu dinheiro poderemos financiar muitas espécies de conservação de vida selvagem em Madagáscar.

Também podes ajudar no dia-a-dia fazendo produtos que podem ser sustentáveis. Isso também é ótimo e porque que é a primeira coisa de ajudar que a vida selvagem não precisa saber de nada e pensar sobre isso também, sempre não consideras Madagáscar? O Zoológico demonstrará aos visitantes que a tua vida selvagem é única, e que é possível sobreviver dela numa forma sustentável.

Querem saber mais?
 Visita www.eaza.net para mais informação.

EAZA MADAGASCAR CAMPAIGN
www.eaza.net

2. The EU's native biodiversity and the role of Europe's progressive zoos

It is a common misconception that good zoos are exclusively concerned with exotic species such as elephants, tigers, kangaroos etc.

Although conservation, education and scientific work in respect of global biodiversity are pressing concerns, the European zoo community is increasingly focussed on the natural heritage of the respective Member States and of the European Union as whole. This wildlife heritage is of course not only a 'biological' or scientific resource but also offers one of few interests that offers a common European identity, binding Europeans of all cultures together.

In its external policy and dialogue Europe is obliged to set a good example to others. When appealing to authorities in the developing world to conserve their natural assets, Europeans have to be aware of the depredation of their own biodiversity and take action to halt, and where possible, reverse the loss.

In addition to their crucial biodiversity value, European animals, plants and the landscapes they inhabit are an important part of the shared cultural patrimony of the European family. Customs, stories, faith traditions, iconography, music and practically every aspect of the cultural life of Europe is shot through with wildlife, animal and natural symbolism (see also section 8 dealing with common cultural identity).

The influx of new nations into the EU has also brought a new wealth of indigenous biodiversity. Eastern states that have not developed in economic terms as quickly as their analogues in West and Central Europe (Romania, Poland etc) have retained a greater degree of wilderness and healthy populations of species long vanished or diminished elsewhere in Europe (European wolf, otter, mink, wisent etc).

Europe's zoos and aquaria have begun over the last several decades to steadily increase the resources they devote to the biodiversity of their own 'backyard' and moved away from an exclusive focus on the exotic. This is not only in respect of charismatic creatures such as the European Brown Bear or Golden Eagle, but also important, but less immediately captivating, species such as the Sand Lizard. A special focus has been placed on habitats and species prioritised in the EU Birds and Habitats Directives. There is a conscious strategy of attracting the public's attention through traditional, 'flagship species' and then exposing this clientele to the biodiversity within their own country.

As with global wildlife, the zoos work in many different ways to support native biodiversity (ex situ breeding, scientific research, public education and direct action in the wild). Protection against invasive



species is also important, and Veszprém Zoo in Hungary is looking to run a project to address the problem of non-indigenous reptiles damaging the native ecosystem.

Nordens Ark in Sweden specialises in developing insurance and ambassador populations of endangered species from the Nordic regions. The education programme at Nordens Ark has made significant contributions to the Swedish, Scandinavian and European public's attitude to the conservation of our remaining carnivores. In addition it works in the in situ conservation of species such as the Lesser white fronted goose (*Anser erythropus*) and the White backed woodpecker (*Dendrocopus leucotos*).

Doué Zoo in France, has also supported the conservation of a vital eco-system at Les Coteaux de Pont Barre. On the European level, Doué Zoo has been deeply involved in the conservation of the various species of European Vultures.

Park and Zoo S Inacio, Portugal has concluded the first ever official zoo conservation agreement with the Portuguese Government to work on the recovery of the Iberian Golden Eagle within the Peneda Gueres National Park, where currently only one wild bird remains.

Görlitz Zoo, Germany uses the European Moose to preserve an open habitat on a territory formerly used by the military in Lusatia, North East Germany, in order to maintain the habitats of endangered plant and animal species.

Once again these merely represent a few significant examples in a large and growing commitment to our own continent's natural resources. In 2009 EAZA will adopt the theme of European carnivores for its annual campaign, potentially extensible to its entire 270 strong network of zoo and aquaria organisations. This will be the first time a specifically European theme has been chosen.

Europe's zoos are constantly developing their commitment to Europe's indigenous biodiversity, and would seek the EU's encouragement in this respect.



3. The EU's commitment to international development and the role of Europe's progressive zoos

As part of its overall external relations remit, the EU has a major policy commitment to stimulating socio-economic progress throughout the developing world. The 10th European Development Fund offers a range of financial instruments including specific provisions on governance, human rights, election observation missions, peace keeping, investment climate, and regional integration.



In turn, article 6 of the EC Treaty stipulates that environmental protection requirements must be integrated into the definition and implementation of the Community policies and activities with a view to promoting sustainable development.

In parallel with this, the work of Europe's zoos is inherently internationalist and zoos have a long established an enviable network embracing organisations and individuals throughout the developing world, often in areas of severe deprivation. Section I has already dealt with zoos' projects around the world working to conserve global biodiversity. What is perhaps less recognised, however, is that it is difficult, if not impossible, to act effectively to conserve threatened wildlife and fragile ecosystems, without equally supporting the needs of human culture that share the same landscape.

For practical and for overriding ethical reasons the projects in the developing world sponsored by zoos in the EU inevitably envelop poverty alleviation and the promotion of sustainable economic growth.

Stiftung Artenschutz supports the Angkor Centre for Conservation of Biodiversity, Cambodia, which is focussed on the education of local people and capacity building to assist in environmental conservation and management, the development of awareness programmes, and the sustainable use of natural resources under community involvement.

Bristol Zoo supports projects in the Cameroons addressing the bushmeat crisis. This looks to protect West African primates and the same time protect the rainforest as a sustainable economic and food resource for people. The sources of food, medicine that indigenous communities have relied on for

centuries are threatened just as much as wildlife by deforestation, and unsustainable hunting is at an increasingly industrialised level.

Antwerp Zoo is involved in Project BioBrasil, which although centred on the Golden Lion Tamarin and associated rainforest species, extends to the protection and development of the needs of adjacent human populations.

The current EAZA campaign focuses on the vanishing natural resources of Madagascar and is a response to the President of Madagascar's call for the world's assistance. The campaign looks to combine wildlife and human needs by:

- Sponsoring sustainable use products
- Habitat and species protection
- Providing ongoing training opportunities for young Malagasy scientists and conservationists.

Amongst a host of other leading zoos, Zoo & Park S. Inacio, Portugal has committed to this campaign and is forming a variety of connections between Portuguese schools local to the zoo and schools in Madagascar.

Individual 'zoo to zoo' projects have especially important potential. Zoo sites in the developing world, often in or near to the centre of large cities, can be transformed from old fashioned menageries into modern environmental awareness centres and focuses for socio-economic and cultural development. London Zoo has developed an embryonic relationship with zoos in Morocco and is looking to help develop an innovative environmental awareness programme for young people here, as well as develop the zoo site as an exemplar of natural patrimony.

In addition to work carried out in partnership with other organisations in such countries, Europe's zoos and similar organisations have one unique capacity, unavailable to any other form of development agency. They have a ready made audience back in Europe of some millions of EU citizens ready to be connected with the issues and work their zoos carry out around the world.

The European zoo community would look to the EU to help further capitalise on its unique potential to assist in the international development agenda.

4. The EU's enlargement and cohesion agenda, and the cooperative role of Europe's progressive zoos

At its heart the EU is about peace, stability and cooperation between Members States

The work of zoos and aquaria is inherently pan European. Cooperation has been essential for decades and cooperation between organisations within the current Members States, Candidate, Pre-Candidate and New Neighbour States is increasingly strong.

To pursue their mission and manage precious genetic populations across the continent, Europe's zoos have always had to cooperate on a very tight basis. Indeed EAZA itself was in part set up in 1992 in response to this very practical requirement. Today individual examples of rare and endangered species, iconic expressions of a common European identity, are largely regarded as being held in common by the European zoo community ('the European Herd'), are ascribed no financial value and are not traded, but freely exchanged. A studbook holder elected by a relevant expert group coordinates movements of genetically important individuals.

Cooperation in strategic breeding programmes is naturally mirrored in an exchange in all other professional areas such as scientific research, education, tourism development, marketing etc.

This highly developed network and culture of cooperation is arguably more developed in certain respects than correspondent areas such as arts, museums or park authorities.

Clearly this chimes with the founding principles of the European Union in looking to reduce economic disparity and promote solidarity across its territory. Many of the EU's programmes specifically encourage the exchange of expertise and knowledge through pan-European partnerships at all levels and look to align principle and practices in all important areas, including naturally the environment, animal welfare and economic competitiveness.

The three zoos on the island of Ireland, Dublin Zoo, Belfast Zoo and Fota Wildlife Park are an especially visionary example of trans-national cooperation in the context of Ireland's complex history. All three institutions collaborate seamlessly in the conservation of ancient Irish biodiversity (the Golden Eagle, the Chough, Bog Meadow habitat) and run public awareness programmes for well over one million visitors annually on this precious heritage, of common value and interest to all traditions within Ireland. This careful presentation of shared wildlife traditions, transcending old wounds, might be beneficially extended to the wider European theatre.



In recent decades, zoo organisations in the 'old' EU states have reached out to develop relations with zoos in the New, Candidate, Pre-Candidate and New Neighbourhood States. Many zoological institutions in the New and Candidate States have been badly isolated for decades and have been in need of a free flow of skills and ideas from their colleagues in the West. Conversely much of Europe's vanished mega fauna subsists in these states, and zoologists in Central and Western Europe have been eager to learn from their colleagues' experience with wild range creatures.

Looking further afield, European zoos and aquariums have also established relations with important institutions in North Africa and those nations bordering Eastern Europe and shading into Central Asia ('The New Neighbourhood').

Many European Zoos envision partnerships with their twin institutions in a creative and holistic way. Zoos, especially in capital cities in North Africa or Central Asia often function as one of few social hubs and shared green spaces for the citizenry at large, and are even more of a focus for family, cultural activity and for celebration of civic and national pride and patrimony. Despite this, years of neglect and underinvestment by former administrations means that these crucial civic amenities may have deteriorated into rather basic menageries where animal welfare standards lag well behind EU standards.

Europe's progressive zoos look to work alongside New Neighbourhood colleagues to catalyse positive change and transform the 'old city zoo' into a modern environmental centres protecting and projecting the natural heritage of the nation.

EAZA has a specific Technical Assistance Programme whereby its more highly developed members carry out missions to appropriate partners in Eastern Europe and elsewhere. Europe's zoos have embraced this collaborative ethos for years and have, for instance, partnered with the TAIEX programme. Doué Zoo in France has been very active for some years in supporting vulture conservation with partners in Bulgaria. Emmen Zoo in the Netherlands is currently assisting the general economic development plans of the city of Gorzowa in Poland which is planning a new state of the art zoo. Copenhagen Zoo is looking to lead an EU wide strategic conservation plan for the European Mink embracing and supporting interests in Romania, Poland and relevant Baltic States.

Europe's zoos and aquaria would look to further develop their role in cohesion, partnership and relations with the New Neighbourhood with the help of the EU, and to be recognised for doing so.

5. The EU's science agenda and the research equity locked up in Europe's progressive zoos

The EU places enormous stress on scientific research and innovation, as these can help deliver jobs, prosperity and quality of life. The EU leads the world in many technologies, but faces increasing challenges not just from traditional competitors, but from emerging economies. Joint programmes amongst Member States can deliver results not possible in isolation and so help to maintain the EU's competitiveness.

The life sciences and biotechnology are of particular importance to enhance citizens' quality of life, and to boost the competitiveness of industry through the construction of a dynamic knowledge-based bio-economy.

Science in the service of the environment and of health protection are other crucial themes for the EU, as it is recognized that research and development can help us to better understand our environment and develop solutions to many problems. An important challenge is therefore to make best use of research results and new scientific findings in policy development.

Science in society' is yet a further important area where the EU seeks to encourage Europe-wide reflection and debate on science and technology and their relation with society and culture. This action line is based on the rationale that the ability of European societies to develop themselves in a positive and sustainable way depends, to a large extent, on their capacity to create and exploit knowledge and to innovate.

Europe's zoos and aquaria allow a set of unique opportunities to contribute to all of the above science based agendas.



There is a practical, but underused, opportunity at zoo sites to garner precious scientific data information on a wide variety of animal species at close quarters in ways that are not otherwise possible. There remains a surprising lack of scientific information on the physiology, anatomy, behaviour, diseases and parasitology of wild species, compared with that handful of animals of immediate economic significance to mankind.

The highest expectations in terms of animal welfare within progressive zoos, as well as specific conservation overtures, necessitate a solid scientific underpinning.

Knowledge gleaned from treating zoo animals can be of essential use in understanding and controlling diseases in the wild. Studies into reproductive physiology, endocrinology and ethology are especially important. Cryobiology and similar techniques, whereby the genetic makeup of threatened species can be banked has opened up an exciting new front. Other crucial avenues embrace diet and nutrition, contraception, wildlife medicine and behavioural studies.

One cannot of course ultimately predict the eventual application of a given piece of research. Perhaps the greatest relevance of zoo based research to the European Union's priorities is in fields other than the purely zoological, including agriculture and human medicine. Both economically vital agricultural populations and human society can be subject to pathologies seen also in wild and feral populations, as illustrated by threats such as the Foot & Mouth epidemic or Avian Influenza. Such crises show up a persistent dearth of information on diseases in wild animals. West Nile Virus was first detected in zoo populations by the zoological veterinary community. Furthermore the basic data required even in the most modern branches of biological sciences, can be easily harvested from a multitude of species in zoos.

The Zoological Information Management System (ZIMS) collates and makes accessible bio-data (genomics, biometrics, aging, nutrition, reproduction, diseases and treatments, general veterinary history, behaviour etc) on over 2 million animals representing 10,000 species maintained in over 600 zoological institutions around the world.

Antwerp Zoo is home to the world famous Centre for Research and Conservation (CRC) which focuses on sustainable population management with field based programmes in the Cameroons and Brazil.

Twycross Zoo in the UK works closely with and supports the Wildlife Information Network, a small international charity that collates data on critical wildlife issues drawn from zoo data all across Europe and further afield to make this available to the European and global research community.

Scientific research carried out at or by zoological institutions quite simply extends advantages that

neither field biology nor laboratory work can rival: ease of access to a large number of wild species with individuals of known age, sex, parentage and background living in natural social groups in relatively natural conditions. Endangered species are simply not available in laboratories and the only realistic access to such animals would be through a zoo collection or in the wild. In the latter, the bias of captivity-modified behaviour can of course be eliminated. However, there remains the ethical risk of disrupting a fragile population and the enormous logistical challenge of wild range study. In simulating wild conditions to the best of their ability, zoos present an excellent compromise for animal study, especially in the instance of endangered species.

Europe's zoo based research community seeks greater dialogue as to how their resources could be opened up to the wider benefit of the EU.



6. The EU's educational programme and education, training skills, and vocational awareness through Europe's zoos



The EU seeks to build 'a Europe of knowledge', an area of lifelong learning to be a benchmark for the world by 2010 and to help to make the European Union the most competitive and dynamic knowledge economy in the world, capable of sustained economic growth accompanied by more and better jobs and greater social cohesion. Lifelong learning is central to these objectives. The EU therefore funds initiatives in the member states for both educational establishments and for students with some €7 billion allocated during the 2007-2013 programme. Well over one million EU citizens of all ages benefit from EU-funded educational, vocational and citizenship-building programmes.

In addition, the EU offers opportunities to its citizens to live and study in other countries in order to make a major contribution to cross-cultural understanding, personal development and the realisation of the EU's full economic potential.

The Information Society is radically changing the way we consider education and training, and the Lisbon Strategy specifically looks to adapt Europe's education systems to meet the demands of the Information Society.

A concept of education, training, volunteering, entrepreneurial & vocational development, strikingly parallel to the EU's own commitment, pervades the culture of progressive European zoos and aquaria. Indeed, for many working in the zoo community, given the vast and wide ranging audience at its disposal, education and environmental awareness raising are the main mission of good zoos.

The overwhelming majority of European citizens will remember a cherished seminal 'first visit to the zoo', imprinting indelible attitudes not only towards our environment, but also the overall worlds of knowledge, enquiry and adventure. Equally the zoo can provide a first notion of our planet as a whole, its peoples, animals and geo-physical systems as inter-dependent elements, as well as growing understandings of responsible citizenship, community and society. Every year 125 million Europeans re-visit to consolidate, update and build on this learning.

Individual zoo exhibits can have a powerful targeted educational effect. Once they have addressed the overriding priority of animal welfare, contemporary zoo designers think in terms of 'learning narrative adventures'. These may be themed on the biodiversity of a particular region, or an overarching theme such as climate change or island endemism. Progressive zoos also look to a greater integration of the aesthetic and cultural dimensions to engage the public at a visceral and emotional level (please also see section 8: zoos as cultural centres). Emmen Zoo, Netherlands has an especially ambitious project establishing dedicated 'environmental theatres' providing extreme and deeply emotionally engaging experiences and thus inciting behaviour change amongst a huge audience.

Děčín Zoo, Czechia on the other hand is looking to use 3D cinema on the rise development and destruction of life on earth based on four island areas of the world.

Artis Zoo's 'Knowledge Court' will include a free public plaza for public to enjoy and learn about science & biodiversity with a choice of museums to subsequently visit.

Bristol Zoo's 'National Wildlife Conservation Park' will extend a variety of ecological innovation and environmental messages, and is committed to ongoing testing and consequent evolution of behaviour change techniques.

Strong educational impact can also be achieved without vast budgets, as shown as Riga Zoo's Kalvene park exhibiting a huge herd of Kiang (Asian wild equids). This combines emotional impact with a strong education message). Nordens Ark in Sweden, specializing in Nordic species, also uses simple naturalistic presentation to make a strong case for the protection of our native biodiversity. Görlitz Zoo (on the German-Polish border) has developed imaginative educational nature games in both German and Polish.

In addition to the general educational impact of the zoo visit, zoos and aquaria deploy many dedicated resources, including teaching staff, classrooms, library and education centre facilities, IT facilities, presenters providing talks at exhibits, and outreach programmes.

The zoo 'prospectus' itself is very wide, ranging from the overriding sustainability and bio-diversity message and the everyday role of the individual within this, through factual and scientific understandings, to the place of animals in European and human history, and the intertwining of the living world with the culture, traditions, religions and arts of Member States. Increasingly progressive zoos are also look to expose their 125 million visitors to jobs, careers, training, volunteering and entrepreneurial opportunities, all associated with the biological or environmental fields.

The EU's progressive zoos offer learning partnerships to European citizens in all shapes and forms and at all levels. These include special needs groups, pre-school groups, teachers themselves, higher educational students, post graduate students, the academic and scientific research community as a whole, individuals seeking careers or work experience working with animals and wildlife or in the leisure industry, special interest groups such as photographic societies or niche wildlife enthusiasts, the business and political decision making community (in terms of advocacy on environmental issues). Naturally, zoos also offer training and education for their own staff and for their zoological colleagues overseas.

The most important individual group, however, remains children in primary and secondary education. This constituency, whilst of its own immediate importance, also represents Europe's decision makers of thirty years hence. Zoo programmes for school children generally reflect the official educational curricula of each individual Member State, whilst also extending into any area where their resources and expertise may be of benefit. Irrespective of the immediate subject, the fundamental 'zoo message', the need to be aware of and to address, the looming sustainability and environmental crisis is always underscored.

The zoos host conferences, seminars and symposia on critical zoological and conservation issues drawing the finest minds from all over the world to convene in Europe.

A recent, especially innovative educational concept floated by Dr Leobert le Boer, Director of Apenheul and Gaia Park involves a new pan-European sustainability website coordinated by a number of participating zoos who would then promote the facility to their huge numbers of visitors.

The zoos would be keen to once again explore partnership possibilities with all relevant education and training initiatives within the EU's portfolio. They see a particular convergence with the EU's wish to radically raise public levels of environmental awareness. They would also be especially eager to dialogue with the EU as to the dramatic synergy of their activities with Government strategies for the development of the Information Society.



7. The EU's tourism and leisure economy and the role of Europe's progressive zoos and aquaria

Within its overall commitment to enterprise and industry the EU recognises tourism, the world's biggest industry, as an activity affecting our society in many different ways. Although emerging relatively recently as a major economic driver, tourism has profound impacts on our social, cultural and economic life, relating to employment, regional development, education, environment, consumer protection, health, safety, new technology, transport, finance, taxation and culture, amongst other areas.

Europe's tourist culture is also strikingly consistent with the founding principles of the EU itself. The tourism economy has grown from, and continues to depend upon democratisation, open borders, prosperous economies, and the freedom and willingness of people to travel to other countries. France actually receives more tourists than any other country in the entire world, and 7 out of the top 10 global tourism destinations are EU Member States.

In addition to tourism activities for those away from their home base, the EU also recognises the importance of a vibrant leisure offer, both as a physical and psychological amenity for its citizens, and as an important wealth generator in its own right.

The EU therefore wishes to encourage all organisations forming part of Europe's tourism and leisure fabric. In particular, it looks to improve knowledge on tourism, to contribute to the dissemination of information and to stimulate co-operation across the board. The EU in particular values tourism and leisure development to diversify rural economies and to help balance economic development across the regions of Europe.

Whilst wishing to avoid clichéd and narrow categorisation as only being concerned with recreation, Europe's progressive zoos seek to pursue a decisive role within the EU's growing dependence on the Continent's tourism and leisure industry.

It must in particular be significant that there are few other leisure and tourism pursuits to have not only survived, but thrived, for well over a century despite enormous upheavals in European society, in recreational fashion and technological advance. Europe's families have been enjoying the tradition of a visit to the zoo for 150 years, a practice with strong domestic cohesion benefit. In the same period overseas tourists have been consistently travelling to enjoy the spectacle of our cities' flagship zoos. The financial sustainability therefore of the very straightforward proposition of the zoo and aquarium visit is 'tried and tested': it does not require elaborate feasibility analysis: it does not demand 'a leap of faith'.



This is reflected in the fact that over the last decades various Member States have rightly focussed on the potential for tourism and culture as an economic development tools. Support for tourism, heritage and leisure facilities as well as for those projects that add to a locality or region's unique and authentic identity have been seen as means to alleviate serious social problems, to develop prosperity and to reinforce a sense of unique place and cohesive community. Traditionally the focus has been seen as more mainstream 'cultural' organisations such as museums and art galleries, as well as sports venues. Recently, however the tourism and overall social generation value of large audience natural history sites has come into recognition.



The tourism and leisure jobs created by the 250 EAZA members constitute a permanent source of employment, invulnerable to overseas outsourcing and of an increasingly varied nature. Zoo tourism sites also create business for regional accommodation, catering, retail and travel businesses and stimulate employment beyond the organisation itself.

Individual zoos such as Emmen Zoo or Twycross Zoo have initiated or led collaborations of regional tourism interests to increase over night stays and to draw in very significant private and public sector investment to create high class accommodation and other facilities. The upgrade of Belfast Zoo, Northern Ireland was seen by Belfast City Council as major tourism initiative to restore confidence and prosperity to a then troubled part of Europe.

Every other year a major conference is held to sharpen European zoos and aquaria' contribution to Europe's overall tourism and leisure economy through enhanced marketing and communications techniques and was last hosted in 2005 by the Munster Zoo in Germany.

Europe's zoos and aquaria are aware however that their tourism and leisure product could be developed further in terms of more pronounced heritage and greater local distinctiveness (please also see next section on zoos' cultural role). The potential to help draw global visitors to Europe could be radically increased.

Zoos would be willing in principle to work together on the European level to develop their tourism product. This might be through a greater focus on individual flagship animals, on native species, on distinctive architecture, on iconic human personalities or on the history of a given zoo organisation's relationship with its community. Europe's zoos would look to the EU for support to establish better market information and to perhaps collaboratively develop a more distinctly 'European' zoo tourism and leisure product.

8. The EU in Europe's cultural identity, a common European heritage and the role of Europe's progressive zoos

The EU has a broad commitment to cultural activity and identity on a number of fronts.

In 1974, the European Parliament adopted an initial resolution which mentioned the need for Community action in the cultural sphere, particularly action to protect cultural heritage. Since 1993, the Treaty establishing the European Community has provided a legal basis specifically for activities concerning the preservation and enhancement of cultural heritage. This explicitly includes natural heritage, landscapes and sites of natural interest.

The EU recognizes that European-level cultural actions, a better understanding of others' cultures and wider recognition of a common heritage, are indispensable in promoting a sense of European citizenship and an evolving European identity. As a valuable resource shared by everyone, cultural heritage is protected at both national and European levels.

Europe's cultural heritage is a precious asset in economic terms too, and the Union supports projects in the field of vocational training, regional development and the use of digital content relating to culture. It supports organizations with cultural outputs as important sources of revenue and employment, looking to ensure the right conditions for European cultural actors to compete internationally.

The Union also includes a cultural dimension in many of its other policy areas such as education (including language-learning), scientific research, support for new technologies and the information society, and social and regional development.

Europe's progressive zoos respond to this commitment in a number of ways. First and foremost as pivotal shared spaces for the representation of nature science, learning and discovery, they are part of the overall cultural fabric of individual Member States, and of Europe as a whole.

In addition, as touched on in section 3, there is a burgeoning involvement around the native wildlife and natural patrimony of the respective countries. It is arguable indeed that the shared myths and legends emanating from European wildlife is one of the most profoundly cohesive elements in the ever widening cultural landscape of Europe. The wildlife/ cultural interface also extends to educational and interpretive programmes on the cultural and heritage symbolism of animals to EU citizens originating outside Europe such as Asian and Afro-Caribbean communities.

Many heritage zoo sites, established in the nineteenth century offer quite unique architectural, botanical and landscape assets. The established zoos often also have a rich community heritage and have highly developed archives of material. 'The Ivy League Zoos' is an outline notion as to a linking of such heritage city zoo organizations across Europe. As its full name suggests ('Natura Artis Magistra'), Artis Zoo in Amsterdam has an especially strong cultural relevance, given its long tradition, its managed landscape and heritage buildings and its provision of natural history and geological museums, a planetarium and botanic garden. Budapest Zoo is also famous for its architecture including the recently restored Elephant House awarded a European Heritage Award. Görlitz Zoo provides a presentation on the importance of the White stork for human culture.

In conclusion, progressive zoos fit very well into the EU's definition of culture, and would actively pursue activities to more fully articulate and develop this role.



9. Closing comments

This document has briefly dipped into the surprisingly extensive work of Europe's progressive zoos, aquaria, animal park and associated organisations.

It has found not only that the capacity of these organisations extends into a far broader compass of public goods than might have been imagined, but also that these benefits closely align with explicit policies of the European Union.

It has also dwelt on the very large numbers of European citizens who 'vote with their feet' to visit in their millions zoo and aquarium sites strung out all across Europe. The patronage of zoos is highly democratic and socially embracing. The fundamental zoo proposition, whilst ultimately leading the public to engage with education, science, the environment, overseas development, and other very serious matters, is in itself disarmingly straightforward, and requires little packaging: the chance to see and learn about fabulous wildlife kept in naturalistic conditions.



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