

## REVIEW

### International Zoo Yearbook — Volume 43

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Since the conservation of biodiversity is intrinsically linked to the sustainable development of human activities and the protection of the wider environment, zoos have a moral duty to consider the sustainability of all their activities. This involves the complex task of examining all impacts on social, economic and environmental systems stemming from all different aspects of the management of zoos, including activities as diverse as population management, research, educational programmes, environmental management, horticulture, and procurement of goods and services. This book offers a very comprehensive study of the stage zoos have reached in terms of meeting a sustainability agenda and the various ways zoos could improve the sustainability of their activities *in situ* as well as *ex situ*.

First and foremost, at the core of zoos' primary function — the management of captive populations — issues such as the maintenance of genetic diversity through imports from the wild and the increasing tightening of regulations in terms of protecting wild populations and controlling the global spread of diseases are discussed in terms of insuring the long-term viability of captive populations. The various means considered for achieving this goal include target population sizes, global management and improved record keeping, husbandry and breeding protocols. A number of chapters are devoted to improving the environmental sustainability of zoos' activities through the controlled use of natural resources and mitigation of climate change. They cover aspects such as environmental management systems, green architecture, and energy, water and waste management, illustrated via case studies at Emmen Zoo and Paignton Zoo. They address the potential conflicts between the pursuit of reduced environmental impacts and optimum financial management or animal-enclosure design and discuss the importance of a triple bottom line approach to balance social, economical and ecological systems.

Ethical issues surrounding the procurement of animals, plants, and food and goods for restaurants and shops within zoos, are examined in depth through a number of case studies, including butterfly imports for zoo displays, seafood procurement for animals and visitors, and the production of handicrafts by local communities in developing countries with *in situ* conservation activities, such as the Payamino Project. In the case of the Payamino Project, a very clear insight is given into the challenges associated with simultaneously attempting to follow Fair-trade principles, comply with regulations affecting the certification of goods, ensure production and delivery rates meet the demand, and deal with different cultural approaches.

Zoos pride themselves on the importance of their educational role in raising the public's conservation awareness, yet research measuring their cultural impact has been lacking to date. One research study throws new light on the public's perception of zoos and on zoo visitors' experiences, suggesting that the traditional 'logico-deductive science learning' approach may not be the most effective means of generating interest in the conservation of biodiversity. With regards to educating local people in developing countries to encourage more sustainable livelihoods, this issue presents a very interesting case study of an educational programme in Madagascar, which has developed a wide range of long-term programmes including ones that target children via the provision of Saturday schooling, farmers via practical week-long courses and students via their university.

This volume will prove to be a highly informative, inspiring and valuable contribution to all zoos wishing to adopt a holistic approach to the conservation of biodiversity and sustainable development activities, helping them towards 'walking the walk' in these areas.