The educational role of zoological collections is broad in scope and focus, with many target audiences: Zoos aim to provide meaningful educational information, activities and experiences for all zoo visitors and employ a wide range of techniques to achieve their educational objectives.

At the dawn of the 21st century there are more endangered species and habitats than at any time in human history, environmental degradation on a massive scale, and global environmental problems such as climate change are recognized as a reality in need of urgent responsive action.

The traditional focus of zoo education ‘programs is still important, and instilling respect, understanding and empathy for wildlife and the natural world are fundamental to creating a society able to deal with the serious issues it faces as the decade and century progress. Knowledge, understanding and empathy don’t in themselves save endangered species or the environment. Action is required. Therefore, this article discusses how zoos can develop ‘education for action’ as a key objective for their education programs, particularly those focusing upon zoo visitors and the community, in addition to schools.

Raising Awareness:

There are many examples from zoos all over the world, of zoo education programs providing Information and raising awareness of issues. For example, sessions or classes for school groups on topics such as rain forests or endangered species; or information for all visitors provided by the basic graphics in most zoos which provide details such as species, range, diet, status and threats in the wild etc. However, this information is passive, and whilst individual visitors may react to it and take subsequent action, the majority that read/absorb the information (no matter how well or innovatively presented) may be considered ‘aware’ but this doesn’t in itself solve the problems.

A Sustainable Future?:

Raising awareness of the wide range of environmental issues and of threats to biodiversity has a higher purpose - that of promoting a sustainable future. This future is entirely dependent upon converting awareness into appropriate responsive action. Zoo education with its egalitarian appeal, can make a serious contribution to a sustainable future by providing lifestyle information and examples for our visitors to make informed choices. However, the message is so much stronger if zoos actually practice what they preach and show how the action of individuals and organizations can and does make a difference.
The Challenge for Zoos:

Zoo Education is therefore far more than information, awareness and inspiration - it is a call to action. But what can we really do? What examples can we highlight to achieve the desired sustainable future? And how, in the first place, can zoo educators convince their own organizations and staff to operate in a more radical environmentally-friendly way? Is it really the role of the educator in the first place?

Throughout the Zoo community worldwide there are examples of good practice. Now is the time to develop this aspect of zoo education and seize the opportunity to lead by example.

Within the zoo environment there are many areas of operation that have environmental consequences, for example, materials used in enclosure construction. We call hardly decry the loss of the rain forest if we purchase virgin forest timber to build our own animal areas.

As with all of our operations, there is a limiting factor, and that ultimately is financial cost. However, in our role as educators, we can advocate the benefits of 'practice what we preach', not only in our more positive (or less negative) environmental impact, but also the achievement of our organizations' educational objectives.

People are Important Too:

There is an added dimension to our environmental and conservation objectives, and that is the relationship of animals, the environment and people. All too often the messages our visitors receive relate to Man's hunting, pollution and environmental destruction. Sometimes in our attempts to make the message straightforward and appealing to our audience, whilst also being relevant to the animals exhibited, we inadvertently forget to highlight the impact of issues such as trade and the socio-economic situations in the countries involved.

If a country can derive income from chopping down a forest and selling the timber, then as far as the government of that country is concerned there has to be a very persuasive and economically beneficial alternative if they are to be expected to keep the forest. Taking account of the needs of the local people, as well as the forest's importance for biodiversity, water supply etc., should be part of the equation. How can we help the environment, endangered species and people?

Fair trade for people and for the environment?:

One of the ways of helping people in developing countries which is being championed in the UK, and some European countries in particular (e.g. Denmark, Holland, Belgium, Germany and others), is 'Fair trade'. Developing countries are largely the places where biodiversity is richest and environmental damage a most serious threat, and they are also
the major exporters of food items such as coffee, tea, and cocoa. The Fair trade principle is about better prices, working conditions and fair terms of trade for producers. 

Fair trade products are identified with a certification scheme - package labeling, and a premium price for the consumer. They rely on consumers choosing to pay more for products such as coffee in order to help the producer. What this means for over 120,000 workers and farmers in the developing world is a better life, reliable trading agreements and support for local environmental sustainability projects, schools, and improved health care. The knock-on benefits may be: reduction in hunting to supplement income, reduced reliance on wood for fuel, development of workers cooperatives, and long term planning that includes organic and more sustainable farming practice. Fair trade can also extend into purchasing local crafts which can be sold in our own retail outlets. Whilst there is not an internationally recognized certification for this, an ethical trading agreement can be made, and certainly some of the NGO agencies, such as Oxfam, already have such links in operation. Whilst Fair trade (or ethical trade) may not immediately spring to mind in the role of zoos as conservation and education organizations, it does provide an opportunity, for action to help the people in some of the areas where the endangered species and habitats we are trying to protect are found. If we can link the needs of people and the environment symbiotically, then there may be greater support from the local community for some of the direct 'conservation' initiatives we wish to promote.

**Examples of Action for a Sustainable Future in Zoos:**

To conclude this article, here are some suggested ideas for developing zoo education into an 'education for action' approach, some of these ideas have already been implemented at Bristol Zoo Gardens, others are aims for future action. Many other zoos have developed and implemented similar actions as part of their overall strategy. Zoos in the 21st century have a very important role to play in the goal of creating a sustainable future.

Some activities that support this goal: A key aspect of doing these activities is where actions are taken to improve the Zoo's own operation, visitors need to be told about it, so they can be encouraged to follow our example.

- Development of an environmental policy and commitment to the international standard ISO14001 (achieved by Aalborg Zoo, Denmark in 2000).
- Fitting energy saving devices, e.g. low energy lighting.
- Fitting water saving devices, e.g. 'hippo' bags in toilet cisterns.
- Incorporating recycled and recyclable materials into construction of buildings, enclosures etc.
- Recycling waste generated within the Zoo, e.g. office paper, bottles, tins, organic waste from animals and restaurant, etc.
• Distributing leaflets and luggage labels for visitors highlighting CITES regulations / endangered species trade (in the UK these are available from our government department of the environment -DETR).
• Donation boxes directly related to specific campaigns/projects, with regular campaign/project updates posted, on nearby notice-boards so people can see what their money is being spent on.
• Fair trade items available in the retail outlets - highlighted with explanation of the benefits of this ethically based trading approach; some Fair trade items may also be served in the restaurant/cafe. More information about this is available from two web sites: for the UK certification go to www.fairtrade.org.uk and for Europe, Canada, USA and Japan, go to www.fairtrade.net for links to national fair trade labeling organizations.
• Trails and leaflets and other literature available in the Zoo, with recycling bins available and/or opportunity to reuse this trail on your next visit / return your trail for another visitor to use; and print such resources on chlorine free, unbleached paper.
• Activities that show recycling / energy use etc. in practice, e.g. compost heaps and gardening advice (even compost for sale); display of the amount of energy being used in different parts of the Zoo, and compare with levels of energy used in the past.
• Transport strategy such that priority is given to walkers, cyclists and public transport users, e.g. charge for all car parking as an additional charge, have 'fast entry queues' for people arriving by bus etc. Also provide encouragement for staff to car share (provide free parking only for multiple-occupancy cars), cycle, use public transport if available, (discounted season ticket).
• Staff training and awareness - if the staff can be 'won over' and realize the benefits of certain lifestyle choices and operational changes then the public are much more likely to respond to well informed, enthusiastic and inspirational staff.

The challenge can be achieved, not all at once, small steps combine to a walk, and eventually a journey to a, new world! OK, I am perhaps looking at Utopia, but we have to do more than we are doing, don't we?

Stephen P. Woollard,
Assistant Head of Education,
Bristol Zoo Gardens, UK.