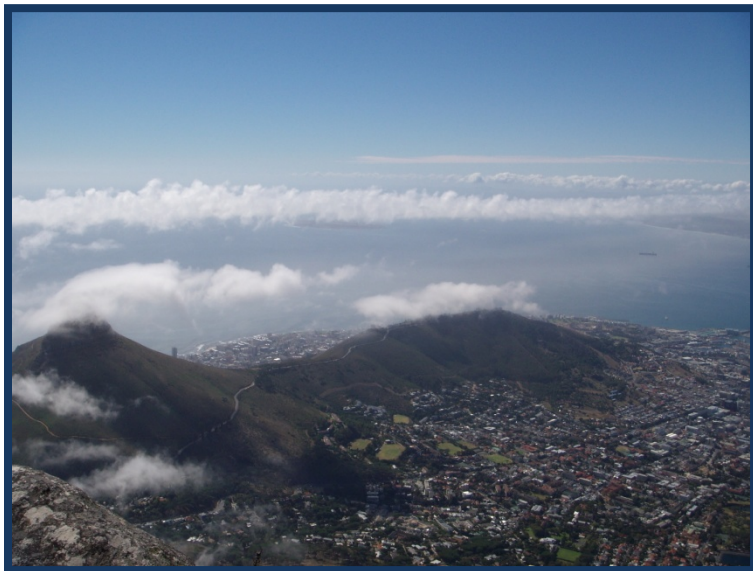# Keeping Nature Alive:
Toward a Code of Ethics for Biodiversity Conservation

Table Mountain National Park Workshop:
South African National Parks Case Study

Workshop Report

Table Mountain National Park,
Cape Town, South Africa
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This report is part of the Biosphere Ethics Project which is implementing the Bangkok World Conservation Congress resolution to draft and promote a code of ethics for biodiversity conservation (reswcc3.020)

About the Authors

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Acknowledgements

Introduction

This report documents the findings of the fourth international meeting of the Biosphere Ethics Project (hereinafter BEP). The Table Mountain National Park Workshop: South African National Parks Case Study (hereinafter SANParks Case Study) is the second in a series of case study workshops planned for BEP. The first workshop was the Windblown Hill Workshop: Chicago Wilderness Case Study (hereinafter CW Case Study). Recommendations from the CW Case Study can be found in Appendix 6.

The TMNP Workshop was held at the Kirstenbosch National Botanic Gardens, along the slopes of Table Mountain National Park, Cape Town, South Africa 17-19 March 2008. The aim of the workshop was to contribute to the ongoing dialogue regarding a new ethics for the conservation of biodiversity by using as a case study issues arising in the management of Table Mountain National Park. In particular, we were interested in learning from South African National Park's (hereinafter SANParks) experiences in advancing conservation efforts through social upliftment. A list of the workshop participants is given in Appendix 1, followed by a summary of the presentations and site visits in Appendix 2. One of the participants, Carol Fialkowski, was a representative from Chicago Wilderness, the regional consortium that was the subject of our first case study; her perspective of the workshop is given in Appendix 3.

The appendices provide a brief history of the project, beginning with a summary in Appendix 4 of the first consultative meeting at Windblown Hill, Libertyville, Illinois, USA. This meeting discussed IUCN Resolution 3.020, proposed at the 3rd World Conservation Congress by the IUCN Comité français. This resolution calls for the creation of a "code of ethics for biodiversity conservation" and administers this task to the Ethics Specialist Group of the IUCN Commission on Environmental Law. Please see Appendix 7 for the full text of the resolution. After the consultative meeting, the project headed to the IUCN Headquarters in Gland, Switzerland. The main conclusions from this second meeting can be found in Appendix 5. The third meeting was the CW Case Study. For further details on the origination and history of the project, please see "The Story So Far" from the full report of the CW Case Study.

The SANParks Case Study

The centrepiece of the workshop was a case study of South Africa's Table Mountain National Park, and the experiences of SANParks in the development and implementation of its conservation programs and partnerships with other government agencies, such as the Department of Environment and Tourism (hereinafter DEAT) and the Department of Water Affairs and Forestry (hereinafter DWAF). During the BEP workshop, several representatives from SANParks and its collaborating government agencies gave presentations, followed by open dialogue. An important element of the workshop involved field visits to program sites and to meet with project staff and managers.

To open the sessions, Razeena Omar introduced the SANParks People and Conservation program and its mandate of social and cultural heritage through social upliftment. Christo Marais then explained the Working for Water program and gave

perspectives on social upliftment through catchment management and secondary industries. Antoinet van Wyk presented the SANParks Poverty Relief Programme to the group, detailing delivery achievements in alignment with SANParks cultural and heritage priorities. Brett Myrdal, Park Manager of Table Mountain National Park, gave a contextual overview of the park, its history, its successes and challenges, and its dream of becoming, "A Park for All Forever." Richard Williams then discussed several of the TMNP special projects. In the final presentation, Kader Meyer gave the group an overview of the DEAT Social Responsibility Programme.

Site visits took place at Orangekloof Tented Camp, where participants gained access to the near-complete campsite. The buildings and boardwalks had been harvested from alien timber and constructed by poverty relief teams. A presentation, followed by open dialogue, was then given by the Hoerikwaggo Guides, the only black accredited mountain guides in South Africa. The workshop participants next travelled to Slangkop Tented Camp, where they saw a construction in progress. The group was able to walk the site, meet the poverty relief teams and discuss the project with the Project and Construction Managers. The participants were also able to see Alien Plant Clearing teams in action, as well as Path-Building teams in action. Again, these presentations and site visits are summarized in Appendix 2, with corresponding images to offer fuller insight.

The main outcomes from the workshop were the conclusions and recommendations that ensured from the discussions and exchanges during the formal presentation sessions and around the site visits. The key ethical conclusions are presented below and, building upon the lessons taken from the CW Case Study, will help inform the philosophy, language, principles and guidelines of the emerging code of ethics for biodiversity conservation.

Key Ethical Conclusions

Building upon the lessons learned from the SANParks presentations and site visits, the workshop participants made the following recommendations for the development of a code of ethics for biodiversity conservation and the next steps for the Biosphere Ethics Project.

It was agreed that the proposed code of ethics and associated programme to promote its uptake should incorporate these key ethical conclusions: (1) the Primacy of Native Species; (2) the need for Truth and Reconciliation Ecology, through (i) Conservation Management for Social Upliftment and (ii) Conservation Management and Justice; (3) understanding that Conservation is about Managing Change; (4) the necessity to Build a Movement for Biodiversity Conservation through (i) Environmental Education, (ii) the Management of Scientific Uncertainty and (iii) Inter-Organizational and -Sectoral Cooperation; and (5) the acknowledgement of the Significance of Bio-Cultural Diversity.

(1)The Primacy of Native Species

Like in many parts of the world, the introduction into a bioregion of alien or non-native plants species by humans has created major conservation problems in and around Table Mountain National Park (TMNP). Native species have been removed or displaced by introduced species (in this case, especially pines, eucalypts and acacias) over

extensive areas of what is a unique biogeographical region. The conservation of biodiversity requires that primacy be given to native species over alien species. However, practical problems arise in applying this principle.

The primacy of native species principle is based on recognition of the values associated with species and community assemblages that exist in a bioregion as the result of evolutionary and ecological processes. To most conservationists, the primacy of native species principle is taken for granted and is a presupposition requiring no further reflection or analysis. However, its application is compounded by various factors, and it is based upon particular values that are not held by all people and communities.

From a technical perspective, the definition of "native" versus "introduced" is not always clear cut. Is a species only labelled as "introduced" and "non-native" when it has been recently brought into a landscape by humans? What about a species that was extirpated and has been re-introduced as part of a restoration project? How long does an introduced species have to be in a landscape before it can be considered "naturalized". Also, we now face the prospect of rapid shifts in species ranges beyond their evolved distributions as the result of human-forced climate change.

The flora and fauna of TMNP is of ancient origins and is part of the Cape Floral Region Protected Areas World Heritage Site. The main justifications for its inscription on the World Heritage list include (1) the Cape Floral Region is considered of outstanding universal value for representing ongoing ecological and biological processes associated with the evolution of the unique Fynbos biome and (2) the species density in the Cape Floral Region is amongst the highest in the world. It displays the highest levels of endemism at 31.9 % and it has been identified as one of the world's 18 biodiversity hot spots (UNESCO 2008). The values recognized for Word heritage Listing are based on scientific knowledge. However, the native species of TMNP are also valued by local communities because of their traditional use as a source of medicine and food.

Practical problems arise in applying the primary of native species principle because some of the introduced species are also valued by local people. For example, in and around TMNP, stands of introduced tree species have become much favoured recreational sites by local people. In addition, mature pine stands are considered by some to add to the landscape aesthetics of the peri-urban environment. Attempts by park management to remove these introduced species as part of an ecological restoration programme have therefore met public resistance from people who argue that the recreational and aesthetic values of these plants should not be dismissed, and that the pines should not be destroyed to make way for native species. Other introduced species, such as infestations of Australian *Acacia* species, do not have any recreational or other uses associated with them and there is no controversy around their removal. In such cases, the main issue here concerns the costs of removing these infestations and the priority that should be given to this task ahead of other conservation problems.

In applying the primacy of native species principle, consideration must given to how ecological restoration projects based on alien species removal are designed and implemented to take into account opposing values and positions. Public education programmes are essential to ensure people have an opportunity to understand the reasons why the introduced species are being removed, the values associated with

the native species, and the longer term benefits for humans and nature from the restoration.

The issue of native versus introduced species is not limited to alien plants in and around protected areas. Biodiversity is also a critical issue in the neighbouring agricultural zone (landscapes which are dominated by alien species) but in different ways. For example, genetic diversity is important for sustainable farming systems and adjacent native ecosystems can provide environmental services that support agricultural production (e.g. pollination, pest control).

(2) Truth and Reconciliation Ecology

The word "reconciliation" carries with it a particular significance in South Africa from association with the historic work of the Truth and Reconciliation Commission. "Reconciliation ecology" therefore takes on added meaning to the original usage proposed by Michael Rosenzweig (2003). We can therefore propose from a South African perspective the principle of truth and reconciliation ecology which acknowledges our responsibility to be accountable for the legacy of past harm to both humans and nature.

Giving consideration to the principle of truth and reconciliation ecology adds more potency to actions such as 'ecological restoration and rehabilitation', suggesting that such activities reflect a moral imperative. Furthermore, in addition to acknowledging the past harm done to other species and ecosystem, the principle implies we must also deal with the human injustices associated with the loss of biodiversity or with past attempts to exploit or even protect biodiversity. For example, the first national parks in South Africa were established at the expense of the traditional people who were driven from their lands, and under the apartheid regime, black South Africans were unable to visit and recreate in national parks [reference].

Consistent with the work of the Truth and Reconciliation Council, truth and reconciliation ecology demands we consider issues of "inclusivity" and "access". The former is a fundamental moral responsibility in South Africa to break the legacy of apartheid in the planning process by enabling people from disadvantaged communities to also benefit from natural conservation programmes and protected areas. Three issues illustrate something of the nature of the challenges. First, communities who were expunged from their traditional lands in the past are now entitled to make land claims including on land within protected areas. This has major legal and practical implications for the future of these parks. Second, even modest park entry feeds can prove an insurmountable hurdle for people from disadvantaged communities. Therefore, for example, mechanisms should be put in places that differentiate between international tourists and locals. Third, eco-tourist developments should be designed so that local communities are not excluded from using them, and so that local people materially benefit.

"Access for all" must also be given effect in ways that is consistent with the principle of ecological integrity (Earth Charter theme II) as unregulated access by whoever can have undesirable impacts on biodiversity (please see Appendix 7 for the full text

of the Earth Charter). The supporting principle "Some access for all forever" captures the idea of ecologically and socially appropriate access and can be used to guide programmes that give effect to the principle. In this way, an ethical perspective can be given to standard park management mechanisms such as zoning schemes, permit systems for specific activities, and path construction to constrain visitor impacts.

The principle of truth and reconciliation ecology, as defined here, also can be used as an ethical basis to re-frame the relationship between agricultural land and biodiversity. Habitat loss due to agriculture is one of the prime causes of the loss of biodiversity (Sala et al. 2002). Given this, is there any scope for agriculture systems to now contribute to the future conservation of biodiversity? Increasingly, protected areas, and landscapes still dominated by native vegetation cover, are becoming "islands" in "oceans" of land that present barriers to the long distance movement of wildlife.

Large scale migratory species movements require particular attention to landscape permeability outside of protected areas (Gilmore et al. 2007). However, agricultural land can be managed in ways that are sympathetic to biodiversity and that promotes biologically permeability, allowing for essential wildlife dispersal and migration (Soulé and Terborgh 1999) Mechanisms for promoting biological permeability in agricultural lands include: retention of remnant habitat patches and even individual native trees; re-vegetation using native species as windbreaks, shade for livestock, or erosion control; protecting wildlife from hunting and culling; and preserving and restoring wetlands and other special habitats.

The issue of landscape connectivity – and the lack there of - is further exacerbated in Cape Town where TMNP is cut off from the hinterland by the city. Therefore, the principle of truth and reconciliation ecology is also relevant to the urban environment. Various measure can be taken here to promote biological permeability particular in the suburbs where there is scope for ecological urban design that, among other things, promotes the use of native species in gardens (which also draws upon the primary of native species principle), fencing that minimized barriers to bird and insect movement, and generally facilitates positive interactions between humans and other species (e.g. bird feeding). Note that these kinds of activities are consistent with the original meaning of reconciliation ecology as defined by Michael Rosenzweig.

A major impediment to applying the principle of truth and reconciliation ecology is a lack of appreciation of the values associated with native species amongst farmers and urbanites alike. This to some degree is due to a lack of knowledge and familiarity with biodiversity generally and the particular species and ecosystems associated with a bioregion such as the Cape Floral Region Protected Areas World Heritage Site. Education is therefore a significant part of the solution in promoting the uptake by individuals and communities of programmes for enhancing biological permeability and landscape connectivity in rural and urban environments. However, the kinds and content of educational programmes will vary with the local context and the history and current circumstances of the community involved. The specifics of the landscape connectivity education and outreach programs must be relevant to the people they are trying to target.

As always, there are complicating factors. It is unfortunate that some people's attempts to engage with biodiversity and natural landscapes conflicts with park management requirements for ecological integrity. A common experience is for

people to be prevented from bringing their pet dogs into protected areas for recreational purposes. Education and outreach programmes must both explain why we need to make our lands more biological permeable whilst at the same time restrict human movements in some landscapes.

Engaging with people and communities to promote a more sympathetic and accommodating attitude to native biodiversity – to make some room for nature – is only partly a matter of education about the known facts of conservation science. There is also the need for education and outreach programmes that deal explicitly with those elements of a conservation ethic that involve respect for other species, regardless of their worth to people (see Earth Charter principle 1). This is also referred to as "intrinsic" value and it captures a large part of the "emotional" appeal of nature conservation – those values we hold about species and ecosystems that do not have an economic value but are nonetheless deeply motivating factors for many people. Albert Schweitzer (1936) called this the ethic of reverence for life, which he extended to all species, not just humans. Such an ethic is consistent with the values of many organized religions and faith traditions, and traditional and Indigenous communities. However, as with other ethical principles, it cannot be assumed that all people adhere to or understand the practical significance of this ethic.

(i) Conservation Management for Social Upliftment

The principle of reconciliation ecology is being implemented at TMNP through a programme which aims at conservation management for social upliftment. Under this approach, community development is promoted through natural resource management projects, and specifically conservation management projects. Thus, the aim is to achieve social goals through conservation work for the mutual benefit of people and nature. Such programs also nurture understanding and appreciation of species and ecosystems amongst disadvantaged communities. These kinds of programs are now required by government policy in all areas of government.

The projects in TMNP are described in Appendix 2. Conservation projects include, "working for water", alien plant removal (ecological restoration), path construction, and low impact camp site construction. They involve employment of people in neighbouring and disadvantaged communities, with quotas that must be met for the employment of woman. Training is provided given the nature of the tasks. Some individuals are also provided with additional training that enables them to tender for projects after the initial engagement.

An additional and welcomed benefit of the social upliftment programme is that it brings people from disadvantaged communities into contact with protected areas and their native ecosystems and ecosystems. This can begin to catalyse awareness through their community and help promote a greater appreciation of the values of and benefits from biodiversity conservation, and therefore a broader based of support for the role of national parks.

While these programmes serve the twin goal of meeting obligations to humans and nature, additional important ethical consideration issues were identified. For example, there are many tens of thousands of people who could benefit from these programmes. How can they be implemented in a fair and equitable way? Given the quotas for employing woman, what happens to the children when their mothers are working? Should SANParks be responsible for organizing child care?

A major concern is that each project runs for two years only and there is a responsibility to consider the future of the programme's alumni, given the lack of job security. Exit strategies are needed if the programme is to help break the cycle of poverty. Various solutions were identified as discussed in Appendix 3. These considerations recognize long-term responsibilities to individuals and the community with respect to employment and economic empowerment that extend beyond legislative and policy requirements. Programmes also need to understand and recognize how needs and opportunities vary regionally. For example, projects based around eco-tourism are not relevant in all locations. Consideration must also be given to the varying circumstances, needs and capacities of different people with respect to gender, age, physically disabled, and single parents. Thus, "one rule for all" may not be appropriate.

(ii) Justice and Conservation Management

Enforcing conservation regulations is the hard end of park management and off-reserve biodiversity conservation. People from traditional or disadvantaged communities often still rely on harvesting plants and hunting animals from natural ecosystems for, among other things, medicine, food, and fibre. Land claims and associated restitution is also opening opportunities for traditional practices. In various ways, local people are interacting with wildlife and their habitats and in some cases this results in legal issues arising.

Hunters were traditionally key figures in a local community. However, hunting protected wildlife or in a national park can now result in arrest and humiliation. Further complexities arise when someone is arrested, for example, for killing an impala and then large numbers are culled because their numbers have exceeded the ecosystem's carrying capacity. Similar episodes have arisen in relation to burning. Planned fires are a necessary part of park management. However, people can be arrested for harvesting plants which soon after are burnt by park managers. At the same time, series and deliberate crimes such as murder and assault are being committed on park visitors, and law enforcement is a major park management issue at TMNP.

The justice system needs to be sensitive to the difficult circumstances people find themselves in, and courts need to differentiate "crimes of necessity" and "crimes of tradition" (i.e. as the result of following traditional practices) from heinous deliberate acts. A more compassionate and flexible response from the legal system will not only be consistent with the principle of truth and reconciliation ecology, but it is also in the long term interest of biodiversity conservation. The understanding and support of local people living in and adjacent to national parks is critical to sustaining conservation efforts. Examples of mechanisms for avoiding the kinds of anomalies noted above include park zoning where traditional uses can be licensed, and by involving traditional local hunters in culls. However, finding such common ground takes dialogue and the goodwill to identify the necessary compromises.

The lessons gleaned from considering the implications of truth and reconciliation ecology have global significance. The world today can be classified into four broad land cover categories: (1) land that has been cleared of its native ecosystems and is used for human settlement, commerce and industrial production; (2) land that has been largely cleared of its evolved ecosystems and is used for growing crops and other forms of intensive agriculture, (3) rangelands that retain their native ecosystems but are exploited for human use by way of livestock grazing or

harvesting of trees and wildlife, and (4) intact land where the human ecological footprint is relatively small. However, all these lands, including intact lands, support human communities, and the future of biodiversity both in and out of protected areas, lies very much in their hands – in how they value biodiversity and the role they are given in its stewardship.

(3) Conservation is about Managing Change

As with all aspects of existence, nothing lasts forever, and even the most concrete of objects are of a finite duration. Philosophically, the normal state is perhaps one of "becoming" rather than "being". Biological decay is part of the cycle of life and life on Earth would in fact be impossible without death and decay, because this process released the scarce nutrients locked up in biomass for other organisms to use. All biological, ecological and evolutionary processes are dynamic and involve fluxes and changes in the state of things over time. To these natural processes we can add the rapidly changing social realities of economic globalization, modernization and industrialization. Climate change is imposing new and additional stresses. Conservation management increasingly has to deal with dynamic ecosystem processes including (1) migratory species, (2) fire regimes, (3) catchment hydrology, (4) vegetation dynamics and (5) invasive plants and animals. Biodiversity conservation requires that attention be given to those processes, often large scale processes, that generate and sustain the habitat upon which species depend (e.g. catchment hydrology), or that constitute selective forces to which species are adapted (such as fire regime). Often, primacy must be given to ecosystem processes ahead of the requirements of a particular species. Conversely, a threatened species often requires an ecosystem be manipulated for its requirements.

From a scientific perspective, evolution and associated processes are of utmost importance to the conservation of biodiversity (Frankel and Soulé (1980). Biodiversity is often recognized as emerging from evolution, but this is often seen as an historical fact or only relevant in terms of the very long term future. Technically, evolution is defined simply as inheritable genetic change in the composition of a population. Thus, by definition, evolution is about small incremental genetic changes in a population that may or may not lead to directional change, new adaptive traits, divergence and speciation. For conservation biology, of most interest is the evolutionary change that constitutes local adaptations by a population to changing physical and biological conditions. Populations within a species can thereby evolve adaptive traits that "fine tune" their morphology, physiology or behaviour to changing conditions. This capacity for rapid and local adaptations is one of the principle sources of ecosystem resilience and ecological integrity (Thompson 2005).

The complex dynamics of natural systems are challenging conventional conservation concepts such as "carrying capacity". While all agree that the population of a given species is a function of and constrained by ecosystem productivity, the actual population numbers for a given species that equate with "carrying capacity" changes through time in response to variability associated with climate and plant productivity, and the presence and abundance of predators, parasites, and prey, amongst other things. Ecosystems have a carrying capacity but it is a something of a "moving target". There is increasing recognition that this dynamic contributes to ecosystem resilience (Walker 1999). Our ability to protect and restore biodiversity is being further complicated by societal pressures from rising human population number and accompanying new and increased demand for land and natural resources. To these dynamics we can add the impacts of war and unintended and perverse

environmental outcomes from other human activities, such as pollutants and the released of genetically modified organisms.

These observations serve notice that – at the best of times - conservation is about managing change. However, this reality is somewhat at odds with a more popular and conventional understanding of the raison d'être for nature conservation, namely to preserve things how they are now. Conservation in the 21st Century requires a raison d'être that accommodates natural processes, and the dynamics of social realities. If systems are changing in response to external drivers then what becomes the target of our conservation efforts? What is the target for ecological restoration projects? If climate change is resulting in ecological upheaval, then how do know we are protecting the right thing?

Communicating and education the idea that managing change is central to the conservation efforts presents many challenges. For example, some processes operate over long time scales beyond the lifetime of an individual. Also, many conservationists are unfamiliar with recent scientific insights into the complex dynamics of natural systems. How we conceive of and understand ecosystems is critical in determining responses to problems such as managing elephant densities and invasive plants,

If we must – by the necessity of circumstance and reality – accept that conservation is not necessarily about keeping things as they are but is about managing the consequences of changing circumstances and conditions, then we need a new fundamental goal around which conservation efforts can be organised. The concept of ecological integrity (Earth Charter theme II; Appendix 8) can serve as such a goal when defined in terms of the integrity of the biological, ecological and evolutionary processes that maintain the health of organisms, the dynamic optimal functioning of ecological systems, and their ongoing capacity to provide environmental services for humans and nature – clean air, fresh water, fertile soils, food and shelter for all species, and a regulated and liveable global climatic regime (Mackey 2005).

(4) Build a Movement for Biodiversity Conservation

The biodiversity extinction crisis does not receive the public attention it warrants, and there is not the necessary sense of urgency that (rightly) surrounds the climate change problem. The two problems are actually deeply connected: the major cause of the biodiversity extinction crisis is loss of habitat, and emissions from deforestation account for about 20% of annual anthropocentric greenhouse gas emissions. In fact, the ultimate integrity of the Earth system – and the global climate system – depends on protection and restoration of the biosphere. However, the reality is that even the biodiversity within protected areas is under threat from social and environmental pressures. The prospects for biodiversity in the surrounding land are even more uncertain.

Underpinning conservation law, policy and programmes must be a growing movement for biodiversity conservation that fosters a sense of ownership and responsibility for local, national and global natural heritage. The more people everywhere value native species and ecosystems, then the more support there will be for the actions needed to sustain biodiversity in the 21st Century and beyond.

Developing and growing a movement for conservation will require an ongoing commitment to dialogue, communication and education. Conservationists must keep

abreast of community agendas and find ways of turning hostile stakeholders into supporters, and actively nurturing community and stakeholder support. Particular for protected areas, it is vital to engage local and disadvantaged communities. All sectors, especially business, must become engaged in and part of this movement. Catalysing and sustaining a movement for biodiversity conservation will require motivating people through engagement with both people's minds – based on good science and traditional knowledge about natural processes – and their hearts – based on values and ethical principles both shared and culturally specific.

(i) Environmental Education

Environmental education is the long term key to building a movement for biodiversity conservation. The kind of education required must provide the facts as we understand them about, among other things, biodiversity, the requirements of species and ecosystems, the important of evolution, how the human ecological foot print can be reduced to within Earth's carrying capacity, and the relationships between the biosphere and the global climate system. However, imparting the relevant scientific information is necessary but insufficient as educational programmes are needed that engage the heart as well as the mind.

At the same time, it is vital the people and their communities are re-connected with the local native biodiversity, and that people learn again, where possible, about their local iconic or totemic species, and have first- hand experience with the many values associated with their native species and ecosystems. The educational programmes should actively engage people and their communities with the kinds of values and attitudes that must be incorporated into their society's cultural norms if biodiversity conservation is to be assigned a public priority. However, values education does not mean proselytizing or imposing one set of values in place of local values. For example, students can be asked to debate the meaning of the ethic of reverence for life, whether it resonates with local cultural practices, and to consider the implications of such a perspective for dealing with local problems.

Protected areas have a special role to play in environmental education as outdoor classrooms" and "laboratories". Youth in particular should be given concrete experiences that involve practical environmental and conservation matters. Environmental education is needed which integrates "brown" environmental issues (e.g. climate change, clean water, toxic wastes) with "green" issues concerning nature conservation. In this way, students can develop a more integrated understanding of the links between human and environmental health, and the environmental services we derive from ecosystems that underpin our economic wellbeing.

Part of the aims of a more integrated environmental education and outreach programme should be to help people understand how they can contribute to biodiversity conservation and to more meaningful decision-making on environmental public policy issues that affect them. Youth should be empowered to contribute to solving environmental problems – they need awareness raising and capacity building in addition to being provided with the known facts. A more holistic education should also be reflected in the education associated with technical training so that participants in, for example, "conservation management for social upliftment" schemes better appreciate the difference they make to the protection of native species and ecosystems.

<u>(ii) Managing Scientific Uncertainty</u>

The ongoing commitment to community and stakeholder dialogue and deliberation that is part of building and sustaining a movement for biodiversity conservation requires conservation managers to recognize that compromise will be inevitable and that other social values aside from nature conservation values will come into play. In part, managers have a responsibility to convince others of the requirements of species and ecosystems from a conservation science perspective. However, our scientific knowledge is always incomplete, sometimes difficult to communicate, and decisions based on the available information can be validly challenged. Ongoing dialogue with stakeholders is critical to developing confidence in decision making process and the science that underpins it, as well as ensuring that local knowledge – including traditional ecological knowledge – is recognized and utilised.

Finding the right balance is difficult. Given the reality of the biodiversity extinction crisis, conservation managers should invoke the precautionary principle when the risk of irreversible harm is great and recognize the need to advocate action when there is sufficient evidence in support of the activities being proposed. Complete agreement is a perfect state rarely obtained. Usually, the best that can be achieved is sufficient consensus, accepting that decisions must be made on imperfect knowledge.

<u>(iii) Inter-Organizational and -Sectoral Cooperation</u>

Another key element in building a movement for conservation is to increase inter-organizational cooperation – between government agencies and between government agencies, NGOs and business. "Conservation management through social upliftment" programmes would benefit from closer cooperation with the Welfare Department – who could provide crèches for working local woman. Another example is the benefits from closer cooperation between conservation agencies and judicial and law enforcement agencies where National Park overlap with city policy precincts. The challenge is to find incentives that will encourage innovative inter-organizational cooperation for biodiversity conservation. Lack of cooperation usually reflects the lack of such incentives.

Much of the unsustainable development that is causing, directly or indirectly, the loss of biodiversity is being enacted by the business sector. Often, the harm to biodiversity is unintended and a by-product of the production activity. Businesses and large corporations in particular, need to become part of the solution and the movement for biodiversity conservation. However, their involvement needs to be promoted by an appropriate combination of incentives, including market based incentives, along with disincentives for bad behaviour. Strong environmental law and policy is needed that makes clear their legally binding obligations and provides opportunities for innovative incentive mechanisms

Local community enterprises are another level of the business sector that need to become part of the movement for biodiversity conservation. Innovative ways are needed to advance a "conservation economy" amongst local communities in particular for micro-enterprises. Opportunities exist now to generate income for local communities from recognizing the connections between natural resource management and ecosystem services, in particular water management and carbon sequestration. Similarly, protecting important wildlife habitat is another ecosystem service that can provide an additional source of income for local people.

(5)The Significance of Bio-Cultural Diversity

Alongside the biodiversity extinction crisis, we can sadly chronicle the loss of cultural diversity around the world. There is a strong connection between the two as much cultural diversity reflects the rich ways in which traditional (pre-modern and industrialised) cultures adapted to their local environments and native species and ecosystems. Consider the worldview, values, and customs of Greenlandic Inuit who traditionally hunt seal, whale and polar bear with the salt water people of Arnhem Land, Australia – traditional hunters of sea turtle and dugong. Indeed, some legacy of the bio-cultural values of traditional agrarian societies in Europe and North America lingers on in their modern industrialised and urban societies. Increasingly, the processes of globalization, modernization and urbanization, are leaving people with less direct contact of their local native species and ecosystems, and therefore traditional bio-cultural values are eroding from cultural memories, customs, and institutions. We are producing generations of humans with no bio-cultural values based on first-hand experience of their local native species and ecosystems. At the same time, subsistence economies throughout the world are dependent on the ecological integrity of local ecosystems and the services they provide – about 40% of the global economy is based on measurable biological products and processes (European Communities 2008). The future of biodiversity will also be affected by the bio-cultural values of these cultures, and the capacity of the people and communities to take action in accordance with these values.

We must find ways of giving expression to a more holistic understanding of human-nature relations, one based on the principle of bio-cultural diversity. It is both a scientific fact and commonly held world view amongst many traditional cultures that humans, other species, and the Earth system, are interconnected and interdependent. We are becoming more familiar with what this means in terms of the ecosystem services that natural processes provide at both the local scale (e.g. water supply) and global level (e.g. climatic regulation).

The evolution of the capacity of humans for culture and technology has not meant an end to evolution: Earth's environment and life continue to co-evolve and maintain the ecosphere in a state fit for life; human health and wellbeing is continually challenged by co-evolutionary interactions between people and pathogens; the productivity of our agricultural and food systems similarly involve evolving interactions between plants and a myriad of other species including pollinators and diseases; and we continue to introduce new genetically modified organisms into the environment and introduce species into foreign biomes. Humanity's welfare one way or another is inexorably intertwined with the fate of all species with whom we share Earth as home (Thompson 2005).

We must respect the wisdom of traditional ecological knowledge and its culturally and location specific characteristics. However, at the same, we must begin to build a shared ethical framework that can serve the conservation of biodiversity in the face of the unprecedented threats and challenges of the 21st Century.

Recommendations for SANParks

An important part of the SANParks Case Study was also to provide feedback and recommendations *to* SANPark managers. Participants were divided into small groups and asked to discuss and recommend "learning actions" from the field trips to Orangekloof and Slangkop tented camps, and the Silvermine invasive alien plant clearing and path building sites, in terms of: (1) What worked?; (2) What could be improved upon?; and (3) What can be taken to other parks and other contexts?

Some of the key recommendations were that SANParks should: (a) serve as incubators for small projects; (b) provide tertiary or technical education scholarships for stand-out employees; (c) establish a database that keeps track of programme alumni to determine what occurs after exiting or "post-graduation" and also to measure the overall success of the program; (d) connect to the private sector with graduates; (e) simplify their process with small businesses, as currently there are "mountains" of paperwork/red-tape/regulations (e.g. trying to buy wood from locals, but the Park is unable to use cash); (f) have more inclusive management: a management of all; and (g) consider if there are lessons to be learnt from other programmes such as the US Civilian Conservation Corps.

By way of content, some highlights of discussion follows, clustered around general concepts; but not in any particular order of priority. To some extent they overlap, and all are related to conservation management for social upliftment.

(1) <u>What worked?</u>

Skills and Training
- ♣ Building of skills/training of individuals in all 3 programs.
- ♣ Skills were adequate and appropriate.
- ♣ Great skills: stonemasons, carpenters.
- ♣ Opportunity for individuals to be discovered as well as them to discover their own skill sets.
- ♣ Trained health and safety officers for each team.
- ♣ Skills were a pride.

Construction Techniques
- ♣ "Touching the earth lightly" technique at camps allows future options for land.
- ♣ Maintenance of camps is an ongoing job creation opportunity.
- ♣ Camp construction visually unobtrusive and there is wind shelter.
- ♣ Use of rocks as materials for footpaths. No reintroduction of foreign materials. Doesn't bring in enriched materials (eg gravel or alien or seeds).
- ♣ As time went on, techniques employed were improved (e.g. boardwalks).
- ♣ Different wood used different places.
- ♣ Harvesting and treatment of timber on site.
- ♣ Alternative construction methods.
- ♣ Creating structures and materials (e.g. hand-sewing sandbags).

Community Engagement and Empowerment
- ♣ Short-term employment.
- ♣ Economic empowerment (pay is greater than the 800R/month average income, or ~10 USD/month).
- ♣ Food on table, children in school.

- ♣ Engagement of local community (project and people).
- ♣ Sensitive to local community needs.
- ♣ Ownership/accountability.
- ♣ Created jobs, particularly for women.
- ♣ Comfortable place to take kids outs.
- ♣ Laborers do a better job than conventional contractors.
- ♣ Economic engines for area.
- ♣ Additional small businesses are created that tie with laborers, such as for their food and transportation.
- ♣ Lose cell phones and games and learn about nature.
- ♣ Work linked to environment (for land/conservation).

Park Management
- ♣ Alien clearing and park building efficient for conservation principles.
- ♣ Good project management: manageable contract sizes.
- ♣ Gender equity.
- ♣ Issue of exiting: alien clearing is not seasonal so always work.
- ♣ Harvest within legal parameters and report those that do not comply.
- ♣ Tourists don't respond negatively to differential payment.
- ♣ Good system of improving access.
- ♣ Time was spent productively.
- ♣ Peace of mind because of the guides.
- ♣ Management from inside the park and not from Pretoria.
- ♣ Technology developed internally so easier to be modified to a specific area.

(2) What can be improved upon?

Exit Strategy
- ♣ Exit and project managers battling with the idea that people must exit; what are they exiting into?
- ♣ Safety nets need to be provided by municipalities, so perhaps a local organization can help these people. Who does that? Departments are busy or they don't have the capacity. There is too much bureaucracy/red tape.
- ♣ Concern over the seasonal jobs, especially those related to tourism. Tourism has seasonal highs and lows, especially between different parks. Perhaps transfer employees to different parks during low times. At the beginning of the project, should be clear to the employees of the different components (predict highs and lows and find alternative areas).
- ♣ Once they exit, how many people will make use of the skills that are developed? They are engaged in physical labour; where to apply those skills?
- ♣ Only a small percentage of people are re-employed.

Employee Sensitivity
- ♣ Regarding women, it could be against the traditional role of woman as the child-rearing role of the family.
- ♣ 60% of workforce must be women, and this work is labor intensive. There needs to be a level of sensitivity with the task and the people that they are using.
- ♣ If targeting a higher percentage of women, need to account for their children and childcare costs.

Structural Deficiencies
- ♣ Need more money, more people.

- ♣ Need more support from partner organizations at a high level.
- ♣ Law favors advantaged groups of society.
- ♣ Two departments exist with alien plants; they are doing some of the same things but there is no coordination. There needs to be coordination of these ecological restoration efforts (i.e. restoration strategy with the alien species clearing strategy).
- ♣ Need more media involvement. Right now, there is no involvement with the parks and the community.
- ♣ Need more information available to the public about how the camps were built and who built them.
- ♣ Need to look at who is remaining with the parks after exiting (see below).
- ♣ Need a tracking database: how to reach and stay in touch with past employees?
- ♣ The Department of Labor should be a bigger part with this program to make sure that once they get into the system, their skills can be found by others.

(3) What can be taken to other Parks and other contexts?

This model could be taken to Brazil, as they have similar issues when dealing with poverty, employment and conservation. Wangari Maathai was also mentioned due to her interests in clearing programs and rehabilitation. In the United States, instead of putting young people in jail (for non-violent crimes), give them this kind of work and pay them. It gives them environmental education and job opportunities, and it is cheaper than putting them in jail. This would also help rehabilitate national parks.

Next Steps

The outcomes from this workshop will be taken to the Biosphere Ethics Project Synthesis and Drafting Workshop, which will be held at Windblown Hill, Libertyville, Illinois, USA, 21-24 June 2008. The purpose of this meeting will be to (1) discuss the project in light of recent developments at IUCN and around the world; (2) hear from the resolution-originating Comité français on their thoughts of the development and the future of the code; (3) review the CW Case Study and the SANParks Case Study; (4) hear reports from Brazil and Jordan,; and (5) identify and begin the drafting tasks for the ethical text and its rationale.

The Biosphere Ethics Project is also organizing a workshop at the 4th IUCN World Conservation Congress in Barcelona, 5-14 October 2008, Keeping Nature Alive - the ethical foundations of nature conservation in the 21st Century. This workshop will explore the critical ethical issues for biodiversity conservation and the ethical resources that can be used to address them. It will draw upon the research being undertaken by BEP, as well as the CEL governance project. An expert panel will provide workshop participants with insights into the ethical dimensions of biodiversity conservation. Small group discussion sessions will then provide opportunities for selected issues to be examined in detail, and for new ideas to be tested.

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Appendix 1. List of Table Mountain BEP Workshop Participants

Name	Affiliation
Abu-Jaber, Mayyada	CEO, Jordan Career Education Foundation; Founder, World of Letters
Asmal, Osman	City of Cape Town
Blumeris, Hilton	Table Mountain National Park
Charles, Beulah	Table Mountain National Park
Cheney, Chad	Table Mountain National Park
Davis, George	SANBI
de Kock, Gary	SANParks
de Kock, Paula	Table Mountain National Park
Dublin, Holly	Chair, IUCN Species Survival Commission (SSC)
Dyosi, Fezile	Table Mountain National Park
Fialkowski, Carol	Chicago Wilderness
Glazewski, Jan	Park Forum, Table Mountain National Park
Gordon, Paddy	Table Mountain National Park
Grabeth, Nduna	Table Mountain National Park
Hendricks, Neville	Table Mountain National Park
Hunziker, Fran	Table Mountain National Park
Isaacs, Moenieba	Park Forum, Table Mountain National Park
Jacobs, Olga	SANParks
January, Mervin	Table Mountain National Park
Kintzele, Kathryn	Post-Doctoral Fellow, Center for Humans and Nature
Lennitch, Mandy	Table Mountain National Park
Little, Robert	IUCN SSC; WWF South Africa
Mackey, Brendan	Visiting Scholar, Center for Humans and Nature; Professor, Australian National University
Mafakala, Nolene	Table Mountain National Park
Marias, Christo	DWAF
Marsh, Patrick	SANParks
McNeely, Jeff	Chief Scientist, IUCN
Meyer, Kader	RSA Department of Environment and Tourism
Mgxashe, Phumeza	Table Mountain National Park
Mkefe, Xola	Table Mountain National Park
Monteiro Matos, Karla	Ministry of Environment, Government of Brazil
Myrdal, Brett	Park Manager, Table Mountain National Park
Nemahunguni, Alfred	Table Mountain National Park
Niwicki, James	Table Mountain National Park
Omar, Razeena	Managing Executive, People and Conservation, SANParks
Peter, Zwai	Park Forum, Table Mountain National Park
Rademeyer, Mercia	Table Mountain National Park
Sibongile	Ntonzino
Sieben, Paul	Table Mountain National Park
Siqhwala, Luvuyo	Table Mountain National Park
Slayen, Michael	Table Mountain National Park
Stoffels, Barry	Table Mountain National Park
van Wyk, Antoinette	SANParks
Vesh, Matthew	Save the Dunes Conservation Fund
Wheeder, Mike, Rev.	Park Forum, Table Mountain National Park
Williams, Richard	Table Mountain National Park

Appendix 2. Summary of SANParks Presentations and Site Visits

SANParks People and Conservation: Perspectives on the SANParks mandate of natural and cultural heritage conservation through social upliftment
Razeena Omar, Managing Executive, People and Conservation, SANParks

Protected areas in pre-democratic South Africa were largely established through enforcement and exclusion, resulting in the history of our national parks being ridden with conflict between the protected areas and the neighbouring communities. By and large conservation in South Africa, embedded in our past of colonialism and apartheid, adopted a protectionist approach, viewing people as separate from the environment, whilst also ignoring that '*environment'* is a social construct where the biophysical world forms an integral part for economic and social development, with numerous interactions between political, economical, social, and biophysical dimensions. The narrow perspectives failed to acknowledge that sustainable conservation practice is not of importance only to conservationists, but also to communities and their livelihoods, human rights, political dispensations, and the economy, which affect all people.

The South African National Parks was established by statute and was governed by the National Parks Act of 1976 as amended, and the Protected Areas Act of 2004 as amended, to manage a system of national parks which represents the indigenous fauna, flora, landscapes, seascapes and associated cultural heritage of the country. SANParks has undergone major changes with regard to philosophy, policy and organisational structure to reflect the political, economic and social realities of South Africa. The first major step in the transformation process was taken in 1995 with the appointment of a new board whose **vision** for the SANParks evolved into:

"National parks will be the pride and joy of all South Africans and the world"

In order to achieve this vision, the SANParks adopted the following **mission**:

"To develop and manage a system of national parks that represents the biodiversity, landscapes, and associated heritage assets of South Africa for the sustainable use and benefit of all"

SANParks also have a transformation mission:
 "To ensure effective transformation both with SANParks and the broader society, through the implementation of broad-based black economic empowerment in support of the Constitution of South Africa."

This statement clearly represents a fundamental shift from traditional conservation practices to a more holistic, integrated natural and cultural heritage management approach.

South African National Parks (SANParks) now manages a system of twenty-two national parks, and established a Division of People and Conservation, to further a "people-centred" approach to conserving the natural and cultural heritage. In the implementation of the conservation mandate, and as the custodian of diverse natural and cultural assets, SANParks recognises the need to engage with stakeholders, in particular neighbouring communities most affected by the activities of the Park, through the People and Conservation Division (P&C). This participation process improves communication and interaction and allows stakeholders not only to become informed about a range of views on issues of mutual concern to the Park and the community but also to share experience and expertise. This interaction results in informed decision-making that is more sensitive to stakeholder concerns and values. The goal of People and Conservation is to enable people, through education, awareness, training and research, to take responsibility for the conservation of our national heritage (that include natural and cultural) and to contribute towards the socio-economic development of communities in-and-bordering the SANParks, while strengthening the building of constituencies to engender support for sustaining our national

heritage conservation efforts. The building of constituencies in support of conservation and heritage goals is an important focus of SANParks. The park forums is a means of communicating park / SANParks issues and ensures participation of stakeholders on strategic matters affecting the park. Park Forums have been established in many National Parks, as platforms for P&C staff to engage with stakeholders in a participatory manner, grounded in mutual respect, transparency and inclusiveness.

Through projects and programmes P&C staff are developing a conservation ethic, grounded within the principles of the Earth Charter, by responding to environmental issues in partnership with the relevant stakeholders, embarking on environmental education processes that represent the environment as integrating dimensions of the biophysical, social, political and economical contexts within which SANParks are placed and produce mutual benefits for local communities and parks. The development and use of contextually relevant indigenous knowledge resources within the Programme will also have a profound affect on Cultural Resource Management within SANParks.

To advance community economic empowerment initiatives, SANParks entered into many partnerships, including a partnership with the Small Enterprise Development Agency (SEDA), a statutory body of the Department of Trade and Industry. SEDA became an active partner assisting the P&C division to further community economic empowerment opportunities, focusing on activities that promote Small Medium and Micro Enterprises in communities adjacent to Golden Gate, Augrabies, Wilderness and Addo Elephant National Parks. Four participating communities from Golden Gate (Thaba blinds), Addo (arts and crafts) and Augrabies (wirework and Nama crafts from two separate communities) were sponsored by SEDA to exhibit their products at the 16th Annual Conference of the National Industrial Chamber in Johannesburg. Small, Medium and Micro Enterprises (SMME's) have also continued to flourish and benefit from construction projects taking place in many of the parks. These include repair and maintenance of buildings as well as the construction of new roads and structures.

To strengthen relations between neighbouring communities and SANParks, People and Conservation staff in parks has implemented 21 community empowerment projects throughout the parks, and actively supported an additional 40 projects. In addition, a draft policy to guide resource use in SANParks was developed. Further prospects to strengthen relations between SANParks and communities are provided through the People and Parks Programme of the DEAT. Working relations with various communities have also reached a new level with several joint management projects being negotiated and undertaken. In the same token, the commercialisation programme is settling well into the parks' system, while creating much needed employment and empowerment opportunities for communities close to the parks.

Working for Water: Perspectives on social upliftment through catchment management and secondary industries
Christo Marais, RSA Department of Water Affairs and Forestry

Natural resource managers are not often confronted with ethics as the theme of scientific presentations. I am just that, and like most natural resource managers I've always been of the opinion that the species *Homo sapiens* is merely one among other species in the natural landscape. Some years ago Razeena (Omar) and I had a debate about (what one could call) the "historical natural resource manager" school of thought. Her argument was that the natural environment is part of the social environment. This obviously led to some pretty intense debate that afternoon. In the end she was able to convince me otherwise, that

unless natural resource managers accept the fact that natural resources are amongst others merely building blocks in the socio-economic make up of society.

There is nothing new about natural resource management in South Africa what has changed is the focus. At the moment the focus of the Department of Water Affairs and Forestry's (DWAF) Natural Resource Management Programmes (the so-called *Working for …* programmes) is on invasive alien plants and fire, as well as wetland and woodland restoration and maintenance.

In 1946 already the Cape news papers reported on the "Cape's Mountain Pests", and later in 1972, the extinction threats of the "Cape's Prized Flowers". The reports were saying that plants and wildlife are in danger of becoming extinct due to unsustainable land management practices amongst others alien plant invasions and unsustainable fires management regimes. During the same era in 1950, the papers reported that "plantations of trees were destroyed" as fire swept Table Mountain. The question of the natural environment being part of the social environment or visa versa is therefore nothing new. We've always struggled with an ethical dilemma, natural resources vs. the needs of humankind.

In 1991 (a reminder this was still during the apartheid era), The President's Council Report of the *Three Committees on A National Environmental Management System* concluded that "environmental conservation is perceived by many to be an elitist concern." This is still very much part of the challenge of conservation ethics in the world today.

At the dawn of the new SA (November 1993), a meeting of the Fynbos Forum, supported by the then Foundation for Research Development (FRD) now called the National Research Foundations (NRF) concluded that there was a problem with the Fynbos and associated natural resources. The meeting took two resolutions. The first was to develop a "road show" to highlight the impact of invasive alien plants on the water resources of the Western Cape. This initiative ultimately led to the launch of the now internationally renowned Working for Water Program (WfW). The second concluded that and international initiative should concentrate on the impact of invasives on biodiversity. This resolution arguably was the catalyst that led to the Cape Action for People and the Environment programme (CAPE).

So, what impact did the programmes have on conservation ethics? WfW has two main business streams/focus areas, that of controlling invasive alien plants while contributing to the economic empowerment of the most marginalized sections of society. There is therefore a clear integration of natural resource management and socio-economic development. During that November 1993 Fynbos Forum meeting Dr. Guy Preston (two years before he became the National Programme Leader of the DWAF Natural Resource Management Programmes) already commented on the potential impact of creating jobs through invasive alien plant control on the living standards of the poorest of the poor.

Today through its poverty relief and economic empowerment impacts WfW and it's sibling programmes have successfully mainstreamed natural resource management in socio-economic development. This is also where the ethical question comes in. Ethics is how humans engage with the environment. The face of poverty still haunts South Africa. The *Working for …* programmes have changed the way natural resource managers engaged society in their core business. Natural resource managers began to look at poverty as part of the solution rather than part of the problem. The *Working for …* programmes changed natural resource restoration and conservation from being the "nice to have" of the rich to the "bread and butter" of the poorest of the poor. The WfW mission statement highlights this by placing emphasis on improved integrity of natural resources while improving the livelihoods of its beneficiaries.

This approach changed the way we looked at managing conservation areas in South Africa, and also the community's perception of these conservation areas (nature reserves and national parks). Natural resource restoration and conservation has become an important source of income to the poor. Ecosystem services are now significant income-streams in many poor rural

communities. Through natural resource restoration and maintenance the *Working for …* programmes have created employment and livelihood opportunities for significant numbers of people. Since 2003/04 (to date 2008) WfW has directly benefited more than 30 000 people per year, overwhelmingly from rural communities.

WfW tries to further add value to the jobs created directly by promoting the harvesting and processing of cleared biomass. It is therefore busy developing the integration of livelihood opportunities with management of invasive alien plants. The programme started by supporting rural projects to develop products from invasive Australian Acacias. Opportunities are also being provided within national parks, such as the tented camp project in Table Mountain National Park. These activities can be described as supplying environmental services.

True to its name WfW also formally engage with the water sector to improve utilizable water through the clearing of invasive alien trees from watersheds, wetlands and riparian areas. This is being regulated by the water pricing strategy established under the National Water Act. Over and above the current section on invasive alien plants though, there are further opportunities for the development of payments for watershed services through the water pricing strategy. Land management practices influence water drainage patterns. While many invasive alien trees actually reduce runoff and most probably also ground water, denuded landscapes cause increased flooding during rainfall events due to the fact that there is no natural vegetation to slow down flows. This further leads to increased sediment loads, reduced dry season flows and poorer water quality. Research has shown that veld fire and grazing regimes have a major impact on vegetation cover in the mountain grasslands of the Drakensberg. Rural communities in these upper catchments should have the opportunity to formally engage with the water sector by improving water security through improved land management practices. These communities can therefore sell ecosystem services, more particularly watershed services in the case of the Drakensberg and other communities in the upper catchments of our major drainage systems.

A number of publications on community based natural resource management (CBNRM) and payments for ecosystem services have seen the light over the last decade or more. There is therefore a body of knowledge and an ethic that have been developed as a basis for sustainable natural resource management. The challenge to natural resource managers however, is to quantify and value the services that they render to society. Due to its original focus WfW has supported extensive research on the impacts of invasive alien plants on water runoff. Invasive alien trees in riparian areas are often equated to a leaking pipe. It's most significant impact is very often in poor rural villages where people extract directly from the stream (the so-called run of river use). Dry season flows are therefore critical to these deep rural communities.

Hopefully what has been presented so far illustrates the move away from the historical/protectionist ethic of natural resource managers to a socio-economically integrated ethic. The *Wf… programmes* have very little difficulty with communities buying into its services, as the programmes do not come in as an outsider but rather as an integral part of the socio-economic system of such communities. Once projects are up and running communities reap the benefits of funds entering the system. Some would argue that South Africa has an unofficial unemployment rate of 41%. So *Wf…* projects are generally very welcome in rural communities. People are desperate for a day's work. The demand for employment therefore contributes to natural resource restoration and conservation.

There is a debate in SA about whether each South African should be entitled to a social security grant every month. However there is a school of thought that argues that such funding should rather be used by creating limited employment for people that really need the money through so called *Community Works Schemes*. WfW, Working for Wetlands, Working for Woodlands and Working on Fire (*the Wf… Programmes*) have the potential to create some 90,000-100,000 person years of employment per year. This will have a permanent downstream impact on 300,000-400,000 people per year. Sustainable natural landscape use (grazing, nature based recreation, consumptive utilization of plant resources etc.) is a very cheap land use practice.

Although it seldom maximize financial turnover, the economic return on investment through on site (in situ land use) and off site benefits (watershed services, carbon sequestration and biodiversity) is very often much higher.

Where local communities contribute to the improvement in water security of down stream users, they should be financially rewarded for it. WfW is currently negotiating a deal for the clearing of invasive alien plants with a mine in the Olifants Water Management Area (Limpopo & Mpumalanga Provinces) with such payments in mind. Not all the stream flow restored in such restoration projects becomes available for human consumption. Some of it stays in the system as base flows. It therefore also contributes to the environmental reserve which in this case is the Kruger National Park who is struggling to sustain its riparian systems. The mine had a choice whether to buy water rights from the agricultural sector or invest in invasive alien plant clearing. They chose the latter.

When there is access to resources, there is access to opportunities. Part of the challenge in natural resource management today lies in society's mind sets, for example, the interpretation of the term Community Based Natural Resource Management (CBNRM). Often the emphasis in CBNRM projects is on the words "Community Based" with the result that the natural resource is expected to supply in all the demands of the community. However, only very seldom can the natural resources in an area supply in all the demands of local communities. This results in community expectations to outstrip the resources that the natural landscape can supply. This inevitably leads to resource degradation. However, if one changes the emphasis to Natural Resource Based Community Development the focus shifts to what the resource can supply. The question then changes to "How much can natural resources contribute to community development?" Now community needs can be aligned with what the natural landscape can supply.

Ultimately the change in conservation ethics resulting from initiatives such as the *Working for …* programmes and Community Based Natural Resource Management projects is one of community ownership and beneficiation. Gone are the days where local communities were seen as externalities to the conservation cause. Today they are part of the solution rather than being part of the problem.

The SANParks Poverty Relief Programme: A national overview of SANParks delivery achievements, person days, training quality, alignment with SANParks cultural and natural heritage priorities
Antionet van Wyk, SANParks

The South African Government is implementing an Expanded Public Works Programme (EPWP) aimed at poverty relief due to high unemployment in the country. SANParks participates in 5 of the sub-programmes of the EPWP. In addition to the removal of alien vegetation, there are also programs for cleaning the coast, rehabilitation of wetlands, fire fighting and infrastructure development. The "People and Parks" programme that forms part of the DEAT Social Responsibility Programme focuses on infrastructure development and gives the majority of construction contracts to black-owned companies. SANParks has found that these programmes provide huge opportunities to expose people from neighbouring communities to national parks and what parks are all about. Through these programmes, people that would not have been in a position to visit the park are employed in parks for periods of up to two years. We also link up with community projects and provide support by giving assistance and guidance.

Of our guiding principles for the implementation of special projects, the social deliverables are most important (employment, training, etc.). We also aim for clear objectives; detailed business plans (plan upfront); adaptive management; strict adherence to deliverables/goals; get the

systems and procedures right; dedicated staff and feasibility studies for income generating projects.

Some of the challenges we face include high staff turnover due to people being employed on contracts; capacity to implement these projects, especially in construction where skilled people are scarce; training (costly and issues arise with the service providers); concern over our real impact in certain communities (due to high substance abuse problems in certain communities, it is often a struggle to get people to work); and concern over exit opportunities (what happens to people afterwards?). SANParks keeps track of the contractors used in programmes and has developed a pool of contractors around most parks which can be used for various needs.

Regarding the exit strategy, there is a real concern because you are exiting people after two years back into an economy with a 41% unemployment rate. We need to give them a livelihood opportunity and ensure that the relevant skills are transferred place them in a better position to compete for other work opportunities. We need to get them to stay in business and create an economic sector around ecosystem services rather than a one-time poverty relief bridge. Even if the Expanded Public Works Programme doesn't continue, park management knows who is around what areas and can get people to help in the normal operational activities of the park, beyond the special project implementation period. The major challenge is to create small businesses which can function outside special programmes.

The Table Mountain National Park: A Park in a City
Brett Myrdal, Park Manager, Table Mountain National Park, SANParks

The value of an ethics based perspective on biodiversity conservation work is intuitively that this principled framework will be able to guide best practise. It is not intended to be a distinct theoretical exercise, but one which ensures better results, with the theory guiding the practise in a dialectic known as praxis.

This workshop will explore the TMNP as a case study for the implementation of two of the South African government's poverty relief programmes and will examine if this has followed an ethically rooted approach and whether this has advanced biodiversity practise.

The two poverty relief programmes are the Department of Environment and Tourism's social responsibility programme (DEAT SRP) and the Department of Water Affairs and Forestry's Working for Water programme (DWAF WfW), both being run by the Table Mountain National Parks (TMNP).

The TMNP is one of 22 national parks within SANParks and has been at the forefront in terms of numbers employed on these programmes with approximately 800 temporary employees sustained for four years.

The question is which ethical principles guided these programmes and did they make any difference?

Poverty – ethical driver for investment in poverty relieving public works Biodiversity Programmes
The City of Cape Town provides the urban context for all activities within the TMNP.

As a country South Africa is second only in the world to Brazil for having the widest extreme between richest and poorest, as measured by the GINI coefficient, a gravity model able to measure social inequality per capita across a society.

As a city, Cape Town has the widest gap between rich and poor of all cities in South Africa.

In this context, the ethics of choosing labour intensive methods, and running programmes targeted at the training and developing the unemployed as preparation for their future engagement in the formal sector is a key contribution that the park can make to mitigating the social inequalities of its neighbouring city communities.

While biodiversity management usually entails labour intensive work the choice could have been made to focus on mass volunteer involvement. This would have missed the opportunity to use the poverty relief programmes to promote the delivery of Benefits beyond Boundaries to the poorer communities neighbouring the TMNP.

Quality of training becomes an ethical driver
Having chosen to follow a poverty relief approach requires a further ethical choice of focusing on the quality of contractor development and training on public works programmes.   While conservation is naturally labor intensive and readily possible to have large numbers of temporary workers, the key ethical question is what happens to these people after the temporary programme, what do the people exit into? Has their position in society changed? Are they able to get further work or do they return to unemployment?   The quality of the exit programme is determined by the quality of the training and supervision offered during the public works programme. So while it is easy to measure the numbers of people and training days, what is our measure of quality in the contractor career development and training programmes?

Focus on the sustainable restoration of biodiversity processes becomes another ethical driver
Our visionary slogan provides the focus for the Table Mountain National Park as *"A Park for All Forever".*

When we talk of "*A Park*" we mean focussing on the restoration of the top five areas of eco-system processes: namely
- fire regimes,
- alien plant and fauna control,
- path building and maintenance (safe walking and erosion control through water management),
- forest and
- marine

Each of these areas of focus for eco-system management ensures that the efforts of the poverty relief programmes are not wasted but tangibly improve the value of the natural capital in the Park.

Focus on access as an ethical driver
"For All" concerns access to recreational and economic benefits. There is no point in involving citizens in programmes to conserve the TMNP, if after the programmes are over they cannot afford to return. Affordable access for citizens is provided through the CT WILD card, such that citizens can pay R60, (~6 USD) to enter 12 times a year, through a gate where the tariff for tourists is R60 each time.

Access to sustained economic benefits can be derived from the small businesses set up to manage tourism infrastructure and business. So while it is one thing to build a tented camp, our goal is to ensure that camps are part of a viable business in running the Hoerikwaggo Trail which walks 100km of paths from Cape Point to Cape Town, and provides portering, catering and top quality mountain guiding business opportunities. Thus the ongoing viability of the Hoerikwaggo

Trail can create and sustain work beyond the temporary tented camp and path construction contracts into long term maintenance and guiding contracts.

Focus on touching the earth lightly as an ethical driver
Forever. Raises not only the questions of business wise financial sustainability, but also the physical nature of the tented camps and paths design and location. The concept of touching the earth lightly, concerns the sense of place, the use of materials and energy efficiency, and the ability to remove the camp should conditions change, all important ethical questions when constructing eco-friendly tourism infrastructure.

Focus on island connectivity and reconciliation ecology as ethical drivers
Fynbos is the oldest flowering plant kingdom, located in the south western most corner of Africa. This area is known as the global cradle of humankind (300,000 years), and over time people have followed the animals and plants cycles, which follow the rains. Hunter gatherer communities would move from the arid coast to the hot and high interior to take advantage of its summer rains and then migrate back to the coast for the coastal winter rains and fogs. This was the pattern of movement until the city of Cape Town brought about a permanent urban settlement which cut off the Table Mountain chain from the hinterland. The TMNP is now a conserved island of biodiversity, cut off from the hinterland by the city. What is the future of that island without measures to promote connectivity?

Reconciliation ecology resonates with the truth and reconciliation commission of our recent South African political experience of healing society's wounds through talking and understanding so as to connect different cultures each reduce the barriers between us.

Likewise in a biodiversity context we have allowed city life to alienate us from nature, at our own cost. By reconciling ourselves to the fact that we are part of nature, and not passive observers, we can establish connectivity corridors through the city. Citizens can be guided by the vision that Cape Town can be a City within a national park rather than just having a national park within a City.

The notion of "reconciliation ecology" can be applied to the neglected Cape Flats lowlands, whereby citizens of townships and suburbs can choose to see themselves as part of nature and hence live in such a way as to provide the connectivity corridors linking the mountain islands, both within the TMNP and between the TMNP and the mountainous hinterland.

This requires programmes to create awareness amongst residents so that we choose not to plant invaders, not to use insecticides and to encourage fauna friendly security fencing and bird feeders so that insects and birds can get from one Biodiversity Island to another. "The riverine corridors and wetlands linking the mountains through the Flats to the sea are the matrix for this to happen."

To conclude then a commitment to "Benefits beyond Boundaries" as part of a profound understanding of what it means for the TMNP to be an open access urban national park is another ethical driver
We cannot stop our efforts at the edge of the park but through partnerships with the City of Cape Town and Cape Nature can manage downstream impacts and think of people as urbanites active within the ecosystem. Through spreading the social benefits of biodiversity based poverty relief restoration projects, we can improve TMNP's relations with disadvantaged communities around TMNP, create quality tourism infrastructure for the important domestic and international tourism markets and sustain the city's tourism industry. All this is guided by an ethics based vision for *A Park for all Forever.*

Department of Environmental Affairs and Tourism (DEAT): Perspectives on the DEAT Social Responsibility Programme
Kader Meyer, DEAT

Money to fund poverty relief regarding the environment comes from the National Treasury. South Africa has a constitutional mandate to alleviate poverty and provide job opportunities. There are also applicable labor laws. For example, there are project selection criteria: target poor households; 60% women, provide a minimum of 2 days training for every month worked; 80% of jobs to local people…

There is also an Environment and Culture Sector within the Social Responsibility Program. Other programs include Working for Water, Working for Wetlands and Working on Fire.

Our objectives are to create jobs, give training to facilitate long term employment, and link people in the 2nd economy with people in the 1st economy. We are working to create land-based livelihoods, rehabilitate, develop natural resources and cultural heritage, as well as promote tourism.

Our key focus areas include sustainable land-based livelihoods (such as sustainable agriculture and food gardens), working for the coast (cleaning, marine monitoring), people and parks (people come from the communities and work in the parks), and working for tourism (enhance tourism potential). Some Community Tourism projects include building a tourism facility for a North-South tourism route; providing alternative income opportunities (no longer have permits to fish); and for people and parks, we have baboon monitors (protect baboons and prevent them from invading residential areas). 60% of intake must be women because of the history. We must also hire 2% disabled and 20% youth.

In Working for the Coast we build boardwalks, clean-up, and train people to become marine monitors, and collect and register species. In the Community Tourism Projects, women are in traditionally male- type of work (plastering, etc.), for example with the sandbag method of sustainable building. There are also community tourism projects operated by women independently of SANParks.

When we select projects we take an integrated approach: all come from municipalities, from provincial growth strategies. There are workshops at the community level and they put forth their proposals formally. We then fund the project and appoint an independent implementer (because money cannot be transferred from different spheres of government). The most important thing is that these formerly unskilled people walk away with skills. We provide temporary jobs and make them employable at the end of the term. We do face problems. Our current struggle is aligning the accredited training with the job itself. People need to be skilled to use that skill within the project. It is a tedious process and by the time they are qualified to do the job, 70% of job is finished.

We have evidence that many of the graduates, especially in rural communities, become part of the new housing programs. We need to set up a database to see to what extent people are employed. Also while they are being trained we should put them in the database so that they can be used in other projects to their level of training.

We are close with the Department of Labor. They subsidize what we have for accredited training. While they are subsidizing they have their own national database to register all skilled persons within the country. The Department of Labor needs to be part of the training of all other departments.

Site Visits

Site visits were undertaken to two tented camps, one complete and one under construction. A third visit was to see the work of an alien plant invader clearing team.

The site visits were an important part of the workshop and followed the contextual presentations. This allowed for discussion on site with the teams, seeing the work in progress which allowed for the third and final part of the workshop to be in a good position to make recommendations about the ethics of best conservation practise.

Orangekloof Tented Camp

The tented camp has been designed to fit into the soft afromontane forest valley of the back of Table Mountain; known as Orangekloof, as it supplied the shipping timber needed by the Prince of Orange of the Netherlands, when the Dutch occupied the Cape in the 17th century.

All the structures, boardwalks and tent shelters were built from timber that had been harvested from alien trees felled and milled in the park by poverty relief teams.

A presentation, followed by open dialogue, was then given by the Hoerikwaggo Guides, the only black accredited mountain guides in South Africa.

Slangkop Tented Camp

The workshop participants next travelled to Slangkop Tented Camps, located near the Kommetjie lighthouse on the Atlantic Ocean.

Here they saw the TMNP poverty relief timber construction teams in progress. The group was able to walk the site, walk the boardwalks, meet the poverty relief teams and discuss the project with the Project and Construction Managers.

Alien Clearing & path building teams

At Silvermine, the participants were also able to see Alien Plant Clearing teams in action, as well as Path-Building teams in action. Organised into contractor led teams of ten, women and men, the teams were uniformed disciplined and clearly proficient in their work, and discussed techniques for keeping water off paths, or for ensuring the alien plants would not re-grow once cut.

Appendix 3. Chicago Wilderness Perspective: SANParks Case Study

SYNOPSIS OF CAPE TOWN, SOUTH AFRICA, CASE STUDY
IUCN, Biosphere Ethics Project
Carol Fialkowski   April 9, 2008

INTRODUCTION:

The purpose of this synopsis is to provide Chicago Wilderness (CW) with insights and unique program features from the Table Mountain Workshop that may lead to or suggest areas for consideration and discussion by CW members, task forces or teams.

DESCRIPTION OF CAPE TOWN PROGRAM

South African National Parks (SANParks) describes the program's purpose as "Conservation through Social Upliftment". South Africa (SA) faces huge unemployment issues and coupled with governmental changes initiated as a result of Apartheid, a focus on the future elimination of townships. In SA parlance, townships are basically squatter camps where unemployed black South Africans live in self-constructed shacks without basic services such as water, electricity, etc. The problem is being exacerbated by thousands of Africans moving to SA from surrounding troubled countries.

Concurrently, SA's natural areas, ranked among the most unique on the planet, suffer from neglect and degradation with respect to specific conservation management issues. Social changes resulting from the elimination of Apartheid also mandate that Parks are to contribute to social upliftment programs and be more open and accessible particularly to people from disadvantaged communities. SANParks, a governmental agency, married these two needs (conservation of unique biodiversity heritage and social upliftment) in this now highly successful, internationally recognized program that the government funds and SANParks administrates.

The essence of the program is to provide skills, training and employment to unemployed township residents for a minimum of two years doing conservation related work in the parks, especially Table Mountain National Park, parts of which are located in the city of Cape Town. Matching the proximity of the township to a nearby natural work area is a program priority.

The outcomes aspired to include the following:
- restoring critically endangered and globally significant natural areas;
- training and future employment for township residents; and
- re-connecting poverty level black and colored residents of Cape Town with the natural areas that surround and sustain them.

Among the jobs being done (think CCC):
- trail construction – build boardwalks thru wetlands, rock trails, chipped and plank trails
- park guides – high school grads extensively trained to guide hikers on multi-day
- trips and interpret the park's natural history
- construction workers – build tent camps, washrooms, shower facilities, cooking lodges, decks, make furniture
- cooks – prepare nutritious meals for crews sometimes 2-3 times a week
- concessionaires
- marine clean-up
- monitoring

UNIQUE FEATURES:

1. Founding Principles

Four principles from the Earth Charter are used as the foundation for the SANParks efforts: Respect and Care for the Community of Life; Social Justice; Ecological Integrity; and Democratic Practices.

The South Africans speak of it as using natural resources as a form of poverty relief – improving the integrity of natural resources while improving the livelihood of the beneficiaries of those resources. The "restoration" of social justice is seen as an integral part of the "restoration" of natural systems.

The term "reconciliation ecology" was often used – restoring our role within nature.

2. Scale

25-35,000 are employed each year in SANParks. This scale has brought to the participants a sense that the government is committed – to them and to conservation. The numbers encourage the participants to develop cadres in each township who become spokespersons and supporters of SANParks and nature.

3. Transformative Power

To speak to the program participants, hear their stories and learn of their newfound love for and excitement about their work, nature and the park is truly inspiring. Particularly impressive were the stories of the park guides. Many who signed up for the 2 year program did so because they needed work. Little did they anticipate how their lives, outlook and attitudes would be transformed forever.

4. Community Involvement:

Employment: When SANPark administrators began to face problems with retentions, absenteeism, behavior, etc. they turned to the townships for help. Now a township committee is involved, with the Park, in hiring decisions and disciplining employees, setting expectations and requirements. This shared responsibility for "social upliftment", while time consuming, is effective and provides a larger sense of ownership.

Planning: Much time and energy is devoted to listening to community needs, thoughts, and suggestions when making management decisions. Developing a management plan for a favorite Park area loaded with non-native eucalyptus trees is currently under negotiation. The Park response seems to be slow but steady wins the race – so while they hold firm on the principle, the time it takes to achieve the goal may be lengthened. Direct confrontation is not an option.

5. Public Safety

Over the past 15-20 years, safety in the Parks has been an issue. While the program does employ security officers, a newfound pride in the parks by the previously underserved population has helped to decrease crime and increase appropriate use.

6. Access and Park Support

Before Apartheid, blacks and so-called coloreds were not usually allowed in Parks. An emphasis of SANParks has been "Some access for all, forever". In other words, some sensitive areas are off limits to all, while other areas have regulated access, and others locations have generally open access. The target audiences were previously non-users, and often those whose use of the Park involved non-approved activities. Their employment in the parks is creating a base of knowledgeable supporters and new informed users.

7. Exit Strategies, Measures of Success

SANParks has devised a comprehensive system for tracking costs, insuring that the required 20% of employee time is focused on training, recording work achieved in each job area, etc. What has remained a challenge is what they call "exit strategies". How many people stay employed, how have the skills taught helped, do they remain living in the townships? In other words, has the goal of employment been reached. While the restoration of natural areas is carefully being monitored and shows positive change, what about change in the human dimension?

A number of strategies are in development to help in this regard. A database of all "graduated" employees is being created and will be available to employers who will be greatly encouraged to hire these folks. While a number have moved up to jobs within SANParks the openings are few. Additionally there is a need to mesh the training with the type of skills needed in the workforce – being on time, organized, articulate, responsible, etc. Also providing links to further education and supporting continuing students is in the works.

The SANParks program definitely addresses and engages both the human (social science) and scientific (ecological) dimensions of natural area restoration and conservation work.

An additional one page paper on the ethical considerations of the Cape Town and Chicago Wilderness models is being prepared and will be part of the Cape Town summary prepared by the BEP project team.

Appendix 4. Main conclusions from 2005 WBH Consultative Meeting

The aims of this meeting were to develop recommendations for implementation of the two resolutions (WCC 3.020 and WCC 3.022) and to consider how the ESG could contribute to this work and its related activities. This summary addresses only the conclusions regarding WCC 3.020 (see Appendix 6 for the full text), the resolution that called for the drafting of a code of ethics for biodiversity conservation.

A. Work Plan

The Bangkok IUCN World Conservation Congress adopted the Earth Charter as a general framework for IUCN's work on ethical issues, including the development of a code of ethics for biodiversity conservation under WCC resolution 3.020.

Priorities for Resolution WCC 3.020: Drafting a Code of Ethics for Biodiversity Conservation
* Ensure that the scope of the code is as complete as that of the Convention on Biological Diversity and covers the full range of issues which it addresses.
* Convene a representative Planning Group to develop a process and time frame by which the code will be drafted. Representatives should be invited from all Commissions, the Secretariat and the Council.
    - This process will include consultations with IUCN membership and a broad constituency of relevant organizations, and take advantage of various international meetings being held over the coming years. Relevant meetings might include: the Earth Charter +5 conference in Amsterdam November, 2005; SBSTTA-CBD, Montréal November 2005; CBD Conference of the Parties 8, Brazil, March 2006; the IUCN Academy of Environmental Law, Brazil, 2007; and annual conferences of the Global Ecological Integrity Group.
    - The Planning Group will recommend to the WCC Steering Committee how the draft code will be presented to the next World Conservation Congress, including the need for Congress consultation workshops and the creation of an appropriate motion in line with Congress rules.

Priorities for WCC 3.020.3: IUCN engagement with philosophical and religious schools of thought regarding nature conservation throughout the world

* Continue ESG collaboration with the Centre for Humans and Nature to hold a series of research symposia on the philosophical, religious, spiritual, cultural and scientific foundations for more effective conservation efforts.

B. Resources for Ethics

* Carry out a feasibility study for the establishment of an Ethics Resource Centre that will provide the IUCN community and others with access to resources, information and advice on the ethical issues and perspectives with which they have to deal, including how IUCN can best encourage member states and organizations to implement WCC 3.020.4.
* Commission a series of monographs and other documents to enable IUCN members to understand the history, sources, contemporary thinking, and practical uses of ethics in world conservation activity and make them available through IUCN communications and publishing programs and/or an Ethics Resource Centre.

C. Assessment and evaluation

The ESG will be responsible for developing appropriate assessment and evaluation measures for each major component of the workplan. Every effort will be made to ensure broad stakeholder consultation and analyses involving quantitative and qualitative data.

D. Organization of ESG

* Membership of the ESG should be drawn from all Commissions and reflect the Union's diversity.
* A concerted effort should be made to expand the membership of the ESG and recruit leading figures in the fields of environmental and global ethics, law, the social and natural sciences, history and philosophy as active members.
* Two organizational models should be considered: (a) the organizational base and secretarial support for the ESG will remain within CEL; (b) the organizational base and secretarial support for ESG will become the joint responsibility of CEL and CEESP (reflecting the historic role the latter's predecessors have played in the development of ethics in IUCN and the relevance of ethics to its mandate). It is recognized that the Chair of CEL will make a final determination on this issue in consultation with the other Commission Chairs.

Appendix 5. Main conclusions from 2006 BEP Gland Workshop

When addressing the substantive and procedural needs of a proposed code of ethics for biodiversity conservation, it was agreed that:

A. There is a need for a new ethic for nature conservation:
♣   We need to recognize and reaffirm our dependency on nature.
♣   The urgency is now.
♣   There is a lack of a biodiversity conservation ethic to guide the world at this most crucial and fragile point in history.
♣   Existing documents are inadequate.

B. The content of a new ethical code should include or be informed by:
♣   The Earth Charter should serve as one of the primary reference texts for the Code.
♣   Biodiversity needs to be expressed in terms that reflect contemporary understanding of evolution and ecology, including ecosystem dynamics.
♣   A new philosophy of nature needs to inform the document.
♣   The ethics of the code should express the values of to the world's diverse religious faiths while at the same time expressing the ultimate commitments we all share.
♣   Global/Local (expression of CBD "common but differentiated responsibilities").
♣   The whole range of issues raised by the imperative of biodiversity conservation needs to be addressed or have the capability of being addressed.
♣   The appropriate name for the Code needs to be finalized.

C. IUCN plays a critical role in the development of a new ethical code:
♣   IUCN is in an excellent position to draft a Code of Ethics for Biodiversity Conservation.
♣   IUCN is in need of a unifying moral and ethical rationale for its work.
♣   Practical ethical tools are needed in the work of IUCN.

D. The Consultative Process for a new ethical code should incorporate:
♣   Project Governance
♣   Target Audiences
♣   IUCN Involvement
♣   Consultative Meetings and Partnerships - the Code should be an invitation to serious reflection

E. The Drafting Process for a Code of Ethics for Biodiversity Conservation should include:
♣   The Drafting Committee
♣   Continue global/local dialogue and encourage local communities to draft their own codes - there is a need for member organisations to engage in the international drafting process.
♣   Present the Benchmark Draft at the 2008 World Conservation Congress, and the final draft at the 2010 CBD Conference.

Appendix 6. 2007 CW Case Study: Recommendations for BEP

It was agreed that the proposed code of ethics for biodiversity conservation, and associated program, should include the following elements:

A. An Ethical Statement
♣ The language must speak to both the hearts and minds of people.
♣ The document should be drafted using words from non-English languages which are rich in meaning.
♣ The statement must be speak candidly, stress the urgency of situation, address our responsibility for the biodiversity crisis and moral obligation to change.
♣ The close interdependence of ecological and cultural integrity, of biological and cultural diversity, needs to be emphasised.
♣ Economic and social justice must also be included; unless these are assured, justice for other species cannot be achieved.
♣ The statement must reflect a scientific understanding of evolution and biodiversity.

B. Guidelines
♣ The guidelines should be four to five pages long and modeled on the IUCN "Guidelines for Applying the Precautionary Principle to Biodiversity Conservation and Natural Resource Management."
♣ The guidelines should be designed for use by anyone working on biodiversity conservation, in clear, accessible language that facilitates evaluating the ethical appropriateness of actions.
♣ Specific issues were identified that should be addressed, such as the need for a shared vision; planning for inter-organizational conflicts; the question of scale; identifying common threats to biodiversity.

C. Models of Governance
♣ This document should be about five pages long, supported by separately published in-depth case studies.
♣ It should give examples of what good governance for the community of life might look like at all levels and from the perspectives of governments, academia and civil society groups.
♣ The document should be prepared in partnership with the IUCN CEL "Governance for Sustainability" project.

D. A Rationale
♣ This rationale should consist of a concise, five-page document supplemented by separate essays on key concepts.
♣ The rationale, regardless of its formal title, should reflect the best of human ways of knowing nature and culture.
♣ The rationale should be a strong document that is not afraid to state and provide clear arguments in support of some uncomfortable ethical and scientific truths that are strongly supported by the separate essays.
♣ The rationale should lay out the three kinds of love for nature that are part of our evolutionary and cultural heritage, and which we share with other species.

E. Other Issues:
♣ Ethical Support Network
♣ Outreach Plan
♣ Ongoing Dialogue and Consultation

Appendix 7. IUCN World Conservation Congress Res. 3.020

THE RESOLUTION ON DRAFTING A CODE OF ETHICS FOR BIODIVERSITY CONSERVATION AS ADOPTED BY THE WORLD CONSERVATION CONGRESS 24 NOVEMBER 2004

RESWCC3.020 Drafting a code of ethics for biodiversity conservation
Congress Reference: CGR3.RES017-REV1

RECALLING humanity's primary responsibility for preserving the diversity of life on earth, taking into account the past and present impact of its activities on the environment;

REAFFIRMING the value of the existence of biodiversity, linked to humanity's own value, as well as to the satisfaction and wellbeing that its existence brings, and the additional value it represents for future generations;

HIGHLIGHTING the concerns raised by the use and impact of new biotechnology tools on the future of biodiversity, particularly with regard to certain genetically modified organisms, and by negotiations on the patentability of living matter;

HIGHLIGHTING ALSO the limits, or even pernicious effects, of a strictly utilitarian view of biodiversity and the services rendered by nature;

RECALLING the first preambular paragraph to the Convention on Biological Diversity, which underlines the intrinsic value of biological diversity and the value of its elements at social, educational, cultural, recreational and aesthetic levels;

RECALLING FURTHER that the Global Biodiversity Strategy and IUCN's strategy Caring for the Earth set out the basic principle that respect is due to all peoples and forms of life on earth, and stipulate that human development must not be implemented at the expense of future generations, nor threaten the survival of other species;

REAFFIRMING its commitment to the preamble of the IUCN Statutes, which affirms that nature conservation contributes to the establishment of peace, progress and human prosperity and that natural beauty constitutes the essential framework for humanity's spiritual development, which an increasingly mechanized existence renders necessary more than ever; and

NOTING that many philosophical and religious schools of thought are becoming more and more explicitly involved in nature conservation;

The World Conservation Congress at its 3rd Session in Bangkok, Thailand, 17-25 November 2004:

1. REAFFIRMS IUCN's commitment to an ethical view of nature conservation, based on respect for the diversity of life, as well as the cultural diversity of peoples;

2. CALLS ON the Director General to invite the ethics specialist group of the IUCN Commission on Environmental Law to hold discussions with a view to drafting a code of ethics for the conservation of biodiversity, accompanied by aims to be achieved and actions to be undertaken, and to submit such a code for consideration at the next World Conservation Congress;

3. PROPOSES that IUCN takes an interest in the efforts made by existing philosophical and religious schools of thought regarding nature conservation throughout the world;

4. RECOMMENDS that IUCN considers subsequently strengthening its work with States in order to promote the adoption of national codes of ethics offering each and every person rights and duties concerning respect for the diversity of life on Earth.

State and agency members United States refrained from engaging in deliberations on this motion and took no national government position on the motion as adopted for reasons given in the US General Statement on the IUCN Resolution Process. NOTE: Only the United States submitted a written statement.

Appendix 8. The Earth Charter

We stand at a critical moment in Earth's history, a time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future at once holds great peril and great promise. To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are one human family and one Earth community with a common destiny. We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace. Towards this end, it is imperative that we, the peoples of Earth, declare our responsibility to one another, to the greater community of life, and to future generations.

Earth, Our Home
Humanity is part of a vast evolving universe. Earth, our home, is alive with a unique community of life. The forces of nature make existence a demanding and uncertain adventure, but Earth has provided the conditions essential to life's evolution. The resilience of the community of life and the well-being of humanity depend upon preserving a healthy biosphere with all its ecological systems, a rich variety of plants and animals, fertile soils, pure waters, and clean air. The global environment with its finite resources is a common concern of all peoples. The protection of Earth's vitality, diversity, and beauty is a sacred trust.

The Global Situation
The dominant patterns of production and consumption are causing environmental devastation, the depletion of resources, and a massive extinction of species. Communities are being undermined. The benefits of development are not shared equitably and the gap between rich and poor is widening. Injustice, poverty, ignorance, and violent conflict are widespread and the cause of great suffering. An unprecedented rise in human population has overburdened ecological and social systems. The foundations of global security are threatened. These trends are perilous—but not inevitable.

The Challenges Ahead
The choice is ours: form a global partnership to care for Earth and one another or risk the destruction of ourselves and the diversity of life. Fundamental changes are needed in our values, institutions, and ways of living. We must realize that when basic needs have been met, human development is primarily about being more, not having more. We have the knowledge and technology to provide for all and to reduce our impacts on the environment. The emergence of a global civil society is creating new opportunities to build a democratic and humane world. Our environmental, economic, political, social, and spiritual challenges are interconnected, and together we can forge inclusive solutions.

Universal Responsibility
To realize these aspirations, we must decide to live with a sense of universal responsibility, identifying ourselves with the whole Earth community as well as our local communities. We are at once citizens of different nations and of one world in which the local and global are linked. Everyone shares responsibility for the present and future well-being of the human family and the larger living world. The spirit of human solidarity and kinship with all life is strengthened when we live with reverence for the mystery of being, gratitude for the gift of life, and humility regarding the human place in nature.

We urgently need a shared vision of basic values to provide an ethical foundation for the emerging world community. Therefore, together in hope we affirm the following interdependent principles for a sustainable way of life as a common standard by which the conduct of all individuals, organizations, businesses, governments, and transnational institutions is to be guided and assessed.

P R I N C I P L E S

I . RESPECT AND CARE FOR THE COMMUNITY OF LIFE

1. Respect Earth and life in all its diversity.
a. Recognize that all beings are interdependent and every form of life has value regardless of its worth to human beings.
b. Affirm faith in the inherent dignity of all human beings and in the intellectual, artistic, ethical, and spiritual potential of humanity.

2. Care for the community of life with understanding, compassion, and love.
a. Accept that with the right to own, manage, and use natural resources comes the duty to prevent environmental harm and to protect the rights of people.
b. Affirm that with increased freedom, knowledge, and power comes increased responsibility to promote the common good.

3. Build democratic societies that are just, participatory, sustainable, and peaceful.
a. Ensure that communities at all levels guarantee human rights and fundamental freedoms and provide everyone an opportunity to realize his or her full potential.
b. Promote social and economic justice, enabling all to achieve a secure and meaningful livelihood that is ecologically responsible.

4. Secure Earth's bounty and beauty for present and future generations.
a. Recognize that the freedom of action of each generation is qualified by the needs of future generations.
b. Transmit to future generations values, traditions, and institutions that support the long-term flourishing of Earth's human and ecological communities. In order to fulfill these four broad commitments, it is necessary to:

I I . ECOLOGICAL INTEGRITY

5. Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life.
a. Adopt at all levels sustainable development plans and regulations that make environmental conservation and rehabilitation integral to all development initiatives.
b. Establish and safeguard viable nature and biosphere reserves, including wild lands and marine areas, to protect Earth's life support systems, maintain biodiversity, and preserve our natural heritage.
c. Promote the recovery of endangered species and ecosystems.
d. Control and eradicate non-native or genetically modified organisms harmful to native species and the environment, and prevent introduction of such harmful organisms.
e. Manage the use of renewable resources such as water, soil, forest products, and marine life in ways that do not exceed rates of regeneration and that protect the health of ecosystems.
f. Manage the extraction and use of non-renewable resources such as minerals and fossil fuels in ways that minimize depletion and cause no serious environmental damage.

6. Prevent harm as the best method of environmental protection and, when knowledge is limited, apply a precautionary approach.
a. Take action to avoid the possibility of serious or irreversible environmental harm even when scientific knowledge is incomplete or inconclusive.
b. Place the burden of proof on those who argue that a proposed activity will not cause significant harm, and make the responsible parties liable for environmental harm.
c. Ensure that decision making addresses the cumulative, long-term, indirect, long distance, and global consequences of human activities.
d. Prevent pollution of any part of the environment and allow no build-up of radioactive, toxic, or other hazardous substances.
e. Avoid military activities damaging to the environment.

7. Adopt patterns of production, consumption, and reproduction that safeguard Earth's regenerative capacities, human rights, and community well-being.
a. Reduce, reuse, and recycle the materials used in production and consumption systems, and ensure that residual waste can be assimilated by ecological systems.
b. Act with restraint and efficiency when using energy, and rely increasingly on renewable energy sources such as solar and wind.
c. Promote the development, adoption, and equitable transfer of environmentally sound technologies.
d. Internalize the full environmental and social costs of goods and services in the selling price, and enable consumers to identify products that meet the highest social and environmental standards.
e. Ensure universal access to health care that fosters reproductive health and responsible reproduction.
f. Adopt lifestyles that emphasize the quality of life and material sufficiency in a finite world.

8. Advance the study of ecological sustainability and promote the open exchange and wide application of the knowledge acquired.
a. Support international scientific and technical cooperation on sustainability, with special attention to the needs of developing nations.

b. Recognize and preserve the traditional knowledge and spiritual wisdom in all cultures that contribute to environmental protection and human well-being.
c. Ensure that information of vital importance to human health and environmental protection, including genetic information, remains available in the public domain.

III. SOCIAL AND ECONOMIC JUSTICE

9. Eradicate poverty as an ethical, social, and environmental imperative.
a. Guarantee the right to potable water, clean air, food security, uncontaminated soil, shelter, and safe sanitation, allocating the national and international resources required.
b. Empower every human being with the education and resources to secure a sustainable livelihood, and provide social security and safety nets for those who are unable to support themselves.
c. Recognize the ignored, protect the vulnerable, serve those who suffer, and enable them to develop their capacities and to pursue their aspirations.

10. Ensure that economic activities and institutions at all levels promote human development in an equitable and sustainable manner.
a. Promote the equitable distribution of wealth within nations and among nations.
b. Enhance the intellectual, financial, technical, and social resources of developing nations, and relieve them of onerous international debt.
c. Ensure that all trade supports sustainable resource use, environmental protection, and progressive labor standards.
d. Require multinational corporations and international financial organizations to act transparently in the public good, and hold them accountable for the consequences of their activities.

11. Affirm gender equality and equity as prerequisites to sustainable development and ensure universal access to education, health care, and economic opportunity.
a. Secure the human rights of women and girls and end all violence against them.
b. Promote the active participation of women in all aspects of economic, political, civil, social, and cultural life as full and equal partners, decision makers, leaders, and beneficiaries.
c. Strengthen families and ensure the safety and loving nurture of all family members.

12. Uphold the right of all, without discrimination, to a natural and social environment supportive of human dignity, bodily health, and spiritual well-being, with special attention to the rights of indigenous peoples and minorities.
a. Eliminate discrimination in all its forms, such as that based on race, color, sex, sexual orientation, religion, language, and national, ethnic or social origin.
b. Affirm the right of indigenous peoples to their spirituality, knowledge, lands and resources and to their related practice of sustainable livelihoods.
c. Honor and support the young people of our communities, enabling them to fulfill their essential role in creating sustainable societies.
d. Protect and restore outstanding places of cultural and spiritual significance.

IV. DEMOCRACY, NONVIOLENCE, AND PEACE

13. Strengthen democratic institutions at all levels, and provide transparency and accountability in governance, inclusive participation in decision making, and access to justice.
a. Uphold the right of everyone to receive clear and timely information on environmental matters and all development plans and activities which are likely to affect them or in which they have an interest.
b. Support local, regional and global civil society, and promote the meaningful participation of all interested individuals and organizations in decision making.
c. Protect the rights to freedom of opinion, expression, peaceful assembly, association, and dissent.
d. Institute effective and efficient access to administrative and independent judicial procedures, including remedies and redress for environmental harm and the threat of such harm.
e. Eliminate corruption in all public and private institutions.
f. Strengthen local communities, enabling them to care for their environments, and assign environmental responsibilities to the levels of government where they can be carried out most effectively.

14. Integrate into formal education and life-long learning the knowledge, values, and skills needed for a sustainable way of life.
a. Provide all, especially children and youth, with educational opportunities that empower them to contribute actively to sustainable development.

b. Promote the contribution of the arts and humanities as well as the sciences in sustainability education.
c. Enhance the role of the mass media in raising awareness of ecological and social challenges.
d. Recognize the importance of moral and spiritual education for sustainable living.

15. Treat all living beings with respect and consideration.
a. Prevent cruelty to animals kept in human societies and protect them from suffering.
b. Protect wild animals from methods of hunting, trapping, and fishing that cause extreme, prolonged, or avoidable suffering.
c. Avoid or eliminate to the full extent possible the taking or destruction of non-targeted species.

16. Promote a culture of tolerance, nonviolence, and peace.
a. Encourage and support mutual understanding, solidarity, and cooperation among all peoples and within and among nations.
b. Implement comprehensive strategies to prevent violent conflict and use collaborative problem solving to manage and resolve environmental conflicts and other disputes.
c. Demilitarize national security systems to the level of a non-provocative defense posture, and convert military resources to peaceful purposes, including ecological restoration.
d. Eliminate nuclear, biological, and toxic weapons and other weapons of mass destruction.
e. Ensure that the use of orbital and outer space supports environmental protection and peace.
f. Recognize that peace is the wholeness created by right relationships with oneself, other persons, other cultures, other life, Earth, and the larger whole of which all are a part.

THE WAY FORWARD

As never before in history, common destiny beckons us to seek a new beginning. Such renewal is the promise of these Earth Charter principles. To fulfill this promise, we must commit ourselves to adopt and promote the values and objectives of the Charter.

This requires a change of mind and heart. It requires a new sense of global interdependence and universal responsibility. We must imaginatively develop and apply the vision of a sustainable way of life locally, nationally, regionally, and globally. Our cultural diversity is a precious heritage and different cultures will find their own distinctive ways to realize the vision. We must deepen and expand the global dialogue that generated the Earth Charter, for we have much to learn from the ongoing collaborative search for truth and wisdom.

Life often involves tensions between important values. This can mean difficult choices. However, we must find ways to harmonize diversity with unity, the exercise of freedom with the common good, short-term objectives with long-term goals. Every individual, family, organization, and community has a vital role to play. The arts, sciences, religions, educational institutions, media, businesses, nongovernmental organizations, and governments are all called to offer creative leadership. The partnership of government, civil society, and business is essential for effective governance.

In order to build a sustainable global community, the nations of the world must renew their commitment to the United Nations, fulfill their obligations under existing international agreements, and support the implementation of Earth Charter principles with an international legally binding instrument on environment and development.

Let ours be a time remembered for the awakening of a new reverence for life, the firm resolve to achieve sustainability, the quickening of the struggle for justice and peace, and the joyful celebration of life.

ORIGIN OF THE EARTH CHARTER

The Earth Charter was created by the independent Earth Charter Commission, which was convened as a follow-up to the 1992 Earth Summit in order to produce a global consensus statement of values and principles for a sustainable future. The document was developed over nearly a decade through an extensive process of international consultation, to which over five thousand people contributed. The Charter has been formally endorsed by thousands of organizations, including UNESCO and the IUCN (World Conservation Union). For more information, please visit www.EarthCharter.org.