GAINING GROUND:
IN PURSUIT OF ECOLOGICAL SUSTAINABILITY
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IN PURSUIT OF ECOLOGICAL SUSTAINABILITY

Edited by David M. Lavigne

Associate Editor, Sheryl Fink
A Norwegian PM name of Gro
Took a concept which as we all know
Does not hold water
Though some think that it ought to
But the Planet just won't grow and grow.

Roger G.H. Downer 2004
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FOREWORD

The book you are holding in your hands is the result of a Forum convened in June 2004 by the International Fund for Animal Welfare (IFAW) in association with the University of Limerick, Ireland. Notable experts from around the world – scientists, social scientists, professors, policy advocates and others – came together to share their perspectives on wildlife conservation and the pursuit of ecological sustainability.

The Limerick Forum marked a first attempt by IFAW to summon leading thinkers and advocates from around the planet – and across the philosophical spectrum – and to invite their best thinking on one of the great challenges of our time: how to reconcile the twin imperatives of improving the human condition, and protecting wildlife and the natural systems upon which all life depends.

Each of the expert presentations that follow shares important insights. Taken together, they provide a rare contemporary study in wildlife conservation and the search for ecological sustainability. While the perspectives differ, the attentive reader consistently is drawn to several important conclusions:

• That the fates and well-being of people, other species, and the planet we share are inextricably linked;
• That our shared world, its inhabitants and natural systems, face new and growing threats; and
• That fresh, far-sighted approaches to wildlife conservation and ecological sustainability are urgently needed if the richness of life as we know and value it is to be passed on to our children and our grandchildren.

Over the course of the past century, attempts to improve the human condition have focused almost exclusively on sustaining economic development, often at the expense of the very natural systems on which human welfare and prosperity fundamentally depend. Now, in the first decade of the 21st century, the triumph of economy over ecology is virtually complete. The result? Burgeoning human population growth, unprecedented atmospheric and marine pollution, persistent poverty within and among nations, inadequate environmental protection in most regions, and a chronic lack of compliance and enforcement where legal protections for wildlife and the environment do exist.

The changes we have witnessed in our lifetime may not seem all that dramatic. They have been slow, subtle, and steady. From one generation to the next, what was a pristine environment becomes quasi-developed. The newly compromised ecosystem in turn becomes the baseline for the next level of development. Bit by bit, piece by piece, step by step, we become inured to lowered baselines of expectation, surrendering to the tyranny of small, incremental decisions that ultimately undermine not only our very own well-being but also the well-being of other species with which we share the planet.

Neither IFAW nor the distinguished Forum participants whose thoughts appear here are content to stay the course. Clearly, there are no mythical “magic bullets” for making the world a better place for all. There are many necessary elements of a new approach contained in these contributions, but none are sufficient to address the enormity of the problem. Yet we must start somewhere, and we need to start now. In fact, the experts have been telling us we need to start “now” since the middle of the last century.

In the essays that follow, each of the invited speakers, and a number of other participants in the Limerick Forum, present their thoughts and ideas about where we have been, and where we need to go, if we are to gain ground in our pursuit of ecological sustainability. They give us much to think about, and even more to do, if we really want to change the course of human history.

Frederick M. O’Regan
President, IFAW
Preface

We are in the midst of an ecological crisis. The human population continues to grow; the demand on nature and natural resources increases daily; more species are being lost more rapidly than ever before; climate change is upon us; sea levels are rising; almost one billion people go to bed hungry every night; the gap between the rich and poor continues to widen; and the threat of a global pandemic seems more likely with each passing day.

To say that it is a "life and death" crisis, not only for many species of plants and animals with whom we share the planet, but also for individual people and various human cultures, may sound like hyperbole, but it isn't. We've known about most of the problems for decades, but we've done little to ameliorate them. Although it's now getting late in the day, remarkably we may still have a bit of time to deal with the issues, reduce the losses, and slow or reverse at least some of the current trends. But this will only happen if we start now. And that, very briefly, is what this book is about.

The book itself actually goes far beyond what was originally envisioned. In 2002, the International Fund for Animal Welfare (IFAW) decided to organize an "IFAW Forum" to focus attention on, and to advance the discussion of, issues of particular relevance to its programs and campaigns. After considerable internal deliberation, it was decided that IFAW's first Forum would deal with ongoing concerns about the loss of biodiversity resulting primarily from human activities. Of special interest were those terrestrial and marine fauna that are currently threatened by commercial exploitation and international trade.

At the time, questions of particular interest to IFAW included: How can a continually increasing human population protect wild animals in their ever-shrinking habitats? In cases where humans exploit wild animals and their habitats, how can we take steps to insure that our use of them is ecologically sustainable in the sense that wild populations are maintained at sufficiently high levels that their ability to recover is not jeopardised, and that exploited ecosystems continue to exist and function?

While these sorts of questions have concerned conservationists for decades, there are precious few examples where ecological sustainability has actually been achieved. In the face of evidence that species are being lost at ever increasing rates, some individuals and organizations now promote a "use it or lose it" philosophy, contending that wildlife must "pay its way" in order to be conserved. Yet, history suggests that the commodification and commercial consumptive use of nature and natural resources usually contribute to species and habitat depletion, not to their conservation or sustainable use. The historical evidence also suggests that there are other approaches that hold more hope for achieving biological and ecological sustainability. Curiously, some of the more promising ones are usually overlooked when promoting conservation today, especially in the developing world.

The first IFAW Forum was designed, therefore, to offer alternatives to the "use it or lose it" philosophy for achieving "sustainable use" of fish and wildlife populations and for pursuing the larger goal of achieving ecological sustainability. These alternatives not only build on the lessons of history, but also upon the most recent developments in the new and growing field of conservation biology. Collectively, conservationists have a good understanding about what needs to be done in order to move towards achieving ecological sustainability. The challenge is to get that message back on the conservation agenda, and then to get conservation back onto the world agenda, in order to make a difference.

The Forum – entitled *Wildlife Conservation: In Pursuit of Ecological Sustainability* – took place from 17-19 June 2004 in Limerick, Ireland, co-hosted by IFAW and the University of Limerick. It consisted of twenty-three invited presentations, with additional papers contributed as posters. The speakers came from a variety of fields and backgrounds including: conservation biology, engineering, ethics, earth sciences, fisheries, geography, law, the social sciences, and zoology. As individuals, they had different opinions on many subjects, but, if they were – and
remain – united in anything, it is that they all agree that
the pursuit of ecological sustainability is a topic worthy of
discussion, debate, and action.

Each of the invited speakers was asked to prepare an
ey essay on their assigned topic. These essays were re-written,
reviewed, and revised in the months following the
Forum, and edited into this book. Authors of three of the
contributed posters were also invited to submit chapters
that are included here.

The organization of this volume follows the original
Forum program. After a brief introduction to the topic,
Part I provides the Global Context for much of the dis-
cussions that follow. Martin Willison addresses the on-
going loss of biodiversity and why the maintenance
of biodiversity is important, and he offers some suggestions
for achieving it. Ward Chesworth reminds us that unsus-
tainable practices have been with us since the dawn of
agriculture some 10,000 years ago and notes that an
entirely new ethic will be required if we are to change our
habits in the future. Sidney Holt examines the very
notion of sustainability, drawing heavily on his long career
as a scientist dealing with the issue, particularly as it
relates to commercial fisheries and whaling. The last
chapter in this section, authored by Sharon Beder, recog-
nizes that individuals and organizations attempting to
promote ecological sustainability in the 21st century must
first understand and appreciate that the conservation
movement has changed since the publication of the first
World Conservation Strategy in 1980 and its introduc-
tion of the now controversial idea of “sustainable develop-
ment”. They must also understand the nature of the
“wise-use” movement that has reshaped conservation over
the past 20 years. Professor Beder concludes with the sug-
gestion that ethical, political and social changes are
required in order to preserve the environment, a sugges-
tion that is reiterated throughout the book.

Part II moves on to examine four specific examples
where the pursuit of ecological sustainability has
remained an elusive goal: commercial fisheries (Jeffrey
Hutchings), commercial whaling (Vassili Papastavrou and
Justin Cooke), the trade in elephant ivory (Ashok Kumar
and Vivek Menon), and the current bushmeat crisis
(Heather Eves). These examples all involve commercial
consumptive use. The final two chapters in this section
discuss examples of so-called non-consumptive (some-
times more accurately called low-consumptive) use.

Arthur Mugisha and Lilly Ajarova examine the benefits
and challenges of ecotourism in an African context, while
Peter Corkeron tackles the issue of whale watching. All
the authors in this section offer suggestions for dealing
with the problems identified, including the need to sepa-
rate science from politics and to recognize explicitly the
role of ethics in conservation. They reiterate that “maxi-
mum sustainable use” is not, in fact, biologically sustain-
able, and call for the application of the precautionary
approach, and the development of responsible eco-
tourism. Two additional messages to emerge from this
discussion are that commercial consumptive use is not a
synonym for biologically sustainable use, and that non-
consumptive uses such as ecotourism are not “magic bullet”
solutions to all of our present conservation prob-
lems, nor do they necessarily achieve objectives such as
ecological sustainability.

Part III discusses some of the factors at play in wildlife
conservation and the pursuit of ecological sustainability.
Such factors include: human attitudes, values and objec-
tives, and other ethical considerations that provide the
real basis for conservation initiatives and policies (Vivek
Menon and myself); what science can and cannot con-
tribute to conservation in an uncertain world, and the
important role of ethics in science and conservation
(William Lynn); the limitations of purely economic
approaches (William Rees), including subsidies (Michael
Earle), to conservation; and the role that our human roots
as Darwinian animals play in the process (Ronald Brooks).

The final section, Part IV, presents some ideas on how
to put theory into practice and, ultimately, how to facili-
tate social change in both the developed and developing
worlds. It includes a number of initiatives that, if widely
implemented, could move us towards achieving the goal
of ecological sustainability. Sir Robert Worcester provides
insights into how and why societal attitudes change, based
on his decades of experience as a pollster. Such informa-
tion is essential if John Oates is correct in arguing, in the
subsequent chapter, that a change in attitudes will be
required if we are ever to be successful in our pursuit of
ecological sustainability. In particular, Professor Oates
highlights the need to divorce wildlife conservation from
economic development, a controversial recommendation
in this age of “sustainable development”. Valerius Geist
reviews the lessons learned from the North American
approach to wildlife management, an approach that
arguably – at least for a time – was well on the way to
achieving the goal of ecological sustainability for many
wildlife populations on that continent. E.J. Milner-
Gulland discusses the development of a new generation of
precautionary, risk averse modeling approaches designed
to achieve ecologically sustainable results, based on her
work on the bushmeat crisis in Africa. Bill de la Mare
then draws on his engineering experiences to ask what is
wrong with our approaches to fisheries and wildlife man-
agement and what can be learned from the engineering
profession to improve the current situation. Lawyer
Michelle Campbell and biologist Vernon Thomas review
some of the history associated with the precautionary
approach and discuss how it might be implemented,
using marine mammal management in Canada as a con-
venient example. Brian Czech provides some concrete suggestions of how society might move toward a steady state economy, a prerequisite, in his view, for achieving ecological sustainability. Atherton Martin then proposes what he terms a new “architecture” for wildlife conservation in the developing world, drawing on his experiences internationally and as a resident of the small island nation of Dominica. On a related theme, activist Stephen Best focuses on western democracies in the developed world. He suggests that major changes in the conservation and environmental movements are required if we are to have any hope of achieving ecological sustainability in the future. In the end, he maintains, conservation boils down to politics, and that change will only happen through the acquisition and use of political power.

If there were only one take-home message from these essays it would be that there is an urgent need to reinvigorate, if not reinvent, the conservation movement, if we are to make any progress toward the goal of ecological sustainability. The final chapter – Reinventing Wildlife Conservation for the 21st Century – coauthored by myself, Rosamund Kidman Cox, Vivek Menon, and Michael Wamithi, draws on the earlier chapters to provide some concrete recommendations on what conservationists might consider doing in order to make progress in the coming years.

A few words about style. In editing the various essays, I made little attempt to impose a single style on such a diverse and talented collection of authors. It also became obvious at an early stage that such an eclectic group could never be convinced to prepare endnotes in an entirely consistent manner. Differences from one chapter to the next thus reflect the different traditions of various fields in which the contributors work.

Among the extra-curricular activities at the IFAW Forum was a limerick contest. Presentation and judging occurred at the closing banquet and prizes were awarded based on audience response. When the applause meter failed, we reverted to an informal panel of judges, which included – appropriately enough – one or two Irishmen. Although some participants are still complaining, the judges’ decisions were (and remain) final! The winning submissions, and a number of other entries of particular relevance to subject matter under discussion are reproduced throughout the book. Apologies in advance for the sometimes loose interpretation of what constitutes a “limerick”.

One of IFAW’s goals in holding the Forum and publishing this book was to provide a provocative, wide-ranging, and stimulating discussion of the conservation movement – past and present – and to glean some ideas about how best to proceed from here on in. The contributing authors have done their part magnificently. They have provided a wealth of ideas and suggestions that will undoubtedly inform future discussions, stimulate additional thinking and debate and, hopefully, move people into action. Of course, their interpretations and opinions remain their own and do not necessarily represent those of the publishers: the International Fund for Animal Welfare and the University of Limerick.

ACKNOWLEDGEMENTS

The organization of a successful international meeting and the production of a book require the involvement of many people. Azzedine Downes, IFAW’s Vice President and Chief Operating Officer, first mentioned the idea of a Forum at IFAW’s Millennium Meeting on Cape Cod in January 2000. Fred O’Regan, IFAW’s President and Chief Executive Officer, soon joined that discussion and, over the next two years, a variety of potential topics were bounced around, principally among Fred, Azzedine, Cindy Milburn, Chris Tuite, and myself. Once the topic was agreed upon, a tentative program was assembled and discussed, and several colleagues – including Kelvin Alie, Vivek Menon, Steve Njumbi, Fred O’Regan, Vassili Papastavrou, Patrick Ramage, and Michael Wamithi – subsequently suggested a number of the eventual speakers.

I thank all the speakers who accepted the invitation to participate in the Forum. They not only all showed up to present their papers and take part in the discussions, but also delivered an essay for inclusion in this book. The Forum would never have happened without their enthusiastic participation. I also thank Jane Goodall, who presented a timely public lecture during the Forum in Limerick, offering reasons for hope during part of the meeting when the participants might have been excused for feeling somewhat gloomy after sitting through a number of papers discussing the current state of the planet. I also thank those who expanded the scope of the meeting by submitting and presenting posters. Four of those indi-
viduals subsequently accepted invitations to produce three additional essays for inclusion in this book.

I thank Rosamund Kidman Cox, the former editor of BBC Wildlife magazine, and IFAW’s Peter Pueschel, Beatriz Bugeda, Kelvin Alie, and Patrick Ramage, for chairing sessions during the Forum.

I am particularly indebted to my old friend and colleague, Professor Roger G.H. Downer, President, University of Limerick, for inviting us to hold the IFAW Forum at the university, and for co-hosting the meeting and co-publishing this book with IFAW. The university’s facilities on the River Shannon – from the residences in Drumroe Village and the conference hall, to Plassey House and the Stables – provided the ideal venue for our meeting. I thank Seán Donlon, Chancellor, for joining us at the opening ceremonies and warmly welcoming the participants to Limerick; and Éamonn Cregan, Director of Corporate Affairs, for his generous hospitality, and for his various contributions before, during, and after the Forum.

IFAW colleagues Sheryl Fink, Carol Cassello, and Christine Jones, looked after many of the organizational and administrative details associated with the Forum. I also thank Nick Jenkins of IFAW for his work on publicity and media relations prior to and during the meeting. The Forum itself was executed by Deborah Tudge and Linda Stevens from Plassey Campus Centre Ltd., University of Limerick, and Louise Mulcahy, and Mary Dunleavy from Limerick Travel, Limerick, who together formed the university’s amazing conference team. This team arranged accommodations and meals on campus, handled registration, and generally looked after the logistics from beginning to end. You would be hard pressed to find a more friendly, enthusiastic, and efficient group of professionals to run your next international meeting.

Kate Clere, Second Nature Films, Australia, and Mick McIntyre, IFAW’s Asia-Pacific Director, came up with the idea of interviewing many of the speakers and producing a DVD that nicely captures the messages emanating out of Limerick and complements the essays in this book.

My office-mates, Jan Hannah and Sue Wallace reviewed and proof-read various chapters in this book. Ingrid Nielsen, in our Ottawa office, also proof-read numerous chapters. I also thank those who generously gave of their time and provided critical reviews of the submitted essays. Robin Clarke at IFAW Headquarters looked after the cover design from beginning to end.

I must single out my colleague in the next office, Sheryl Fink, for special mention. From the time I started to assemble the draft program to the delivery of the book manuscript to the printer, Sheryl was involved at every step. In addition to things already mentioned, she built and maintained the Forum web page (http://www.ifaw.org/forum), and designed and produced the book of abstracts for the meeting. As the associate editor of this book, she kept track of manuscripts, communicated with authors, prepared figures and tables, designed and formatted the entire manuscript, editing, copy-editing and proof-reading along the way. And, while all that was going on, she continued to dig out obscure references for me as I wrestled with my own chapters. Merely saying, “Thank you, Sheryl”, is hardly sufficient. This project would never have been completed without her.

Finally, I thank Fred O’Regan and Azzedine Downes for giving me the opportunity to undertake this project and for providing the funding, both for the Forum and for the production of this book.

David M. Lavigne
Guelph, Canada
February 2006