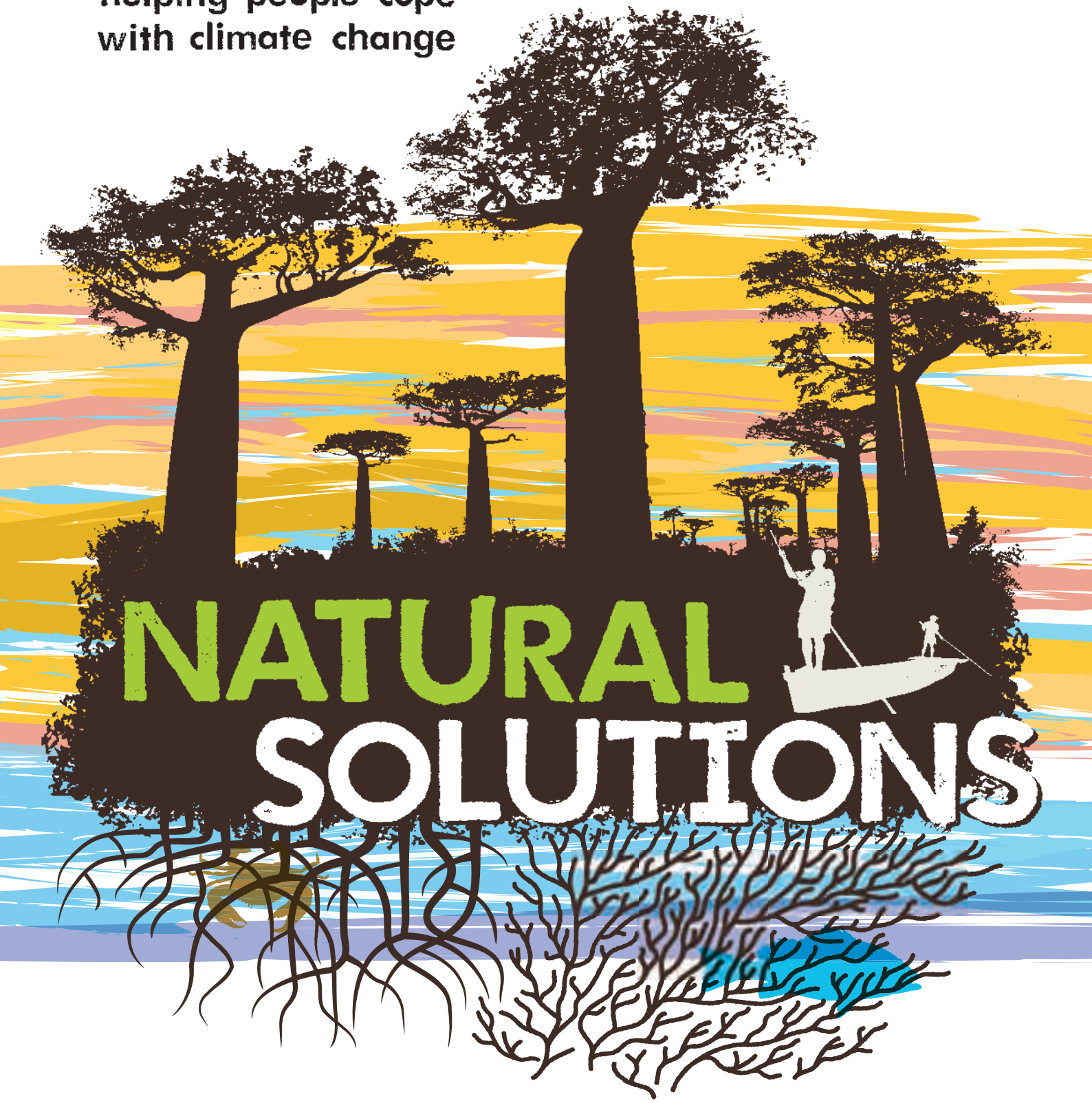
protected areas
helping people cope
with climate change



NATURAL SOLUTIONS

Preface by Lord Nicholas Stern

Arguments for Protection

In 2000 a conference organised in Bangkok by WWF and the IUCN World Commission on Protected Areas agreed that there was an urgent need to identify and quantify the wide range of social and environmental benefits offered by protected areas. The WWF **Arguments for Protection** project was developed in response. The project aims to:

- Identify and where possible quantify the wide range of benefits derived from protected areas
- Increase support for protection
- Develop new interdisciplinary partnerships
- Identify innovative financing mechanisms
- Broaden and strengthen protected area management strategies

Since 2003 the project has created the world's largest information source on the wider values of protected areas. Six reports have been published to date (see www.panda.org/protection/arguments) and a new simple-to-use tool, the **Protected Area Benefit Assessment Tool (PA-BAT)**, has been developed, field-tested and is now being implemented.

The published reports are:

- **Running Pure:** The importance of forest protected areas to drinking water
- **Food Stores:** Using protected areas to secure crop genetic diversity
- **Beyond Belief:** Linking faiths and protected areas to support biodiversity conservation
- **Safety Net:** Protected areas and poverty reduction
- **Natural Security:** Protected areas and hazard mitigation
- **Vital Sites:** The contribution of protected areas to human health

The project has worked with a number of partners including: The World Bank; UN International Strategy for Disaster Reduction; World Health Organisation; University of Birmingham; Alliance of Religions and Conservation, and many protected area agencies. This new report in the series continues the relationship with the World Bank and has been carried out in collaboration with UNDP and many members of the PACT 2020: Protected Areas and Climate Turnaround Alliance.

PACT 2020: Protected Areas and Climate Turnaround

At the IUCN Council Meeting held from 8-10 March 2008, climate change was acknowledged to be the greatest threat to biodiversity and the global system of protected areas was noted as one of the most powerful solutions. This was the genesis of **PACT 2020: Protected Areas and Climate Turnaround**, formally launched at the IUCN World Conservation Congress in 2008 and supported by IUCN's Innovation Fund.

PACT 2020 involves a partnership led by IUCN's World Commission on Protected Areas, together with the IUCN Secretariat, IUCN members and international organizations, including The Nature Conservancy, WWF International, the Wildlife Conservation Society, Conservation International, the Wild Foundation, Fauna and Flora International, the Climate, Community and Biodiversity Alliance, The World Bank, United Nations Development Programme and UNEP World Conservation Monitoring Centre.

PACT 2020 aims to "*Ensure that protected areas and protected area systems are recognised as an important contribution to climate change adaptation/mitigation strategies for biodiversity and human livelihoods*". Activities include developing:

- A situation analysis leading to the articulation of a compelling case and action plan for protected areas as an integral element of climate change adaptation/mitigation
- Guidance and project proposals are developed for regional implementation programmes
- A policy action plan championed by IUCN is agreed by key stakeholders
- Protected area and climate change policy interventions are designed and undertaken at global and national levels
- A functional communications/learning network is developed

This publication is one of the first products of this collaboration, and will be a primary input into the PACT 2020 Protected Areas and Climate Change Summit held in November 2009 in Granada, Spain, hosted by the Junta de Andalucía.

Protected areas helping people cope with climate change

Natural Solutions

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Preface

Responses to climate change must now focus on reducing greenhouse gas emissions enough to avoid runaway impacts ("avoiding the unmanageable") and on addressing the impacts that are already with us ("managing the unavoidable").

Managing natural ecosystems as carbon sinks and resources for adaptation is increasingly recognised as a necessary, efficient and relatively cost-effective strategy. The *Stern Review on the Economics of Climate Change* recommended that governments develop policies for "climate sensitive public goods including natural resource protection, coastal protection and emergency preparedness".

The world's protected area network already helps mitigate and adapt to climate change. Protected areas store 15 per cent of terrestrial carbon and supply ecosystem services for disaster reduction, water supply, food and public health, all of which enable community-based adaptation. Many natural and managed ecosystems can help reduce climate change impacts. But protected areas have advantages over other approaches to natural ecosystem management in terms of legal and governance clarity, capacity and effectiveness. In many cases protection is the only way of keeping carbon locked in and ecosystem services running smoothly.

Without the investment made in protected areas systems worldwide, the situation would be even worse. Increasing investment through a partnership of governments, communities, indigenous peoples, non-governmental organisations and the private sector would ensure greater protection of these essential services. Evidence suggests that protected areas work: even since this report was completed, a new World Bank review shows how tropical protected areas, especially those conserved by indigenous peoples, lose less forest than other management systems*.

But these co-benefits for climate, biodiversity and society are often missed or ignored. This book clearly articulates for the first time how protected areas contribute significantly to reducing impacts of climate change and what is needed for them to achieve even more. As we enter an unprecedented scale of negotiations about climate and biodiversity it is important that these messages reach policy makers loud and clear and are translated into effective policies and funding mechanisms.

Lord Nicholas Stern

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* Nelson, A. and K. Chomitz (2009); *Protected Area Effectiveness in Reducing Tropical Deforestation: A global analysis of the impact of protection status*, Independent Evaluation Group, Evaluation Brief 7, The World Bank, Washington DC

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Acronyms, abbreviations and formula

CBD	Convention on Biological Diversity
CDM	Clean Development Mechanism
CH^4	Methane
C	Carbon
CO^2	Carbon dioxide
EBA	Ecosystem-based adaptation
GEF	Global Environment Facility
GHG	Greenhouse gases
Gt	Gigatonne (1,000,000,000 tonnes or 1 million metric tonnes)
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
Mg	Megagram (1,000,000 grams)
Mt	Megatonne (1,000,000 metric tonnes)
REDD	Reducing Emissions from Deforestation and Degradation
PoWPA	Programme of Work on Protected Areas (of the CBD)
Tg	Teragram (1,000,000,000,000 (one trillion) grams)
TNC	The Nature Conservancy
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WCPA	World Commission on Protected Areas (of IUCN)
WCS	Wildlife Conservation Society
WWF	World Wide Fund for Nature

Glossary

Adaptation: Initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects. Various types of adaptation exist, e.g. anticipatory and reactive, private and public, and autonomous and planned[1].

Ecosystem-based adaptation: The use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people to adapt to the adverse effects of climate change[5].

Ecosystem services (also ecosystem goods and services): the benefits people obtain from ecosystems. These include provisioning services such as food, water, timber, and fibre; regulating services such as the regulation of climate, floods, disease, wastes, and water quality; cultural services such as recreation, aesthetic enjoyment, and spiritual fulfilment; and supporting services such as soil formation, photosynthesis, and nutrient cycling[6].

Equivalent CO_2 concentration (carbon dioxide): The concentration of carbon dioxide that would cause the same amount of radiative forcing as a given mixture of carbon dioxide and other greenhouse gases[7].

Leakage: the situation in which a carbon sequestration activity (e.g., tree planting) on one piece of land inadvertently, directly or indirectly, triggers an activity, which in whole or part, counteracts the carbon effects of the initial activity[8]. The net change of anthropogenic emissions by sources of greenhouse gases (GHG) which occurs outside the project boundary, and which is measurable and attributable to a project activity designed to mitigate greenhouse gas emissions[9].

Mitigation: Technological change and substitution that reduces resource inputs and emissions per unit of output. Although several social, economic and technological policies would produce an emission reduction, with respect to climate change, mitigation means implementing policies to reduce GHG emissions and enhance sinks[10]. An anthropogenic intervention to reduce the anthropogenic forcing of the climate system;