



# The Futures of Privately Protected Areas

Sue Stolton, Kent H. Redford and Nigel Dudley,  
with the assistance of: William (Bill) M. Adams, Elisa Corcuera and Brent A. Mitchell



## Developing capacity for a protected planet

Protected Area Technical Report Series No.1



## **IUCN WCPA Protected Area Technical Report Series**

IUCN WCPA Protected Area Technical Reports are intended to be timely, peer reviewed syntheses of issues of global importance to protected area managers, policy makers, and scientists. These reports define critical issues or problems facing protected areas now and into the future, place the issue or problem within the broader context of protected area management, and make recommendations for how the issue or problem may best be addressed in the future. The audience for these reports includes national and sub-national governments, protected area agencies, non-governmental organizations, communities, private-sector partners, the Secretariat of the Convention on Biological Diversity, and other interested parties striving to reach goals and commitments related to advancing protected area establishment and management.

A full set of technical reports are available at: [http://www.iucn.org/about/work/programmes/gpap\\_home/gpap\\_capacity2/gpap\\_pub/](http://www.iucn.org/about/work/programmes/gpap_home/gpap_capacity2/gpap_pub/)

Complementary resources are available at: [www.cbd.int/protected/tools/](http://www.cbd.int/protected/tools/)

Contribute to developing capacity for a Protected Planet at: [www.protectedplanet.net/](http://www.protectedplanet.net/)

## **IUCN PROTECTED AREA DEFINITION, MANAGEMENT CATEGORIES AND GOVERNANCE TYPES**

IUCN defines a protected area as:

**A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.**

The definition is expanded by six management categories (one with a sub-division), summarized below.

**Ia Strict nature reserve:** Strictly protected for biodiversity and also possibly geological/ geomorphological features, where human visitation, use and impacts are controlled and limited to ensure protection of the conservation values

**Ib Wilderness area:** Usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, protected and managed to preserve their natural condition

**II National park:** Large natural or near-natural areas protecting large-scale ecological processes with characteristic species and ecosystems, which also have environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities

**III Natural monument or feature:** Areas set aside to protect a specific natural monument, which can be a landform, sea mount, marine cavern, geological feature such as a cave, or a living feature such as an ancient grove

**IV Habitat/species management area:** Areas to protect particular species or habitats, where management reflects this priority. Many will need regular, active interventions to meet the needs of particular species or habitats, but this is not a requirement of the category

**V Protected landscape or seascape:** Where the interaction of people and nature over time has produced a distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values

**VI Protected areas with sustainable use of natural resources:** Areas which conserve ecosystems, together with associated cultural values and traditional natural resource management systems. Generally large, mainly in a natural condition, with a proportion under sustainable natural resource management and where low-level non-industrial natural resource use compatible with nature conservation is seen as one of the main aims

The category should be based around the primary management objective(s), which should apply to at least three-quarters of the protected area – the 75 per cent rule.

The management categories are applied with a typology of governance types – a description of who holds authority and responsibility for the protected area. IUCN defines four governance types.

**Governance by government:** Federal or national ministry/agency in charge; sub-national ministry/agency in charge; government-delegated management (e.g. to NGO)

**Shared governance:** Collaborative management (various degrees of influence); joint management (pluralist management board; transboundary management (various levels across international borders)

**Private governance:** By individual owner; by non-profit organisations (NGOs, universities, cooperatives); by for-profit organisations (individuals or corporate)

**Governance by indigenous peoples and local communities:** Indigenous peoples' conserved areas and territories; community conserved areas – declared and run by local communities

For more information on the IUCN definition, categories and governance type see the 2008 *Guidelines for applying protected area management categories* which can be downloaded at: [www.iucn.org/pa\\_categories](http://www.iucn.org/pa_categories)

# The Futures of Privately Protected Areas

Sue Stolton, Kent H. Redford and Nigel Dudley

With the assistance of:

William (Bill) M. Adams, Elisa Corcuera and Brent A. Mitchell

A project funded by the Linden Trust for Conservation  
published by IUCN WCPA with the CBD and UNEP-WCMC  
2014



### **IUCN (International Union for Conservation of Nature)**

IUCN helps the world find pragmatic solutions to our most pressing environment and development challenges. IUCN works on biodiversity, climate change, energy, human livelihoods and greening the world economy by supporting scientific research, managing field projects all over the world, and bringing governments, NGOs, the UN and companies together to develop policy, laws and best practice. IUCN is the world's oldest and largest global environmental organization, with more than 1,200 government and NGO members and almost 11,000 volunteer experts in some 160 countries. IUCN's work is supported by over 1,000 staff in 45 offices and hundreds of partners in public, NGO and private sectors around the world.

**[www.iucn.org](http://www.iucn.org)**



**protectedplanet**

### **Protected Planet**

Protected Planet is a partnership between IUCN, IUCN-WCPA and UNEP-WCMC that envisages a world that recognizes the value of protected areas and is empowered to take positive action to maintain and improve their integrity in the face of global change. The partnership includes the development of a global platform for the acquisition, analysis, exchange and communication of data and knowledge on the status and trends of protected areas that engages the full spectrum of stakeholders, and is instrumental in the achievement of the Millennium Development Goals, the CBD Strategic Plan for Biodiversity, informed decision-making and enhanced action. The Protected Planet report, IUCN WCPA's Best Practice Guidelines and PARKS journal are all part of empowering this action.

**[www.protectedplanet.net](http://www.protectedplanet.net)**



### **IUCN World Commission on Protected Areas (WCPA)**

IUCN WCPA is the world's premier network of protected area expertise. It is administered by IUCN's Global Programme on Protected Areas and has over 1,400 members, spanning 140 countries. IUCN WCPA works by helping governments and others plan protected areas and integrate them into all sectors; by providing strategic advice to policy makers; by strengthening capacity and investment in protected areas; and by convening the diverse constituency of protected area stakeholders to address challenging issues. For more than 50 years, IUCN and WCPA have been at the forefront of global action on protected areas.

**[www.iucn.org/wcpa](http://www.iucn.org/wcpa)**



**Convention on Biological Diversity**

### **Convention on Biological Diversity**

The Convention on Biological Diversity (CBD), which entered into force in December 1993, is an international treaty for the conservation of biodiversity, the sustainable use of the components of biodiversity and the equitable sharing of the benefits derived from the use of genetic resources. With 193 Parties, the Convention has near universal participation among countries. The Convention seeks to address all threats to biodiversity and ecosystem services through scientific assessments, the development of tools, incentives and processes, the transfer of technologies and good practices, and the full and active involvement of relevant stakeholders including indigenous and local communities, youth, NGOs, women and the business community. The tenth meeting of the Conference of the Parties to the CBD, held in 2010, adopted a revised and updated Strategic Plan for Biodiversity for 2011-2020, comprising five strategic goals and 20 Aichi Biodiversity Targets. The Plan is the overarching framework on biodiversity, not only for the biodiversity-related conventions, but for the entire United Nations system.

**[www.cbd.int](http://www.cbd.int)**



### **Linden Trust**

Linden Trust's mission is to help stabilize Earth's biodiversity and ecological processes for the benefit of humanity, by raising the quantity and improving the effectiveness of financial resources - public and private - brought to bear. Specifically, we seek to advance the use of conservation finance and environmental markets in ways that address major environmental challenges.

**[www.lindentrust.org](http://www.lindentrust.org)**



### **Equilibrium Research**

Equilibrium Research promotes positive environmental and social change by linking targeted research to field application. Sue Stolton and Nigel Dudley established Equilibrium in 1991. Equilibrium works with groups ranging from local communities to United Nations agencies. Major issues include protected areas and broadscale approaches to conservation. Equilibrium offers a consultancy service and also runs its own portfolio of projects. Sue and Nigel are members of IUCN's World Commission on Protected Areas (WCPA) and its Commission on Environmental, Economic and Social Policy (CEESP). Nigel chairs the WCPA specialist group on natural solutions.

**[www.EquilibriumResearch.com](http://www.EquilibriumResearch.com)**



### **Archipelago Consulting**

Archipelago Consulting has as its mission to help individuals and organizations improve their practice of conservation by: 1) catalyzing and innovating; 2) learning and synthesizing; and 3) convening and facilitating. Kent Redford established Archipelago Consulting in 2012 and is based in Portland, Maine, USA.

**[www.archipelagoconsulting.com](http://www.archipelagoconsulting.com)**

The designation of geographical entities in this journal, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of IUCN concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries. The views expressed in this publication do not necessarily reflect those of IUCN or other participating organizations.

Published by: IUCN, Gland, Switzerland

Copyright: © 2014 International Union for Conservation of Nature and Natural Resources

Reproduction of this publication for educational or other non-commercial purposes is authorized without prior written permission from the copyright holder provided the source is fully acknowledged.

Reproduction of this publication for resale or other commercial purposes is prohibited without prior written permission of the copyright holder.

Citation: Sue Stolton, Kent H. Redford and Nigel Dudley (2014). *The Futures of Privately Protected Areas*. Gland, Switzerland: IUCN.

ISBN: 978-2-8317-1675

Cover photos: Front: Osprey (*Pandion haliaetus*) at Cox Reservation, Massachusetts © Essex County Greenbelt Association; Back: Inkosi Baleni telling the community about the Ezemvelo KZN Biodiversity Stewardship Program © Bill Bainbridge

Layout by: millerdesign.co.uk

Printed by: Express Print & Mail, Queensland, Australia

Available from: IUCN (International Union for Conservation of Nature)

Global Protected Areas Programme

Rue Mauverney 28

1196 Gland

Switzerland

Tel +41 22 999 0000

Fax +41 22 999 0002

delwyn.dupuis@iucn.org

www.iucn.org/publications

The text of this book is printed on ecoStar Silk 130gsm paper made from wood fibre from well-managed forests certified in accordance with the rules of the Forest Stewardship Council (FSC).

# Contents

**Foreword**

**Acknowledgements**

**Executive summary**

<b>Part 1: Introduction</b>	<b>1</b>
<b>Part 2: What is a PPA?</b>	<b>5</b>
<b>Part 3: Results from 17 country reviews</b>	<b>15</b>
3.1 Definitions	20
3.2 Trends in numbers and ownership	21
3.3 Regulation and legislation	23
3.4 Personal motivations and incentives	26
3.5 Conservation advantages and disadvantages	30
<b>Part 4: Key Issues facing PPAs</b>	<b>37</b>
4.1 PPAs and society	38
4.2 Management and planning	38
4.3 Reporting	43
<b>Part 5: Recommendations</b>	<b>45</b>
<b>Part 6: PPA Futures</b>	<b>49</b>
<b>Part 7: PPA Country reviews</b>	<b>53</b>
7.1 Australia	54
7.2 Brazil	58
7.3 Canada	62
7.4 Chile	65
7.5 China	67
7.6 Finland	70
7.7 Germany	75
7.8 Kenya	77
7.9 Mexico	80
7.10 Namibia	84
7.11 Republic of Korea	87
7.12 South Africa	88
7.13 Spain	92
7.14 United Kingdom	95
7.15 United States of America	98
<b>References</b>	<b>101</b>
<b>Appendix 1: Potential PPA data from country reviews</b>	<b>110</b>
<b>Appendix 2: Additional information on PPAs provided through a query from the Secretariat of the Convention on Biological Diversity</b>	<b>111</b>

## Boxes

1. A note on terminology and data on PPAs in this report	3
2. PPAs in Brazil's Atlantic Forest	16
3. Marine PPAs: Mythical Sea Creature or Ocean of Opportunity?	25
4. From 'distressed debt' to 'PPA': the story of Karukinka	26
5. Religious reserves as PPAs	28
6. Company reserves: the unknown PPAs	29
7. Connecting local landscapes: the Avalon Marshes, UK	31
8. PPAs in the State of Maine, USA	32
9. PPAs in Japan	36
10. Management effectiveness in PPAs	39
11. The BirdLife International Partnership	41
12. Guidance on applying the 2008 IUCN Guidelines	43
13. The WDPA data standard for Protected Areas information	44
14. A case study from Catalonia	93

## Figures

1. Theory of change of the <i>PPA Futures</i> project	4
2. Location of country reviews for the <i>PPA Futures</i> project	18
3. Increase in extent of protected areas in the National Reserve System in Australia between 2000 and 2010, including ownership type	22
4. Land ownership of the NABU-Stiftung Nationales Naturerbe, Germany, between 2002 and 2012	22
5. Government protected area and PPA coverage in Mexico	30
6. Average size of private reserves in Brazil (as of June 2014)	34
7. Number of protected areas owned or managed by the BirdLife International Partnership, shown by region	41
8. Area of protected areas owned or managed by the BirdLife International Partnership, shown by region	41
9. Distribution of Private Reserves of Natural Heritage (PRNHs) in Brazilian biomes according to quantity and total area protected	42
10. The number of Private NRs established in Finland per decade from 1920-1999, and for the years 2000-2002 (2000s), 2003-2007 (METSO I) and 2008-2010 (METSO II)	72
11. State-owned and privately-owned protected areas in Finland	74
12. Breakdown of PPAs certified as ADVCS per ownership type (407 certificates in 2012)	82
13. Breakdown of uncertified PPAs per ownership type (285 areas in 2012)	82
14. Total PPA area certified as ADVCS per ownership type (Total 128,369 ha in 2012)	82
15. Total uncertified PPA area per ownership type (358,920 ha calculated from partial data in 2012)	82
16. Average size of PPAs certified as ADVCS per ownership type (Total 128,369 ha in 2012)	82
17. Average size of uncertified PPAs per ownership type (358,920 ha calculated from partial data in 2012)	82
18. Options and tools for Land Stewardship: a roadmap towards a full property transfer	94



## Tables

1. 'The IUCN protected area matrix': a classification system for protected areas comprising both management category and governance type	7
2. Explanation of the IUCN protected-area definition and key aspects pertaining to PPAs	8
3. Summary of criteria which distinguish PPAs from other governance types	14
4. Summary of national existence of key PPA issues for the 17 countries surveyed by PPA Futures	21
5. Options for conservation on private lands that support formal protected area system	24
6. Size distribution of PPAs in Finland in 2010	34
7. Number and area of major conservation covenanting programmes in Australia (as at September 2013)	55
8. Number and area of private reserves owned by major non-profit conservation land owning organizations in Australia (as at 30 June 2013)	56
9. Protected area types and coverage	59
10. PPAs reported in the Conservation Areas Reporting and Tracking System (as of 31 March 2013)	63
11. Private Protected Areas in China	69
12. Programmes related to nature conservation in Finland: government resolutions and supplementary decisions 1976-2012	71
13. Finland's national protected area network: number, surface area and area type	73
14. Different types of Wildlife Conservancy in Kenya	77
15. Examples of privately owned land units with conservation and business objectives not established under conservation legislation	85
16. Estimated terrestrial PPA coverage in Spain	93
17. Information on the number of sites owned/managed by the UK's main environmental NGOs for nature conservation	96
18. Possible number and area of PPA estate from the 17 country reviews by <i>PPA Futures</i>	101

# Foreword

For the last decade, most of the world's nations have been working together on an inspirational conservation goal: to complete an ecologically representative network of protected areas as the cornerstone of an effective global biodiversity conservation strategy. Landmark proposals from the fifth IUCN World Parks Congress in Durban in 2003, and some courageous decisions by signatories of the Convention on Biological Diversity (CBD) in Kuala Lumpur in 2004 and Nagoya in 2010, have created ambitious targets for protected areas, currently running at 17 per cent of land and freshwater area and 12 per cent of coastal and marine areas. Terrestrial protected areas already cover a total area equal to South and Central America, with designated marine protected areas equal in size to the Caribbean, South China, Mediterranean and Bering Seas.

To date, the large majority of protected areas have been created on state-owned lands and waters. Whilst such initiatives are invaluable, and unprecedented in their scale and in the commitment shown by governments, they will not be enough to achieve the CBD targets on their own. In the last few years, the essential role played by protected areas which have been self-generated by local communities and indigenous peoples – known as indigenous peoples' and community conserved territories and areas (ICCAs) – has also been highlighted. With this report, another major governance type is receiving long-overdue recognition: protected areas under private ownership. 'Private' here covers a wide field: individuals, non-profit and charitable trusts, religious groups, ecotourism companies and large corporations are amongst the many types of institutions involved.

Ernesto Enkerlin Hoeflich  
Chair,  
World Commission on Protected Areas



There are already tens of thousands such reserves around the world, with more being set up all the time. But, as was until recently the case with ICCAs, privately protected areas often remain a hidden resource; ignored by governments, omitted from international conservation reporting mechanisms and left out of regional conservation strategies. This is a pity because, as this report shows, private conservation efforts can often fill important gaps in national policies in terms of both geographic cover and speed of response to conservation challenges. They also provide private citizens with an opportunity to contribute directly to conservation efforts through a bottom up process. Private efforts can help hold the line when governments fail, and importantly bring a far wider range of stakeholders into the conservation endeavour.

Privately protected areas deserve far greater recognition and support than is the case at the moment. IUCN has long recognized the potential of privately protected areas and the World Commission on Protected Areas has a specialist group focused on their support and development. The CBD has explicitly called for private conservation to play a stronger role in achieving the aims of the Programme of Work on Protected Areas and the Aichi Biodiversity Targets. We therefore commend the following report, believe that it will help bring the private conservation movement fully into the mainstream of global conservation practice, and request governments, the international community and other actors to work together to implement the recommendations herein.

Braulio Ferreira de Souza Dias  
Executive Secretary,  
Convention on Biological Diversity



# Acknowledgements

The authors would like to thank all those who contributed and commented on this document through its development phases: from an initial expert workshop in the UK, through a multitude of meetings and correspondence, to the final document presented here. Any omissions or errors are the authors' responsibility. We are extremely grateful to the Linden Trust for Conservation, which funded the development and promotion of this report – in particular for their support, comments and enthusiasm on the project development and outcomes: we thank Larry Linden, Roger Ullman and Lindsay Slote. We would also like to thank IUCN, the UNEP World Conservation Monitoring Centre and the Secretariat of the Convention on Biological Diversity for their support of the project and outputs.

Special thanks should go to the project advisory group: William M. Adams, Professor of Conservation and Development, Department of Geography, University of Cambridge, UK; Elisa Corcuera Vliegthart, ex-President, Asociación de Iniciativas de Conservación en Áreas Privadas y de Pueblos Originarios of Chile and Brent A. Mitchell, vice-chair IUCN WCPA Specialist Group on Privately Protected Areas, USA. Thanks also to Caroline Snow for proof reading and checking all the references.

We would also like to thank: Ahmed Al-Hashmi, Director, Biodiversity Department, UAE; Džiugas Anuškevičius, Protected Areas Strategy Division, Nature Protection Department, Lithuania; Marco Vinicio Araya, Gerente de Areas Silvestres Protegidas, Sistema Nacional de Areas de Conservacion (SINAC)/Ministerio de Ambiente y Energía (MINAE), Costa Rica; Diego Flores Arrate, Jefe del Departamento de Áreas Protegidas del Ministerio del Medio Ambiente, Chile; Charles Besancon, Lifeweb, CBD, Montreal, Canada; Juan E. Bezaury Creel, Representante en México y Director Asociado de Política Ambiental – Latinoamérica, TNC, Mexico; Tracey Cumming, Deputy Director, Biodiversity Economics and Stewardship Policy Advice, South African National Biodiversity Institute; Teppei Douke, Conservation Research Division, Nature Conservation Society of Japan / Secretariat of Japan Committee for IUCN; Lincoln Fishpool, Global IBA Coordinator, BirdLife International, UK; James Fitzsimons, Director of Conservation, TNC Australia Programme, Australia; Maritza García García, Directora,

Centro Nacional de Áreas Protegidas, Cuba; Tobias Garstecki, Germany; Sarat Babu Gidda, CBD Montreal; Craig R. Groves, Senior Scientist, Science for Nature and People Initiative, TNC; Mervi Heinonen, Metsahallitus Natural Heritage Services, Finland; Hag Young Heo, Research Fellow, Korea National Park Service; Kathryn Howard, Strategic Partnerships – International, Department of Conservation - Te Papa Atawhai, New Zealand; Lisa Janishevski, CBD Montreal; Brian T. B. Jones, Namibia; Naomi Kingston, Head of Programme Protected Areas, UNEP WCMC, UK; Karina Kováčsová, Division of Nature and Landscape Protection, Ministry of Environment, Slovakia; Jeff Langholz, Professor, Graduate School of International Policy & Management, Monterey Institute of International Studies, USA; Nik Lopoukhine, Canada; Kathy MacKinnon, Deputy Chair, IUCN WCPA, UK; Chris Mahon, UK; Paula Andrea Bueno Martínez, Parques Nacionales Naturales de Colombia; Sonia Peña Moreno, Senior Policy Officer – Biodiversity, IUCN, Switzerland; Rob Olivier, Kenya; Botshabelo Othusitse, Chief Wildlife Officer, Department of Wildlife and National Parks, Ministry of Environment, Wildlife & Tourism, Botswana; Claudio Padua and Angela Pellin, Institute for Ecological Research (IPE), Brazil; Miquel Rafa, Director de Territori i Medi Ambient Fundació Catalunya-La Pedrera, Spain; King Sam, Special Assistant to Minister/Programme Manager, Protected Areas Network, Ministry of Natural Resources, Environment and Tourism, Palau; Trevor Sandwith, Director IUCN's Global Protected Area Programme, Switzerland; Andrej Sovinc, IUCN WCPA Regional Chair for Europe and Head of Secovlje Salina Nature Park, Slovenia; Daniel Springer, Head of Section for Protected Areas Management, Ministry of Environmental and Nature Protection, Croatia; Philip Tabas, Special Counsel for Conservation Strategies, TNC, USA; Win Naing Thaw, Director, Nature and Wildlife Conservation Division, Ministry of Forestry, Myanmar; Tilia Tima, Biodiversity Officer, Ministry of Foreign Affairs, Trade, Tourism, Environment and Labour, Tuvalu; Jay Udelhoven, former Senior Marine Policy Advisor, TNC, USA; Tarik UI-Islam, Assistant Chief Conservator of Forest, Forest Department, Bangladesh; Paul Vahldiek, Western Landowners' Alliance; Stephen Woodley, Canada; Cathy Wilkinson, Canada; Katarina Groznik Zeiler, Sector for Nature Conservation, Ministry of the Environment and Spatial Planning, Slovenia; Li Zhang, Beijing Normal University, China.

# Executive Summary



Participants in the expert workshop on PPAs held as part of the PPA Futures project on a field trip to the Somerset levels, UK © Equilibrium Research

Privately protected areas (PPAs) will be an essential component in achieving the Convention on Biological Diversity (CBD) Aichi Biodiversity Target 11 on completing ecologically representative protected area networks around the world. The current IUCN Report, *The Futures of Privately Protected Areas*, supports this by creating a framework to allow governments to expand their use and support of PPAs and by raising awareness that PPAs can and should be reported to the World Database on Protected Areas (WDPA) and the CBD. Key audiences for the report include IUCN and its World Commission on Protected Areas, parties to the CBD and the UNEP World Conservation Monitoring Centre. The report is based on an extensive literature review, discussions with PPA specialists, an expert workshop and 17<sup>1</sup> commissioned country reviews.

**Definition and governance:** There are currently at least 50 definitions of privately protected areas in use. Only six of the 17 countries studied linked their PPA definition directly with the IUCN protected area definition, and several have PPA legislation even though they are without an official definition. The report proposes a definition of a PPA that is based on this IUCN definition – an area can only become a PPA if it qualifies as a protected area. To increase support for

PPAs, we recommend the following definition: **a privately protected area is a protected area, as defined by IUCN, under private governance (i.e. individuals and groups of individuals; non-governmental organizations (NGOs); corporations – both existing commercial companies and sometimes corporations set up by groups of private owners to manage groups of PPAs; for-profit owners; research entities (e.g. universities, field stations) or religious entities).** Not all private conservation initiatives can or should become PPAs, although some initiatives that are not currently PPAs could become so with minor changes in management and emphasis.

The report provides guidance on applying the IUCN definition of a protected area to PPAs. Two of the most important elements of this guidance are: 1) PPA managers should be aware of any use rights impacting conservation objectives that are not under their control and ensure these do not reduce the area's conservation effectiveness or undermine the status of the IUCN protected area definition; and 2) due to the challenge PPAs may have in proving 'long-term' conservation, focus should be on demonstrating long-term *intent* to conservation. Long-term here should be at least 25 years, though the intent should be conservation 'in perpetuity', and safeguards put in place to ensure conservation objectives persist even if ownership changes.

<sup>1</sup> In Australia, Brazil, Canada, Chile, China, Colombia, Finland, Germany, Japan, Kenya, Mexico, Namibia, Republic of Korea, South Africa, Spain, United Kingdom and the United States of America.

**Motivations:** Individuals and groups have been involved in establishing PPAs for well over a century: there are already millions of PPA supporters, including NGO members. Many are driven by philanthropic motives, interest in endangered species or the desire to leave behind a positive conservation legacy. Others want to preserve particular places against development change because they have cultural, religious or spiritual importance. Landowner motivations often include issues relating to quality of life. Corporations set up PPAs as part of development projects or as a condition of resource use (e.g. as part of forest or agricultural certification systems). Incentive schemes are powerful motivations for some landowners.

**Advantages and disadvantages:** PPAs have a critical role to play when a quick response is needed to rapid changes in land or water use, or where further state-run protected areas are resisted for political or economic reasons. PPAs can be effective in expanding protection into under-represented areas or where most land is in private hands. They provide opportunities for involving more stakeholders in conservation and for using innovative funding mechanisms. Conversely, some of the disadvantages or challenges faced by PPAs have included lack of clarity about definitions and management and sometimes a poor match between areas protected and biodiversity richness. PPA owners complain of limited opportunity to engage with wider conservation policy and limited government support. The existence of sometimes ineffective incentive structures have created the risk of ‘temporary’ PPAs being created and have sometimes limited creation of PPAs.

**Social issues:** Though relatively little represented on the global stage, there are social concerns with PPAs that focus on how land was acquired, and whether it involved ‘land grabbing’, particularly when a PPA owner is a foreigner. IUCN addresses this unequivocally by stressing that protected areas should not be used as an excuse for dispossessing people of their land. A broader question relates to the extent that the state is shifting environmental responsibilities towards civil society and the private sector and neglecting its own responsibilities. PPAs are part of this movement and must be monitored to ensure that their creation is beneficial to both public and private actors.

**PPA coverage:** The global coverage of PPAs remains unknown due to a variety of factors including a lack of common definitions on what comprises a PPA and the fact that governments do not report on PPAs to the WDPA. There are few established national or subnational PPA databases or attempts at systematic data collection, although this is changing. The country reviews commissioned for this report give important indications of global trends. PPAs are strong in parts of Latin America, including Brazil, Colombia, Chile and Costa Rica; Australia has a growing movement; there is a long tradition in Canada, United States of America and Mexico; western and northern Europe contains many PPAs, while some central and eastern European countries have few if any; South Africa and Kenya have well-developed PPA systems integrated into national conservation strategies and some other southern and east African countries have mainly

commercially run PPAs; while Asia contains few sites but several countries are recognizing the potential and beginning PPA establishment. Some of the areas referred to as PPAs in the country reviews will likely not meet the terms of the definition laid out in this report.

## Summary of the recommendations

1. Use the IUCN protected area definition as the basis for defining and international reporting of PPAs
2. Review national PPA systems to clarify definition, legal standing and importance of PPAs
3. Develop and implement monitoring and management effectiveness systems for PPAs
4. Create or strengthen national PPA associations to assess performance, provide training and develop data collection systems
5. Improve knowledge sharing and information by development of best practice guidelines and encouraging a focus on company and religious reserves
6. Understand what incentives are needed to support and promote PPAs relating to establishment, management and ensuring long-term security
7. Develop incentives to increase the conservation role of PPAs through expanding their size, ensuring connectivity and focusing on threatened species
8. Create structures and incentives to report on PPAs both nationally and to the WDPA.



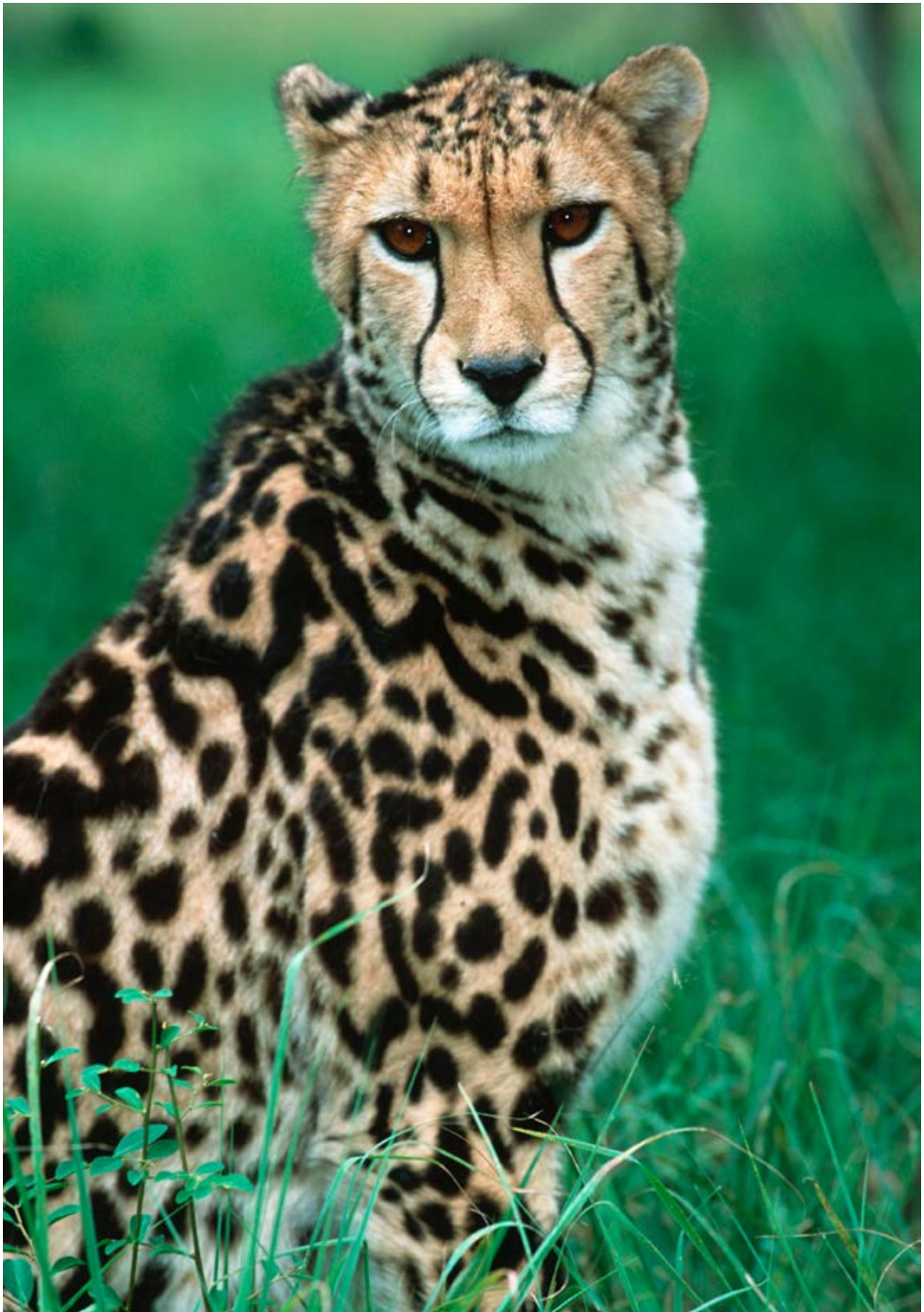
Children visiting Attenborough Nature Centre a wildlife haven in the industrial East Midlands of the England, UK © Equilibrium Research



**Lodge at the 700 ha Bellavista Cloud Forest PPA in Tandayapa, Ecuador** © Equilibrium Research

# Part 1

## Introduction



**Cheetah (*Acinonyx jubatus*) at the 13,000 ha Kapama Private Game Reserve, South Africa** © Martin Harvey / WWF-Canon



Privately protected areas have existed formally and informally for centuries. Rulers who conserved areas as hunting reserves or communities that kept sacred forests were all creating protected areas – though long before the practice or term were known. Germany's first well-known privately protected area dates from the 1880s when an association that aimed to preserve the scenic beauty and touristic potential of a hilly range southeast of the small town of Bonn started buying land to protect it against the development of quarries. In 1824 a German botanist acquired a large property in Veracruz, Mexico that he managed as a coffee plantation and as a private tropical forest preserve. In the UK, NGOs have owned nature reserves since the late 19<sup>th</sup> century (for example the National Trust bought its first reserve at Wicken Fen, Cambridgeshire in 1899) and the land trust movement in the USA began in 1891 (Bernstein & Mitchell, 2005). Despite this long history, the global protected area community has not paid a great deal of attention to this form of private conservation. There is a lack of global data and systematic mapping of their existence, little understanding of the social processes that have led to their growth throughout the world, and few precedents to guide policy and practice.

The **Privately Protected Areas Futures** project arose because of a concern that privately protected areas, or **PPAs**, are in danger of becoming one of the 'lost children' of the world's protected area community – important but often ignored – and a belief that private conservation efforts deserve to be fully recognized, better integrated within national and regional conservation policies, encouraged and supported. The project was designed to:

- Systematically review PPAs globally
- Focus on a representative set of countries to learn more about national PPA efforts, their constraints and opportunities
- Analyse these results in the context of the IUCN's definition of a protected area
- Develop a set of recommendations for strengthening and extending PPA initiatives nationally and globally
- Encourage integration of PPAs into national reporting towards the Aichi Biodiversity Targets.

The Convention on Biological Diversity's (CBD) Aichi Biodiversity Target 11 states: 'By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape.' This project is designed to bring PPAs more fully into the mainstream of conservation planning and practice as a contribution to Target 11 and beyond, by helping Parties to the CBD fulfil part of decision X/31 (para 32, b) which seeks: 'the recognition of the contribution of, where appropriate, co-managed protected areas, **private protected areas** and indigenous and local community conserved areas within the national protected area system through acknowledgement in national legislation or other effective means' (our emphasis) (SCBD, 2010).

## Box 1

### A note on terminology and data on PPAs in this report

One of the main purposes of the *PPA Futures* project was to provide clarity about what the world community means by PPAs. However, as made clear in the following pages there has so far been a lack of global agreement on what is understood by the term PPA. This publication therefore reinforces the need to apply the IUCN definition of a protected area to PPAs in order to develop a new definition. Without such an agreed definition, no systematic and complete analysis of PPAs can be attempted.

Whilst PPAs in several countries/regions have been subject to study over recent years, and national federations, international congresses and a growing abundance of literature all address PPAs, there has never been an attempt to bring this information under the umbrella of globally agreed protected area structures, such as the IUCN definition of a protected area, the international reporting requirements of the CBD or the World Database on Protected Areas (WDPA) managed by the UNEP World Conservation Monitoring Centre (UNEP-WCMC). By using these lenses to review PPA development worldwide this report is designed as the first step in a process of moving under-representation to representation, neglect to support, and to ensure that PPAs are seen as a globally important contribution to conservation. This report differs from other summary reviews (e.g. Langholz & Lassoie 2001; Kamal et al., 2014) that do not use the IUCN protected area definition as an organizing principle.

PPAs come in all shapes and sizes, from tiny reserves conserving a pond or a single tree to massive areas of native grassland with free-roaming herds of bison or savannah areas of Africa supporting iconic species like lion, elephant and rhinoceros. Owners of PPAs are varied as well: charitable trusts supported by the public; for-profit companies managing nature-based tourism operations; companies that own and manage important wildlife refuges as an offshoot of their operations; religious institutions that manage a proportion of their land to conserve ecosystems for reasons of faith; and individuals who choose to put some of their money towards protecting nature. Many PPAs are only 'private' in terms of their legal ownership, and are actually open to the public as a general resource; others are kept strictly for the use of their owners. Thus even the term 'private protected area' is problematic because it suggests that such areas are exclusive, when in fact many are very public. In this report therefore we have used '**privately protected areas**' to denote the acronym PPA in an attempt to provide a more accurate picture of the aims of this type of governance.

The project had a number of distinct phases:

- An initial planning meeting to develop the scope of the project, and agree to key steps, outputs and timelines

### What do we want to achieve?

Achievement of the Aichi Biodiversity Target 11 through a diversity of protected area governance types in particular including the contributions of PPAs



### What change do we want?

Agreement on a standard definition of a PPA; national governments encouraged to expand and support their PPAs; integration of PPAs in conservation planning; and national reporting of PPAs to the WDPA and CBD



### Who do we influence?

Parties and non-Parties (i.e. the USA) to the CBD

UNEP-WCMC's WDPA

IUCN and WCPA



### How do we intervene?

The current IUCN report

Presentations at the CBD Conference of the Parties

Presentations at the IUCN World Parks Congress

Language within official decisions of the CBD



**Monitoring lupins for the endangered Karner blue butterfly (*Lycaeides melissa samuelis*) at a TNC Preserve, New York, USA © Kent Redford**

Figure 1: **Theory of change of the PPA Futures project**

- Literature research, covering both peer-reviewed journal sources and grey literature from NGOs, governments and others, culminating in a thorough literature review
- Call for PPA information from the IUCN World Commission on Protected Areas (WCPA) network, the CBD Programme of Work on Protected Area Focal Points (PoWPA) and PPA experts
- Identification of countries of particular interest because of their vibrant or emerging PPA community and the commissioning of a series of country reviews, aiming to answer a standard set of questions (see country reviews later in the report)
- The organization of an expert workshop to address key questions relating to definitions, principles and the role of PPAs; this took place in Bristol, UK in October 2013 and brought together 18 specialists from Europe, North and South America, Africa and Australia
- Separate discussions and workshops at: a conference on PPAs in Latin America, held in Chile in August 2013; the Asian Parks Congress in Sendai, Japan in November 2013; and the Ninth Pacific Congress on Protected Areas and Nature Conservation in Suva, Fiji in December 2013

- A series of bilateral in-country meetings including the UK and USA
- Analysis and consolidation of the information assembled and the conclusions reached, which are summarized in the following report
- Policy development, including working closely with IUCN and the Secretariat of the CBD (SCBD) to ensure that wording on PPAs is included within policy decisions from both institutions.

The project used the theory of change, outlined in figure 1.

## Part 2

What is a PPA?

## Part 2: What is a PPA?

### IUCN protected area definitions and processes



The 172,200 ha NamibRand PPA in southwestern Namibia shares a border with Namib-Naukluft National Park © Martin Harvey / WWF-Canon

IUCN has spent several decades wrestling with the question of what defines a ‘protected area’ and how protected areas contribute to human society. The latest manifestation of this thinking, following a major four-year consultation period that itself built on a lengthy research project (Bishop et al., 2004), was agreement on a new definition of a protected area and publication of revised guidelines (2008 Guidelines) to the IUCN protected area management categories and governance types (Dudley, 2008). The new definition of a protected area is: **“A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values”**.

The new definition ends a decade-long lack of consensus amongst IUCN members by stating clearly that nature conservation is the primary function of protected areas, which is further emphasized by an associated principle that reads: “For IUCN, only those areas where the main objective is conserving nature can be considered protected areas; this can include many areas with other goals as well, at the same

level, but in the case of conflict, nature conservation will be the priority”. The definition also stresses the importance of ecosystem services and cultural benefits, includes the need for management effectiveness (which was absent in earlier iterations) and broadens objectives from ‘biological diversity’ to ‘nature conservation’, thus embracing geological diversity and important landforms.

Although the use of IUCN definitions by countries is voluntary, its use has been supported by the IUCN membership through a resolution (WCC-2012-Res-040-EN: Endorsement and uniform application of protected area management guidelines) and decisions of the CBD (e.g. Decision VII/28 which recognized ‘the value of a single international classification system for protected areas...’). Data on protected areas are collected globally by UNEP-WCMC, which manages the WDPA using the 2008 Guidelines as the data standard by which protected areas are identified and management objective and governance type are recorded (UNEP-WCMC, 2014a). These data are then used by various UN bodies, including the CBD, to report on progress towards the goals

Table 1: **The IUCN protected area matrix: a classification system for protected areas comprising both management category and governance type**

Protected area categories	Governance by government			Shared governance			Private governance			Governance by indigenous peoples and local communities	
	Federal or national ministry or agency in charge	Sub-national ministry or agency in charge	Government-delegated management (e.g. to an NGO)	Transboundary management	Collaborative management (various forms of pluralist influence)	Joint management (pluralist management board)	Declared and run by individual landowner	...by non-profit organizations (e.g. NGOs, universities, cooperatives)	...by for-profit organizations (e.g. individual or corporate landowners)	Indigenous peoples' conserved areas and territories – established and run by indigenous peoples	Community conserved areas – declared and run by local communities
I a. Strict Nature Reserve											
I b. Wilderness Area											
II. National Park											
III. Natural Monument											
IV. Habitat/Species Management											
V. Protected Landscape/Seascape											
VI. Managed Resource Protected Area											

and targets of the PoWPA, Aichi Biodiversity Targets (through the *Protected Planet Report and the Global Biodiversity Outlook*, among others) and the Millennium Development Goal (MDG) indicators of protected-area coverage. Systems for assessing whether an area meets the definition of a protected area and assignment of category and governance type are therefore becoming increasingly stringent and standardized, with clear guidance issued internationally and interpreted for local conditions by governments (Stolton et al., 2013).

Protected areas that meet the IUCN definition can be grouped in many different ways: by ecoregion, biome, management effectiveness and so on. IUCN's approach to protected areas works with two typologies based around six *management categories* (one with a sub-division) and four *governance types* (see summaries on the inside front cover of this report and table 1). This report is focused on governance type 'c': private governance. Together, the management category and

governance type provide a clear picture of what the protected area management objectives are aiming to achieve and how, and who, has the authority to set them.

The inclusion of specified governance types in the 2008 Guidelines was intended to reinforce the breadth of different types of protected areas that exist and encourage their integration into national systems and global reporting frameworks. This is particularly important given that data on protected area governance remains poor; only 51 per cent of the records on the WDPA had the governance type recorded in 2010. At this time most protected areas in the WDPA were recorded as being government owned or managed (76.9 per cent of those with governance type recorded) or areas co-managed with government (13.5 per cent). Indigenous community conserved areas accounted for 9.3 per cent and PPAs only 0.2 per cent (Bertzky et al., 2012).

Table 2: **Explanation of the IUCN protected-area definition (A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values) and key aspects pertaining to PPAs.**

Note: *Phrase* and *Explanation* are taken directly from Dudley, 2008

**Clearly defined geographical space:**

Explanation from 2008 Guidelines	Understanding the definition for PPAs
<p>Includes land, inland water, marine and coastal areas or a combination of two or more of these. 'Space' has three dimensions, e.g. as when the airspace above a protected area is protected from low-flying aircraft or in marine protected areas when a certain water depth is protected or the seabed is protected but water above is not: conversely subsurface areas sometimes are not protected (e.g. are open for mining). 'Clearly defined' implies a spatially defined area with agreed and demarcated borders. These borders can sometimes be defined by physical features that move over time (e.g. river banks) or by management actions (e.g. agreed no-take zones).</p>	<p>No PPA-specific considerations</p>

**Recognized:**

Explanation from 2008 Guidelines	Understanding the definition for PPAs
<p>Implies that protection can include a range of governance types declared by people as well as those identified by the state, but that such sites should be recognized in some way (in particular through listing on the World Database on Protected Areas – WDPA).</p>	<p>PPAs might be recognized in a number of different ways:</p> <ul style="list-style-type: none"> <li>• Legislation that declares a PPA part of the national or subnational protected area system with all attendant legal obligations</li> <li>• Legislation that declares a PPA part of the national or subnational protected area system but with fewer obligations</li> <li>• Legal agreements such as easements or covenants that are recognized by national governments</li> <li>• Broader legal or quasi-legal agreements, such as easements or covenants, that may fall short of full recognition of a PPA by the national government but ensure long-term commitment to land or water conservation</li> <li>• Recognition by a national or subnational association of PPAs with guidelines and inventory (see below) provided that the association is recognized by outside experts (e.g. WCPA regional chairs)</li> <li>• Recognized on authoritative international databases (e.g. WDPA) – probably via a national-level process (see for example UK country review)</li> <li>• Ownership by an NGO with a legal structure that obligates conservation</li> </ul> <p>(NB. Inclusion within international designations (e.g. Ramsar, Biosphere) or other designations of significance (e.g. key biodiversity areas) can strengthen the security of a PPA but is not sufficient in and of itself).</p>

**Dedicated:**

Explanation from 2008 Guidelines	Understanding the definition for PPAs
<p>Implies specific binding commitment to conservation in the longterm, through e.g.:</p> <ul style="list-style-type: none"> <li>• International conventions and agreements</li> <li>• National, provincial and local law</li> <li>• Customary law</li> <li>• Covenants of NGOs</li> <li>• Private trusts and company policies</li> <li>• Certification schemes.</li> </ul>	<p>Showing 'dedication' can be more difficult in PPAs than in other governance types. Where the owner has no legal control over wildlife or ecological processes (e.g. fire management) that impact the ability to achieve desired conservation outcomes, 'dedication' can be shown through:</p> <ul style="list-style-type: none"> <li>• Formal agreements with the government agencies that have legal control to ensure that conservation values are maintained; or</li> <li>• Publicly available longterm management plans with indication of dedication to conservation; or</li> <li>• Other recognition processes. For example, in the case of voluntary conservation commitments recognition by a national or subnational association of PPAs with guidelines and inventory can help provide additional evidence of the site's dedication to management which meets the IUCN definition of a protected area. It may be possible in the future for such associations to be additionally recognized by outside experts (e.g. WCPA regional chairs or the WCPA PPA Specialist Group).</li> </ul>

**Managed:**

Explanation from 2008 Guidelines	Understanding the definition for PPAs
<p>Assumes some active steps to conserve the natural (and possibly other) values for which the protected area was established; note that 'managed' can include a decision to leave the area untouched if this is the best conservation strategy.</p>	<p>PPAs should have a written statement of an intention to manage for conservation outcome and some means of monitoring progress towards these goals (even if private ownership and management may make PPA planning and management less formal).</p>

**Legal or other effective means:**

Explanation from 2008 Guidelines	Understanding the definition for PPAs
<p>Means that protected areas must either be gazetted (that is, recognized under statutory civil law), recognized through an international convention or agreement, or else managed through other effective but non-gazetted means, such as through recognized traditional rules under which community conserved areas operate or the policies of established non-governmental organizations.</p>	<p><i>De facto</i> or <i>de jure</i> tenure should be clearly defined (even if the package of tenurial rights and responsibilities constituting the 'area' that is managed as a PPA is diverse and unconventional). The control of rights over land or water use are rarely in the hands of one person, organization or government ministry – and thus tensions often arise when different rights holders have different objectives for the use of those rights.</p> <p>For any area to fit the definition of a protected area the current use of the area should be conservation – and the intent should be that the conservation objective is for the long term.</p> <p>Where specific management is necessary to achieve the stated conservation outcome and rights-holders may require a particular management style in order to satisfy their requirements. Managers of sites should be aware of any rights of use which are not in their control, and efforts should be made to ensure that use does not impact these conservation outcomes.</p>

To achieve:

Explanation from 2008 Guidelines	Understanding the definition for PPAs
<p>Implies some level of effectiveness – a new element that was not present in the 1994 definition but which has been strongly requested by many protected area managers and others. Although the category will still be determined by objective, management effectiveness will progressively be recorded on the World Database on Protected Areas and over time will become an important contributory criterion in identification and recognition of protected areas. The <b>Convention on Biological Diversity</b> is asking Parties to carry out management effectiveness assessments.</p>	<p>No PPA-specific considerations (but see section on Management)</p>

Long-term:

Explanation from 2008 Guidelines	Understanding the definition for PPAs
<p>Protected areas should be managed in perpetuity and not as a short-term or temporary management strategy. Temporary measures, such as short-term grant-funded agricultural set-asides, rotations in commercial forest management or temporary fishing protection zones are not protected areas as recognized by IUCN.</p>	<p>PPAs should demonstrate <b>an intent to conservation ‘in perpetuity’</b>, or at least ‘long-term’ ( a period of at least 25 years). PPAs can face particular challenges in ‘proving’ long-term conservation. In a few countries, PPA declaration brings legal obligations for long-term protection, putting PPAs on equal footing to state-run protected areas. Where this is not the case, long-term <b>intent</b> can be demonstrated through:</p> <ul style="list-style-type: none"> <li>• PPA status transcending changes of ownership, through easement, covenant, wills, etc.</li> <li>• Where formal agreements relating to PPAs are short-term they should be tied to commitment to long-term protection (e.g. renewable agreements or long-term stated objectives) and ending of agreements should never prohibit continuation of PPA status.</li> <li>• Some form of long-term monitoring to ensure adherence to conservation intent.</li> <li>• Active or passive management practices being applied in order to safeguard the integrity of natural resources present in the PPA, that are validated by local or regional units of a national association of PPAs with guidelines and a national inventory.</li> </ul>

Conservation:

Explanation from 2008 Guidelines	Understanding the definition for PPAs
<p>In the context of this definition conservation refers to the <i>in-situ</i> maintenance of ecosystems and natural and semi-natural habitats and of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties.</p>	<p>No PPA-specific considerations</p>



**Nature:**

Explanation from 2008 Guidelines	Understanding the definition for PPAs
<p>In this context nature <i>always</i> refers to biodiversity, at genetic, species and ecosystem level, and often also refers to geodiversity, landform and broader natural values.</p>	<p>No PPA-specific considerations</p>

**Associated ecosystem services:**

Explanation from 2008 Guidelines	Understanding the definition for PPAs
<p>Means here ecosystem services that are related to but do not interfere with the aim of nature conservation. These can include provisioning services such as food and water; regulating services such as regulation of floods, drought, land degradation, and disease; supporting services such as soil formation and nutrient cycling; and cultural services such as recreational, spiritual, religious and other non-material benefits.</p>	<p>No PPA-specific considerations</p>

**Cultural values:**

Explanation from 2008 Guidelines	Understanding the definition for PPAs
<p>Includes those that do not interfere with the conservation outcome (<i>all</i> cultural values in a protected area should meet this criterion), including in particular:</p> <ul style="list-style-type: none"> <li>• those that contribute to conservation outcomes (e.g. traditional management practices on which key species have become reliant);</li> <li>• those that are themselves under threat.</li> </ul>	<p>Many PPAs were created to ensure a legacy – this is a cultural value that is an important aspect of these PPAs.</p>



Purisil PPA, San José, Costa Rica © Chris Martin Bahr / WWF-Canon

### Defining a PPA

Over 50 definitions of private conservation are currently in circulation (Mitchell, 2005; Lausche, 2011). Several of the countries reviewed for this report did not have a formal definition of a PPA even though many PPAs existed in the country (see country reviews). In other countries there are *de facto* but not *de jure* definitions. Many of the definitions in use are not fit-for-purpose when trying to understand and account for PPAs internationally within the IUCN scheme of protected area definition, management category and governance type, because, amongst other things, they do not distinguish between management approach and governance type. There is also a major question left unresolved as to the difference between ownership and control (Holmes, 2013b and see below). This multiplicity of definitions and the lack of a formal or commonly used definition suggest that even the few comparative analyses of private protection that have been undertaken to date may not always be comparing strictly equivalent approaches.

There is clearly a need to start developing a common understanding of PPAs globally, based on the IUCN approach and practice. Our recommended definition is: **a privately protected area is a protected area, as defined by IUCN, under private governance (i.e. individuals and groups of individuals; non-governmental organizations (NGOs); corporations – both existing commercial companies and sometimes corporations set up by groups of private owners to manage groups of PPAs; for-profit owners; research entities (e.g. universities, field stations) or religious entities), or put more simply a privately conserved area is only a PPA if it is a protected area as defined by IUCN.** Anchoring the definition of a PPA in IUCN's lexicon is important because the governance of an area can change but the objective of conserving nature needs to remain the same. It is important to note that there are many types of private conservation areas that will not qualify as a PPA as defined above and that the PPA category does not therefore describe all types of private conservation areas.

The IUCN definition of a protected area is further elaborated by a set of principles in the 2008 Guidelines, three of which are particularly relevant to PPAs and are thus repeated below.

Existing general protected area principles particularly relevant to PPAs:

1. Protected areas must prevent, or eliminate where necessary, any exploitation or management practice that will be harmful to the [management] objectives of designation
2. For IUCN, only those areas where the main objective is conserving nature can be considered protected areas; this can include many areas with other goals as well, at the same level, but in the case of conflict, nature conservation will be the priority
3. Protected areas should usually aim to maintain or, ideally, increase the degree of naturalness of the ecosystem being protected (Dudley, 2008).

### Understanding the definition of a PPA

In 2008, recognizing the difficulty of trying to define the complexity of protected areas in one short sentence, IUCN provided additional guidance for each of the separate phrases in the definition. This approach is used in table 2 to further elaborate how the definition is applied to PPAs; for each component there is a discussion of what is meant by the phrase (which is taken directly from the 2008 Guidelines) and then how the phrase should be interpreted in the context of PPAs. Some key points that are elaborated in this table are:

- **PPA managers should be aware of any rights of use that impact the achievement of desired conservation objectives that are not under their control and should make every effort to ensure that use does not impact the area's conservation objectives or the area's ability to meet the IUCN definition of a protected area.**
- **In recognition of the challenge that PPAs may have in proving 'long-term' conservation, focus should be put on demonstrating long-term intent towards conservation. Long-term in this context should be at least 25 years, though the intent should be conservation 'in perpetuity', and safeguards should be put in place to ensure conservation objectives persist even if ownership changes.**



Fish River Station PPA, Northern Territory, Australia © James Fitzsimons

## PPA governance

Governance is defined as: 'The interactions among structures, processes and traditions that determine how power and responsibilities are exercised, how decisions are taken and how citizens or other stakeholders have their say' (Graham et al., 2003) and IUCN argues: 'governance that is both appropriate to the context and 'good' is crucial for effective and equitable conservation' (Borrini-Feyerabend et al., 2013). Governance, as discussed above, is thus an important dimension of protected area establishment and management.

In some protected areas, and particularly in PPAs and those managed by indigenous peoples and local communities (ICCAs), the owners and managers of the land may be different (e.g. state leased, owned by the state but managed by an NGO, etc.) (cf. Carter et al., 2008 for East Africa). The key issue is effective long-term control (either through ownership or management agreement) of the bundle of resources necessary to achieve the stated conservation objectives for the property (see discussion in above section).

Additionally, there is often a blurring between public and private governance and between PPAs and governance by indigenous peoples and local communities. Countries like Mexico with a complicated history of communally owned lands also tend to have complex approaches to PPAs; for example, when governments or communities retain ownership but management is done by an NGO through a contract. In most cases mixed governance is likely to fall into the category of shared governance, which is explained by IUCN (Borrini-Feyerabend et al., 2013) as: '*Protected areas under shared governance are based on institutional mechanisms and processes which – formally and/or informally share authority and responsibility among several actors.*' However, there may be cases where the owners of the land pass so much control to the managers that the shared governance would not describe the governance situation adequately and one of the other governance categories would seem more appropriate.

Another key issue here is the definition of 'private'. Carter et al. (2008) define private actors as including: '*... all non-state bodies or organizations that may be involved in either the management and/or ownership of private protected areas, from corporate institutions and limited companies through to private individuals and trusts.*' Most general definitions of 'private' would include indigenous and community groups but for the purposes of conservation practice and protected area governance IUCN has created a separate governance type for these non-state actors. **Therefore, 'private' in the context of IUCN governance types is all ownership types that are not 'governments', 'indigenous and community' or 'shared'.**

PPAs, according to the IUCN governance matrix, could thus include ownership and/or management by:

- Individuals and groups of individuals
- Non-governmental organizations (NGOs)
- Corporations (both existing commercial companies and sometimes corporations set up by groups of private owners to manage groups of PPAs)
- For-profit owners (e.g. ecotourism companies)

- Research entities (e.g. universities, field stations)
- Religious entities.

## How to become a PPA

Private owners may provide benefits to nature in a variety of ways (see table 2 for a definition of 'nature' in this context). At one end of the spectrum are incidental conservation benefits that may accrue to the natural world as a side effect of another management goal, such as sustainable forestry. Or the owners may manage for landscape views that preclude the disruption caused by roads, settlements etc., again with some benefits for biodiversity. Or islands may be exclusive tourist resorts with most of the human activity confined to a small portion of the entire island and the rest left (but not specifically managed for) nature. Such properties, despite the benefits they provide to biodiversity would generally not be considered PPAs because they are not 'recognized, dedicated and managed ... to achieve the long-term conservation of nature ...' and as such do not comply with the IUCN definition of a protected area.

Other types of private land/water appear to be on the borderline between what does or does not meet the definition. One example might be wildlife ranches in South Africa, Namibia and Kenya. Wildlife ranches can vary in form, with some having no fences and being managed as part of larger conservation ecosystem (e.g. being contiguous with national parks). Others may have fences, remove predators and manage for artificially high densities of animals in ways that may be similar to a conventional livestock farm (Cousins et al., 2008). The latter examples would not be considered PPAs, the former probably would. The same logic applies to another common private land-use type in southern and eastern Africa, the 'conservancy' (Child et al., 2013). Conservancies take many forms (see Kenya, Namibia and South Africa country reviews). However, typically they involve landowners eliminating internal fences and entering multi-tenure systems where land management is promulgated through a constitution that binds landowners together in a shared vision of the landscape (Kreuter et al., 2010). Where conservation is the overarching objective these would qualify as PPAs.

This same argument applies to properties included in forestry operations. Responsible forestry operations may retain key habitats, protect against poaching and support endangered species, but would not generally be considered PPAs. However, a proportion of land within forestry management units set aside permanently for conservation could be considered a PPA.

It is important to stimulate adoption of new PPAs by acknowledging and supporting the areas with conservation benefit that do not at present meet the IUCN definition of a protected area but might if the proper changes were made. Some of these areas, which could be termed 'candidate PPAs', could become PPAs if for example their owners/managers:

- Develop a long-term commitment to nature conservation; and

Table 3: Summary of criteria which distinguish PPAs from other governance types

PPA criterion	Sub-criteria
Protected area	<ul style="list-style-type: none"> <li>Area is legally designated and managed in accordance with the IUCN definition and associated principles</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>Area is managed in accordance with the IUCN definition and associated principles, and, though not legally mandated, is recognized as a PPA</li> </ul>
Entities involved	<ul style="list-style-type: none"> <li>Individual or a group of individuals, NGO, corporation, for-profit owner, research entity or religious entity</li> </ul>
Governance	<ul style="list-style-type: none"> <li>PPA managers should be aware of any rights of use which are not in their control and efforts should be made to ensure that such use does not impact overall conservation objectives</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>Management is dedicated primarily to the purpose of nature conservation by its owner(s) or manager(s)</li> </ul>
Permanence	<ul style="list-style-type: none"> <li>Area is legally designated for permanent protection of nature conservation (e.g. Act)</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>Designation to nature conservation is made through a permanent agreement (e.g. conservation covenant or easement)</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>Designation to nature conservation is made by a renewable agreement with the aim of permanence (e.g. time-limited conservation covenant or easement)</li> </ul>

- Make a stated intention to conserve nature permanently (see table 3) that is approved by some external appropriate body (see discussion above).

Candidate PPAs that would need to make a commitment to long-term conservation of nature in order to become PPAs include:

- Specific national initiatives such as Land for Wildlife properties in Australia and conservation reserve and wetland reserve programmes in the USA
- Non-binding agreements relating to conservation management between landowners
- Private or company reserve that has made no robust provision for long-term conservation
- Certified lands (e.g. Forest Stewardship Council forests or agriculture under organic certification schemes) which include setting aside a proportion for conservation under the scheme
- Areas zoned for ‘open space’ or very non-intensive forms of agricultural production
- Land held by institutions that do not have a primary purpose of nature conservation but are providing effective management that yields conservation benefits (e.g. universities, field stations, some religious groups)
- Greenbelt open-space systems supported by land-use zonation linking other existing protected areas/PPAs but which do not have as a main purpose nature conservation.



Monhegan Island in Maine is one of the first Land Trusts on the East coast of the USA; a large portion of the small island is owned and managed by local residents, the Monhegan Associates © Kent Redford



# Part 3: Results from 17 country reviews

No one knows how many PPAs there are around the world or where they are located. Sparse data from single countries or regions have been used to infer that they are probably quite numerous and rising (Langholz & Lassoie, 2001; Holmes, 2013b). In some countries there has been a sharp increase in PPA creation since the millennium change, with Brazil's Atlantic Forest, for example, showing an 80 per cent increase in PPAs in the last decade (see box 2). However,

with governments usually not counting PPAs as part of their national or subnational protected area networks, let alone deciding on how to define them, it is anyone's guess how many there are and researchers worldwide have noted the gaps in international data on the most authoritative database of protected areas worldwide: the WDPA (Holmes, 2013b). Overall, the country reviews presented in this report indicate a strong and broad interest in, and creation of, PPAs.



Fazenda Cabeceira do Prata is one of Brazil's Private Reserves of Natural Heritage; the PPA is in the much-diminished Atlantic Forest region © Daniel De Granville – Photo In Natura

## Box 2

### PPAs in Brazil's Atlantic Forest

PPAs, or Private Reserves of Natural Heritage (PNHRs) as they are termed in Brazil, have been an important conservation tool since 1990. They are distributed throughout Brazil in all States and many municipalities. They are particularly common in the Atlantic Forest of Brazil, the extremely biodiverse forest found on Brazil's Atlantic coast. The Atlantic Forest ecoregion contains 762 PPAs, almost 70 per cent of all the PPAs found in Brazil and almost four times more than the Cerrado, the ecoregion with the next largest number (for data source see Brazil country review).

The number of PPAs continues to grow rapidly, and in the last ten years the number has grown by 80 per cent. Due to the long history of European occupation, the Atlantic Forest has been reduced by over 90 per cent from its original cover and what is left is heavily fragmented. As a result the average PPA size is only 186 hectares and collectively they do not equal the size of the municipality of São Paulo. Also due to its early history, 80 per cent of what remains of the Atlantic Forest is in private hands.

The Brazilian Government provides only limited incentives to encourage creation of PPAs so most of the landowners make their decisions based on a desire to protect remaining forest. And the decision to dedicate their land is permanent as dictated by Brazilian law. The price of land is extremely high in the area so the Government cannot afford to create many new protected areas, making the role of PPAs particularly important.

Businesses of many sorts, from forestry companies to agribusinesses, have also created their own PPAs and a programme run by Conservation International, SOS Mata Atlantica and the Nature Conservancy (Ayala, 2010) has been encouraging and supporting these companies to create a number of important reserves that support and provide ecological connectivity in the fragmented landscape.



Greater double-collared sunbird (*Cinnyris afrea*) are common in privately protected areas in South Africa © Claire Fulton

## Filling the information gap

To gain a global overview of countries' responses to the opportunities offered by PPAs, the *PPA Futures* project worked with the WCPA membership (through a call in several WCPA newsletters), the WCPA Specialist Group on PPAs and a trilingual (English, French and Spanish) request from the SCBD to the PoWPA national focal points (see Appendix 2 for an overview of results from this request). Some countries were obvious candidates for review due to their well-developed systems of PPAs (e.g. Australia, Brazil, Chile, Colombia, Mexico, South Africa, USA); in Europe where PPAs are well developed in several countries, primarily in the west, research focused on a few examples (Finland, Germany, Spain, UK). In Asia and the Middle East the coverage of PPAs has been little studied, and whilst some countries reportedly have no PPAs (e.g. India, Nepal and UAE) others have NGO-based PPAs similar to systems found in Europe (e.g. Japan and Republic of Korea which were thus added to the list of reviews), whilst in China the development of PPAs is very recent but clearly could have major potential. Other reviews from Canada, Kenya and Namibia completed the set.

All the reviews were developed by in-country experts. *PPA Futures* asked these authors to provide information on national PPA systems (or potential PPA systems) based around questions that asked:

- How is a PPA defined in your country (including ownership, management, objectives and permanence)?
- What national or other legislation addresses PPAs – their creation and management, long-term security and links to state-run and other protected areas?

- Number of PPAs (estimate if complete data are not available), area covered, average size – if possible provide this information for terrestrial and marine areas separately
- Ownership of PPAs: private individuals, non-profit groups or for-profit groups (e.g. companies). Please provide statistics if possible
- Main management approach (e.g. IUCN category if this has been designated)
- Geographical location – is there any bias compared to other governance types of protected areas? Were the PPAs established to connect other protected areas? Or for other specific purposes?
- Are there any incentives, tax or otherwise, for PPAs?
- Are there any measures of conservation or management effectiveness that are used to assess PPAs? If so please provide brief details and responses.

In most cases the information received from these reviews was so detailed and thorough that only edited summaries have been included in this report. The edited versions of 15 of the reviews are included in Part 6 (two reviews, Colombia and Japan, were briefer and have thus not been written up, however see box 6 for a short overview from Japan).

The following discussion draws on these 17 reviews (see figure 2), to try to understand the trends in the development, numbers and incentives for PPA development in countries with strong or emerging PPA estates.



© Nature Conservancy of Canada

**CANADA**

PPAs in Canada are primarily on the country's southern border on land with high levels of species diversity and also species at risk



© Essex County Greenbelt Association

**USA**

No formal PPA definition and no comprehensive reporting but a vibrant and active PPA community led by Land Trust organizations and NGOs, with many thousand PPAs



© Equilibrium Research

**UK**

PPAs not formally reported on by government, but NGOs in particular manage over 400,000 ha of land with important biodiversity value



© Marco A. Lazzarini-Barrero, Erick J. Torres - Reserva Ecológica El Estero A.C.

**MEXICO**

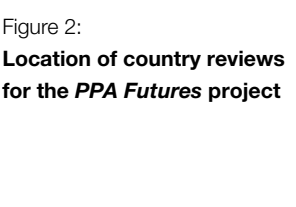
PPAs, which protect 487,300 ha (0.25%) of the country's land surface, play an important role in connecting government managed protected areas



© Diego M. Garcia / WWF-Caracol

**COLOMBIA**

280 registered with national PPA organizations, most are small in area and many are in the Andes



© Conservation Land Trust

**CHILE**

The term PPA is legally recognized, although undefined and unregulated. Federated system of PPA owners who together add over 10% to the national protected system



© Instituto Homem Pantaneiro

**BRAZIL**

Legislated and federated system of over 1,100 Private Reserves of Natural Heritage protecting approximately 703,700 ha



© FOLP

**SPAIN**

Many NGOs and foundations active in conservation; most have a continuum of approaches from land stewardship to PPA ownership/management



© Martin Harvey / WWF-Caracol

**NAMIBIA**

Many private land holdings called 'private game reserves' managed primarily for nature-based tourism; there is lack of clarity about whether these meet the definition of a protected area

Figure 2: Location of country reviews for the PPA Futures project





© D. Kolbächer

**GERMANY**

History of private protection going back to 19th century and the protected area system has been formed through close cooperation between State and Civil Society actors



© Equilibrium Research

**FINLAND**

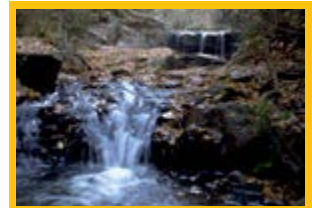
Over 10,000 small PPAs, mainly in the south, covering ~290,000 ha, established to complement state protected areas, which are less representative there than in the north



© The Nature Conservancy

**CHINA**

PPAs first suggested as part of protected area system in 2007 primarily as a response to the poor funding and management of government managed areas



© WWF-Japan/Mima Junkichi / WWF-Canon

**JAPAN**

A relatively new governance type in the country, but seen as important for achievement of the Aichi Biodiversity Targets



© Jong-Hwan Choi

**REPUBLIC OF KOREA**

Civil society interest in conservation and supporting NGOs managing PPAs, although PPAs are not well developed as part of the protected-area system



© Geoffrey Malwaits

**KENYA**

New law recently promulgated to regulate Conservancies, a term used to describe land set aside by an individual landowner, corporate bodies, groups of owners or a community for purposes of wildlife conservation



© James Fitzsimons

**AUSTRALIA**

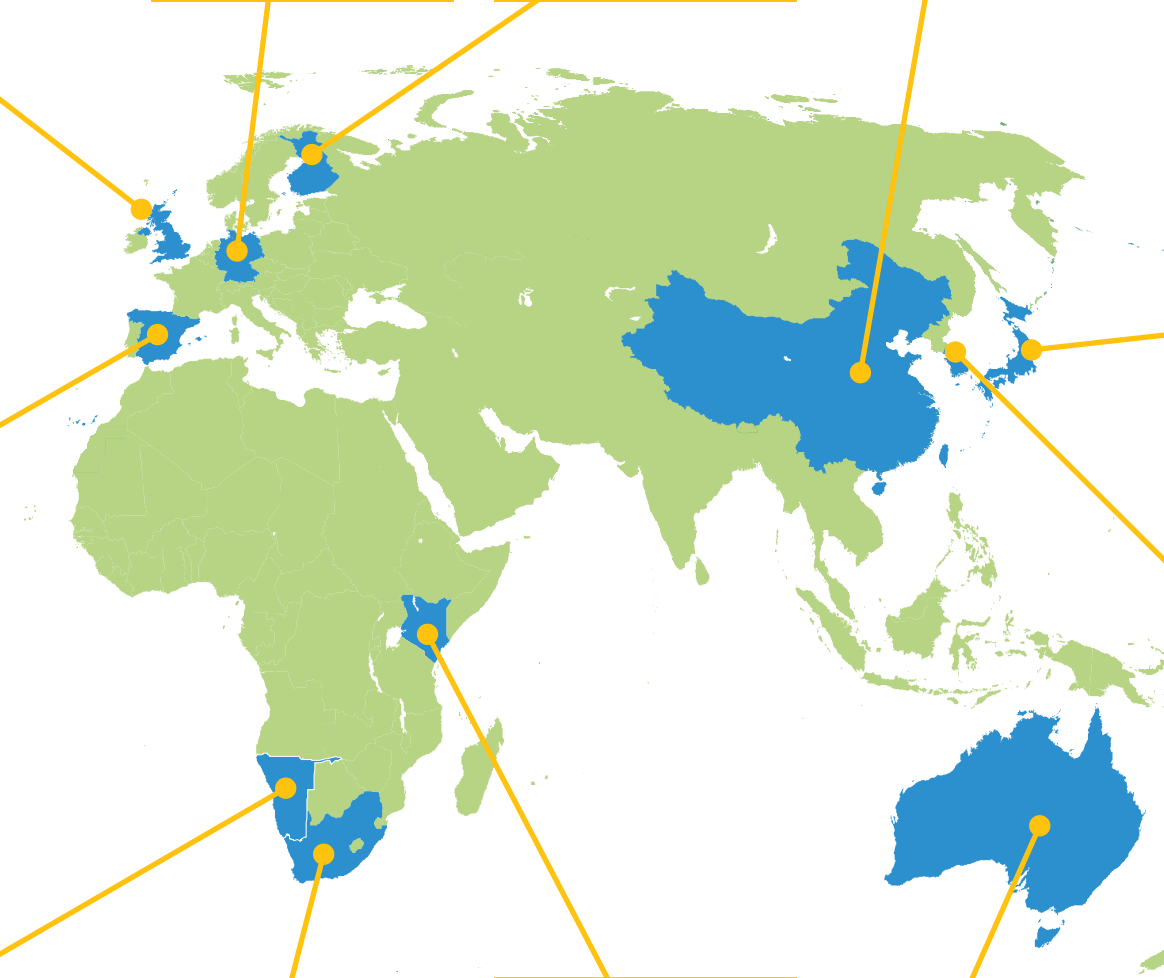
A vibrant, although not legislated, PPA community of practice nationally recognized for its role in the national protected area system



© Martin Harvey / WWF-Canon

**SOUTH AFRICA**

Legally recognized PPAs that meet the needs of national biodiversity conservation are actively encouraged by the government





At least 28 individual jaguars (*Panthera onca*) have been identified through camera traps in El Eden PPA in Northern Quintana Roo, Mexico over the last five years © Marco A. Lazcano-Barrero, Erick J. Torres - Reserva Ecológica El Edén A. C.

## Regional differences

One clear result of our study is that PPAs are not evenly distributed across countries, nor are they necessarily similar in aims or approach in different countries.

- PPAs are particularly prevalent in some Latin American states, with much existing experience that is now being shared, including through regional PPA meetings (Chacón, 2008; Environmental Law Institute, 2003; Monteferri & Coll, 2009; Asociación Conservación de la Naturaleza, 2008). Key countries include: Brazil (Castro and Borges, 2004; Silva, 2013; Buchemi de Oliveira et al., 2010), which was the first country in Latin America to include PPAs in the official system of protected areas (Mesquita, 2008); Colombia, where PPAs are integrated into national protected area systems; Chile, with many small and large holdings and a national association; and Costa Rica (Langholz et al., 2000).
- Australia has a growing PPA movement (Figgis 2004; Figgis et al., 2012).
- Private conservation has a long tradition in North America including Canada, USA and Mexico (see country reviews); for example, in the western states of the USA half of all financial investment in land conservation goes to easements (Fishburn et al., 2013; Rissman & Sayre, 2012; Wallace et al., 2008).
- Western and northern Europe contains large numbers of areas designated as PPAs. In some countries these are mostly owned by NGOs, while in others private individuals hold large numbers. In contrast some central and eastern European countries have few if any PPAs.
- In Africa, South Africa and Kenya have well-developed PPA systems integrated into national conservation strategies (Knight et al., 2010; Langholz & Kerley, 2006; Pasquini et al., 2011; von Hase et al., 2010 and see also the case studies); some other southern and east African countries also have PPAs although here they are mainly commercially run.
- Asia in comparison contains relatively few sites although a number of countries are starting to recognize the potential of PPAs and there could be an increase over the next few years.

## 3.1 Definitions

Without clear definitions it is hard to quantify the status and trends of any protected areas. Government owned/managed areas have tended to follow a clear pattern of designation (usually linked to legislation), management development (including site-based management teams of trained protected area professionals and national administrations directed by management and operational plans), finances (state/regional budgets supplemented by grant/project funding), etc. Such patterns are much harder to find in PPAs. Designation ranges from an individual simply making a decision to manage land he or she owns for nature conservation (with the understanding of what is meant by 'manage for conservation' being far from uniform globally) to areas managed by NGOs which may have more assured security than government-managed areas in the same country (e.g. lands owned by the National Trust in the UK – see country review) to areas that can only become PPAs with the approval and support of the government. Although many PPAs will have site-based management, sometimes the managers will also be the individuals who own the site, whilst other small sites may have no managers at all, and yet others have people who are focused on specific activities in the PPA, such as nature-based tourism provision. Some sites may have no links (physically or programmatically) to other PPAs, let alone national or subnational networks, while others will be linked to national (or even international) NGO headquarters or more or less formally organized networks of PPA owners. Funding will also range from an individual's own finances to funds coming from an NGO membership of over a million (e.g. TNC in the USA and the RSPB in the UK).

This diversity can provide some exciting new models for conservation development and practice, as well as some potential disadvantages (as discussed below) but it certainly represents a challenge in trying to build a global understanding of what is meant by a PPA. Summary information on the key elements of protected area global structures (definitions, links to legislation and reporting) from the 17 reviews is given in table 4 (more details can be found in the country reviews in this document).

Several conclusions stand out from the 17 countries surveyed in the project:

- Only seven countries reportedly linked the definition of a PPA directly with the IUCN definition of a protected area<sup>2</sup>
- Several countries have legislation for PPAs although do not define what is meant by a PPA
- There are only three established national databases for PPAs (and the one in Canada is not complete), although several countries are currently developing databases
- There are very few clearly articulated national calls for PPA data despite the majority of countries listed being signatories to the CBD, which encourages a range of governance types for protected areas.

<sup>2</sup> It is thus inevitable that a portion of what are called PPAs in the *PPA Futures* country reviews will not meet the terms of the definition laid out in this report. As noted in the recommendations national assessments of conservation sites against the definition (as is being carried out in Japan and the UK) will be needed to develop accurate data on PPAs which can be reported to the WDPAs.

Table 4: Summary of national existence of key PPA issues for the 17 countries surveyed by PPA Futures

	National PPA definition	National PPA legislation <sup>1</sup>	Regional <sup>2</sup> PPA legislation	National PPA database	National reporting required
<b>Australia</b>	no <sup>3</sup>	no	yes	yes <sup>4</sup>	no
<b>Brazil</b>	yes	yes	yes	yes	no
<b>Canada</b>	no <sup>3</sup>	no	yes	yes	no
<b>Chile</b>	no	no	no	no	no
<b>China</b>	yes	no	yes	no	no
<b>Colombia</b>	no	yes <sup>5</sup>	yes <sup>5</sup>	yes <sup>4</sup>	yes
<b>Finland</b>	no <sup>3</sup>	yes	n/a	yes <sup>4</sup>	yes
<b>Germany</b>	no	yes	n/a	no	no
<b>Japan</b>	no	no	no	yes <sup>4</sup>	no
<b>Kenya</b>	yes	yes	n/a	yes <sup>4</sup>	no
<b>Mexico</b>	no	yes	yes	yes	no
<b>Namibia</b>	no	yes	n/a	no	no
<b>Republic of Korea</b>	no	yes	n/a	no	no
<b>South Africa</b>	no	yes	n/a	yes <sup>4</sup>	yes <sup>6</sup>
<b>Spain</b>	no	no	yes	yes <sup>4</sup>	no
<b>USA</b>	no	yes	yes	yes <sup>4</sup>	no
<b>UK</b>	no <sup>3</sup>	no	no	yes <sup>4</sup>	no

<sup>1</sup> This indicates whether any protected area legislation exists, while recognizing that not all PPAs established in the country will necessarily have been set up in accordance with this legislation

<sup>2</sup> 'Regional' is used here to indicate regions within a country (e.g. the various states of Australia, Germany and USA, the provinces of Canada, the regions of Spain, or the semi-autonomous countries which make up the UK)

<sup>3</sup> Although no specific definition, PPAs must meet the overall IUCN definition of a protected area

<sup>4</sup> Databases are under development but not yet complete

<sup>5</sup> PPAs covered in general protected area legislation

<sup>6</sup> The data on the national database are currently in the process of being verified so the data at this point are not 100% reliable.

### 3.2 Trends in numbers and ownership

Few countries clearly define, collect data and report nationally/internationally on PPAs – which results in a lack of reliable data currently held by the WDPAs (see Part 4). Any attempt to estimate the number and coverage of PPAs, according to the definition outlined earlier in this report, is impossible, even in the 17 countries covered by detailed reviews. The many thousands of PPAs predicted by Langholz & Lassoie in 2001 still seems a fair estimate, but there is clearly a need to develop the type of assessment and data-collecting projects currently ongoing in Japan (see box 9) and the UK (see country review) to develop baseline data on PPAs and develop ongoing systems to update data at regular intervals. Appendix 1 includes a summary of 'raw' data on the potential PPAs in the 17 countries (the country reviews contain more detail and discussion). These data could be used as a starting place to undertake such country-specific projects.

Despite the lack of clarity surrounding what is understood by the term PPA around the world, the country reviews show that the concept of non-state, non-community and non-indigenous ownership and management of areas for the conservation of nature is neither new nor confined to certain regions. Individuals or groups of individuals with a shared goal have been involved in the establishment of PPAs for well

over a century – and constitute a global fellowship of PPA supporters of many millions (including the memberships of the many NGOs worldwide who support site-based conservation initiatives). The reviews also highlight that in recent decades the creation, expansion and networking of PPAs have grown in number, variety, area and organization.

Of the six types of private governance identified in part 2 (individuals and groups of individuals; NGOs; corporations; for-profit owners; research entities; and religious entities), NGOs are amongst the most important owners/managers of PPAs, in number if not necessarily in area. From the largest international NGOs (such as The Nature Conservancy (TNC) and the various National Trusts) to small NGOs set up to protect a single site, this form of private governance owns and/or manages many thousands of PPAs worldwide. The combination of regulation around NGO set-up and ability to raise funds from a wide variety of sources and various incentives (preferential tax rates/exemptions) which helps secure long-term management means that NGOs owning/managing land for long-term *in situ* conservation will most likely meet the IUCN definition of a protected area. Many of the larger NGOs also have close working relationships with government conservation bodies and are well represented in international processes. Some smaller NGOs benefit from

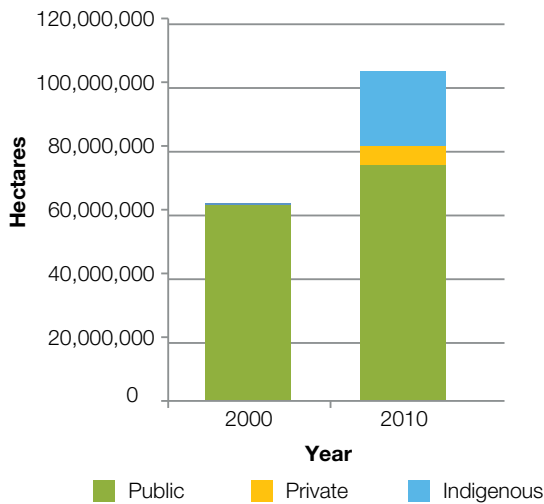


Figure 3: Increase in extent of protected areas in the National Reserve System in Australia between 2000 and 2010, including ownership type (data from the Collaborative Protected Area Database 2000 and 2010) (adapted from Fitzsimons & Looker, 2012)

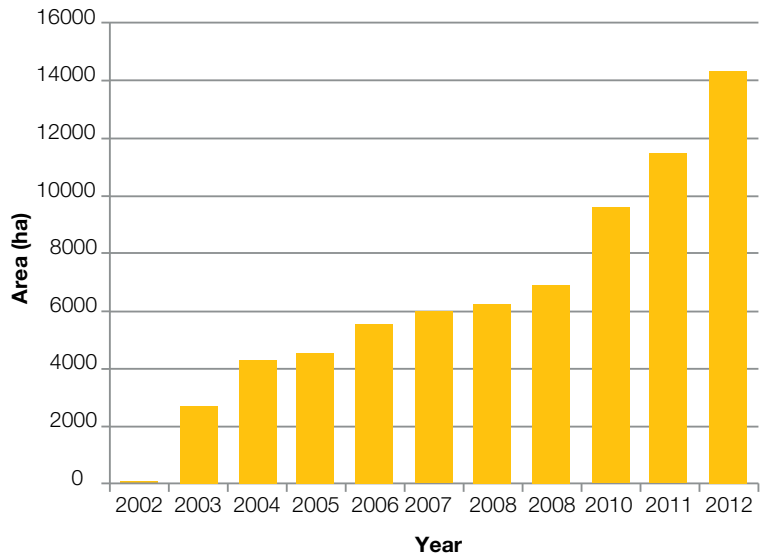


Figure 4: Land ownership of the NABU-Stiftung Nationales Naturerbe, Germany, between 2002 and 2012 (land ownership by year based on online annual reports; NABU-Stiftung Nationales Naturerbe, 2013)

being part of federations such as BirdLife, the American Bird Conservancy and its NGO partners in Latin America and The International National Trusts Organisation (INTO). Overall, NGO data is also likely to be the most readily available source of information on PPAs as organisations generally have accessible records of their holdings available for donors /visitors.

PPAs owned/managed by research entities (e.g. universities, field stations) are in many ways similar to NGOs in generally being linked to bigger organizations, having clear reporting needs and most likely clear conservation objectives. For example in Chile, the Reserva Nasampulli was first initiated by a group of 20 Chilean professionals and staff from the International Conifer Conservation Programme of the Royal Botanical Gardens (Edinburgh, UK) when they formed a small cooperative to purchase an initial 170 ha of forest (Chilean Plants, 2014).

Of the other PPA governance types, individuals and groups of individuals have a long history in protected area establishment. These PPA owners/managers may be relatively isolated from all international processes or agreements in relation to protected areas, and are less likely to be interested in, or see the relevance of, for example, the IUCN definition or reporting needs for PoWPA. This may particularly be the case for the large PPAs owned by the wealthy who also may not want to be part of any national reporting.

The three remaining types of PPA governance (corporations, for-profit owners and religious entities) together highlight some of the confusions around the discussions of what is meant by a PPA. Many of the private conservation areas under this type of governance regime are likely to have primary management objectives other than nature conservation, in particular nature-based tourism in the case of for-profit reserve owners

(e.g. see country reviews from Namibia, Kenya and the few examples of PPAs from China) and sacred values in the case of faith groups. Information on for-profit PPAs or PPAs linked to companies remains hard to find (Stolton & Dudley, 2007 and see box 6). Here the decision about whether a particular management approach is or is not a protected area depends on whether non-conservation management decisions over-ride conservation objectives on a significant proportion of the land. So, building small areas of trails and visitor accommodation in a private reserve that is otherwise managed for conservation would be acceptable in a PPA; whereas expanding visitation to a level that seriously undermined conservation would not. The '75 per cent rule' for protected areas, which says other compatible uses can take place in a maximum of a quarter of the area, may be helpful in determining what is and is not a PPA in these cases (see the 2008 Guidelines for more details on this).

It is clear from the country reviews that governance of private land and water tends to be complex; and generally much more complex than the 'government managed' areas where either the state owns and manages the land, or legislation clearly gives government authority to manage overall conservation objectives on private lands within designated protected areas. Furthermore, in several countries there is a lack of clarity in distinguishing between PPAs and areas governed by indigenous and community groups (e.g. Chile and Kenya).

The governance of an area can change quite rapidly in the development and set up phases of PPAs and being a 'PPA' may be only a temporary condition on the way to becoming a government protected area. PPAs are often initiatives of a range of stakeholders including landowners, communities, NGOs, researchers, government agencies etc., making it likely



**Inkosi Baleni telling the community about the Ezemvelo KZN Biodiversity Stewardship Program** © Bill Bainbridge

that many management approaches that are predominantly PPAs will have mixed or shared-governance.

The number of PPAs is growing, although often small in area (see later discussion), the sheer number of people involved and different practices evolving in development of PPAs is clearly increasing rapidly. Figures 3 and 4 provide examples from Australia and Germany, in the latter country land owned by the charitable foundation NABU-Stiftung Nationales Naturerbe has risen from six to more than 14,000 ha between 2002 and 2012. Many other country reviews also report that PPAs are a growing phenomenon.

The development of marine PPAs is not so advanced and several of the country reviews note only the presence of terrestrial PPAs. Nonetheless many marine PPAs do exist (see box 3) and clearly private initiatives offer another route to fulfilling the ambitious marine targets of commitments such as the Aichi Biodiversity Targets.

### 3.3 Regulation and legislation

Given the lack of clarity regarding PPA definitions and lack of reporting on PPAs internationally, it is perhaps surprising to find that most countries reviewed (13 out of 17) have developed (or are in the process of developing) policies, regulation and legislation regarding the establishment of PPAs.

IUCN's guidance on protected area legislation (Lausche, 2011) identifies four options that can support conservation on private lands. These options can co-exist within the same country. All relate to different levels of commitment, but all could be PPAs if the IUCN definition of a protected area is met. Table 5 uses the options detailed in Lausche (2011) and adds examples of various approaches to PPA establishment discussed in the country reviews. These approaches are varied and only in a very few countries (e.g. Brazil, Finland, Kenya, Mexico and South Africa) is the legislative basis for PPAs truly integrated with the so-called 'formal' or 'official' protected-area system. In other countries the legislative basis is in place but not implemented, (e.g. although in Chile article 35 of Law N°19.300 recognized the term 'Private Protected Area' in 1994, the term was not defined and the Law's implementing regulations were never approved, meaning that there are no operative definitions, standards, or administrative procedures to establish terms, conditions, and incentives to be officially recognized and no support by the government of Chile). In other countries the legislation does not reflect

Table 5: Options for conservation on private lands that support formal protected area systems

General category	Level of commitment / alternatives	Examples from country reviews
A. Self-imposed restrictions on property for conservation purposes, with no legally binding document	1. Management of property in a sustainable way, according to conservation principles	Private conservation initiatives in <b>Chile</b> are, for the most part, established by a declaration of conservation intentions or self-proclamation of private protected status.
	2. Naming of property with a conservation-associated title ('shelter', 'refuge') and use accordingly	
	3. Elaboration and adherence to business or management plans for the area	
B. Self-imposed restrictions on property for conservation purposes, formalized through binding documents, with no participation from a protected area authority and without being part of the formal protected area system	1. Conservation agreements, with NGOs, universities or other owners	In <b>Australia</b> , the states and territories have legislation enabling the application of conservation covenants over private land; covenants being the primary mechanism to secure conservation intent on the title of the land in perpetuity. However, only some jurisdictions provide information on conservation covenants (in 2010 this was South Australia, Queensland and Tasmania) for national reporting and thus most PPAs are not seen as part of the formal protected areas system.
	2. Conservation easements; land use restrictions are annotated in the public register of property	
	3. Other civil contractual mechanisms containing conservation clauses such as documents related to inheritance and wills, loan contracts, or agreements granting the right to use the property	
	4. Included in a local or national network, usually involving membership and registered responsibilities	
C. Self-imposed restrictions on property for conservation purposes, and voluntary agreements to comply with governmental procedures in order for them to be formalized or recognized as protected areas within the formal protected areas system	1. National protected area authority creates a register of private owners on a voluntary basis. No major requirements except to be part of a network	In <b>Brazil</b> , the federal legislation governing Private Reserves of Natural Heritage (PRNHs) is Federal Law 9,985 (2000), which includes these protected areas within the National System of Officially Protected Areas.
	2. National protected area authority provides legal framework allowing owners to obtain recognition of their lands as PPAs on a voluntary basis. Requirements depend on the country; may include perpetuity, types of allowed uses of property. In most cases, it requires formal declaration by the authority for the area to be included in the formal protected areas system	
	3. National protected area authority or other government body provides incentives for properties with formal recognition. May include reduced taxes, payment for environmental services, legal or technical assistance	
D. Government-imposed restrictions on land use for conservation purposes, imposed as conditions on ecosystems use or directly affecting individual properties	1. Restrictions on changes in land use, according to type of land (watershed, forest)	
	2. Establishing a protected area on private property in the public interest, with or without compensation or consultation	

Source: adapted from Lausche, 2011

the understanding of PPAs outlined in this document, for example, in Namibia Section 22 of the Nature Conservation Ordinance of 1975 enables the Minister of Environment and Tourism to declare any area a private game park or private nature reserve on application from the owner of the land concerned, however there are certain ambiguities in the legislation – see country review – and it is not clear what substantial advantages either for conservation of biodiversity or for the landowner are gained from the proclamation of a private game park under the Ordinance.

The country review from Kenya describes the recently passed *Wildlife Conservation and Management Act*, which provides the first ever legal definition of the term Wildlife Conservancy in the country, given in the Act as: *'land set aside by an individual landowner, body corporate, group of owners or a community for purposes of wildlife conservation in accordance with the provisions of this Act.'* Although a welcome development, the review draws attention to some

potential inadequacies in the Act – and in so doing highlights the need for more international guidance on the development of conservation legislation which both includes the possibility of setting up PPAs, and importantly, considers them as part of the national protected area system.

## Box 3

**Marine PPAs: Mythical Sea Creature or Ocean of Opportunity?**

Author: Jay Udelhoven, formerly Senior Marine Policy Advisor, TNC, USA

Early views on marine protected areas (MPAs) posited that they would differ from their terrestrial counterparts due to ecosystem and regulatory differences. Specifically, private ownership, management and use of the marine environment was considered to be far more limited than on land, thus government-centric MPAs were the commonly pursued model. Recently, however, conservation interests are recognizing that while ownership, management and use rights can be complicated in the marine environment, private rights often exist or can be established in many marine areas. Private conservation-oriented entities are starting to obtain rights for a mix of private and public purposes, and in the process, improving and protecting the environment. This type of place-based private acquisition, management and/or control of the marine environment for conservation purposes, functionally serving as private MPAs, is often consummated through one or more agreements, including, but not limited to, purchase and sale agreements, leases, licenses, concessions, easements, contracts and memorandums of understanding/agreement (MOU/As).

The Nature Conservancy (TNC) and partners have been assessing, developing, implementing and supporting opportunities for private entities to protect and restore ocean and coastal environments through various agreements with right-holders since the early 2000s. To help describe this body of work, the umbrella term Marine Conservation Agreement (MCA) has been adopted by TNC to mean: *“any formal or informal contractual arrangement that aims to achieve ocean or coastal conservation goals in which one or more parties (usually right-holders) voluntarily commit to taking certain actions, refraining from certain actions, or transferring certain rights and responsibilities in exchange for one or more other parties (usually conservation-oriented entities) voluntarily committing to deliver explicit (direct or indirect) economic incentives”*. Given this broad definition, not all ocean and coastal projects involving MCAs result in the establishment and management of private MPAs, but many do.

To date, TNC and partners have identified 265 field projects in 30 countries that involve or likely involve, either explicitly or implicitly, MCAs. Of the 265 projects, 167 (63 per cent) were area-based, representing private and shared forms of MPA governance. Most of these area-based MCA projects meet the IUCN definition of an MPA:

- *A clearly defined geographical space* – met through a legal description or a more general, landmark-based boundary description in the agreements
- *Recognized, dedicated and managed, through legal or other effective means* – met through purchase and

sale agreements/deeds, leases, contracts, MOU/As, or grant agreements

- *To achieve the long-term conservation of nature with associated ecosystem services and cultural values* – met through the establishment and management of no-take zones, fish sanctuaries, and coral reef protected areas, for example.

As another aspect of this work, TNC and partners have completed 20 country-wide MCA feasibility assessments (e.g., Beck et al., 2004). The assessments revealed that private ownership of marine areas for conservation purposes was possible or existed in seven countries while private contracting of marine areas for conservation purposes was possible or existed in 18 countries. In some countries, private and shared governance of small forms of MPAs are quite common, such as in Chile (Fernández & Castilla, 2005).

Research and field projects show that conservation entities have used MCAs to help establish and manage various forms of private MPAs through two distinct mechanisms: 1) contractual arrangements with government agencies and local communities who own and manage resources; and 2) acquisitions from private entities that own coastal and underwater lands. Descriptions of private MPAs that employ these agreement mechanisms are increasingly found in the literature (e.g. de Groot & Bush, 2010; Savage et al., 2013). MPAs managed under private and shared governance through these agreement mechanisms occur under three general scenarios: 1) ownership and management rights are retained by the original right-holders while some degree of management control is transferred to a conservation entity; 2) ownership rights are retained by the original right-holders while management rights and management control are transferred to a conservation entity; and 3) ownership rights, management rights and management control are all transferred by the original right-holders to a conservation entity. Examples of each scenario are provided below.

In 2008, the Gili Eco Trust (GET) entered into a long-term agreement with local fishing families to protect coral reefs around one of three islands located within a government-established marine recreation area off the coast of Lombok, Indonesia (Bottema & Bush, 2012). The agreement was signed by several parties, including GET, a local community group, the government recreation area manager, and local fishers. Under the agreement, no ownership or management rights were transferred to GET, but GET was able to establish control over destructive net fishing in approximately 103 ha of near-shore reef areas around the island.

From 2005-2010, three private, place-based MCA projects were established in West Papua, Indonesia.

**Box 3 (continued)**

The Sea Sanctuaries Trust signed a long-term contract with local community right-holders to establish and manage a 70,000 ha no-take zone within a functional project area totalling 150,000 ha. In a separate effort, the Misool Baseftin NGO (in collaboration with the Misool Eco Resort) signed two long-term agreements with other local communities to establish and manage no-take zones totalling 77,000 ha, within a government-managed MPA of 340,000 ha. In the third project, WWF in Indonesia began signing annual agreements with another local community in 2007 to establish and manage a 2,500 ha no-take zone within a government-managed MPA of 8,150 ha; the total project area is now 150,000 ha. In these projects, ownership rights were not transferred to any of the three conservation entities, but the majority of the management rights and control were transferred.

In 2002 and 2004, TNC acquired ownership, management and use rights from a private shellfish company to 5,400 ha of underwater lands within an inner-coastal bay off Long Island, New York, USA (Lobue & Udelhoven, 2013). As a result of the fee-simple transfer of all interests (except for navigation) via purchase and sale agreements, TNC established and managed 22 per cent of the bay as the Great South Bay Marine Conservation Area. TNC's primary activities on the site have been to restore shellfish and seagrass habitats as well as work with local communities to improve watershed and water quality conditions.

To capture lessons learned from field projects like these and the country-wide assessments, and to help inspire additional private MPAs, TNC and Conservation International (2012) developed *A Practitioner's Field Guide for Marine Conservation Agreements* to explain the process of assessing, engaging, designing and implementing MCAs ([www.mcatoolkit.org](http://www.mcatoolkit.org)).

**3.4 Personal motivations and incentives**

There are a wide variety of motivations for creating PPAs. Some are for societal benefit (e.g., conservation or recreation), others are self-directed (e.g., privacy or tax benefits), while yet others are family related (e.g., keeping property in the family or ensuring inter-generational conservation aims within family property). Different actors may have different motivations, with companies interested in gaining credit for conservation activities, universities wanting a field station for teaching purposes or religious groups wanting to preserve a sacred space. There may be more than one motivation with many creators of PPAs having multiple reasons for their decision (see Chile and Brazil country reviews for examples from surveys of landowner motivations).

The creation of PPAs also often entails both a private entity (e.g., NGO, private individual, or for-profit organization) that is able to make the initial decision to create a PPA and an entity that is validating, supporting and/or holding the landowner accountable – usually the national or subnational government. These two actors can be driven by different motivations. In some countries such as Chile there is mostly a single actor, the landowner, though the growing PPA association is beginning to serve as the second actor. In other countries such as South Africa there are two clear entities with the government playing a strong role in PPA development.

**Legacy:** Places that are important to one generation can be preserved for future generations through creation of a PPA with restrictions to maintain the special values of that place. The development of legal instruments like covenants (see UK country review) and easements (see USA country review) has greatly facilitated this practice. The PPA can be kept within a family for private use, opened for public use, or donated or sold to a public agency. In some cases PPA status may allow a parent to prevent a property from being broken up when it is passed to heirs. In other cases the desire to create a legacy may be directed to a community rather than to the family of an individual owner.

**Quality of life:** Being able to maintain the attributes of a place that are valued by the owner is a motivation for creating a PPA. This may again involve either keeping a private place private or opening it to others to share. Though often thought of as a motivation for only wealthy people, this may equally be the case for much less well-off people, as documented in the Brazil country review. Many small private reserves in Finland arose because owners were no longer interested in working patches of woodland for timber (see country reviews). In Chile many small landowners declared their primary motivation for setting up a PPA is to have a residence in a place of naturalness and scenic beauty. This category can also apply to communities that support, sometimes through funding, the creation of a PPA to conserve a place of local importance.

**Philanthropy:** Gifting a piece of land for public use is another motivation for creating PPAs. Such gifts have been made by a wide range of actors, from individuals to companies (see box 4 on Karukinka). There is a strong tradition in some countries like the USA for individuals to donate their property to land trusts



## Box 4



Karukinka Park, Tierra del Fuego, Chile owned and managed by the Wildlife Conservation Society © Kent Redford

### From 'distressed debt' to 'PPA': the story of Karukinka

Author: Barbara Saavedra, Wildlife Conservation Society

In 2002 the financial company Goldman Sachs bought a package of distressed debt – collateral that had been forfeited when a loan went unpaid. Part of one of these packages was a parcel of land in southern Chile on the island of Tierra del Fuego. The area was slated to be inside a large logging operation by the Trillium forestry company. Goldman Sachs decided to keep the property undeveloped and to donate it to the US conservation NGO the Wildlife Conservation Society (WCS) to become a PPA. The resulting donation became one of the most significant donations of private land for conservation to date in the world and the largest in Chile.

With this generous gift 'Karukinka' was born, a 298,000 ha property that conserves an important part of the cultural and biological history of the southern tip of South America. It conserves not only biodiversity but also high value cultural artefacts and memories of the now disappeared people, the Selk'nam whose name for 'our land is 'Karukinka''. Karukinka Park conserves large tracts of native lenga forest, vast peat bogs, the southern extreme of the Andean montane ecosystems, black-browed albatross, elephant seals and rich inter-coastal ecosystems.

As part of the deal, an alliance between Goldman Sachs and WCS was created to allow joint work on the conservation of these lands. Goldman Sachs would provide seed financial support allowing WCS to start a conservation operation in Tierra del Fuego Chile, and an

additional financial contribution to seed a trust fund that would allow a sustainable operation of the property. WCS would design and carry out programmes to achieve the long-term conservation of the area's biodiversity.

WCS decided to use this gift as stimulus to develop and implement an innovative model for conservation firmly rooted in the biological, social and political realities of Chile. WCS was committed both to establish a project that would have both local and global value, and to work with the Chilean national community on the development of conservation actions that would benefit both Chile and the global community. To achieve these twin goals, WCS set up an Advisory Council, made up mostly of Chilean representatives from the scientific and business worlds to provide advice and counsel.

Karukinka Park has sponsored a regular programme of field visits for local school children from under-served schools, has given research fellowships for Chilean students to conduct applied research, hosted Chilean and foreign researchers, coordinated work on invasive species with Argentine conservationists, conducted applied research on many issues such as invasive plants along roadways, and served as a centre for artists to work. It has become a model PPA in Chile and shown the power that can come from an industry-NGO partnership to further conservation.

For more information see: [www.karukinka.cl](http://www.karukinka.cl); Saavedra et al, 2011.

such as The Nature Conservancy (TNC, see USA country review) but this phenomenon is found in many countries (see China and Republic of Korea country reviews). Philanthropy is often based on a sense of personal responsibility to take action in the face of an ever more evident global and local environmental crisis.

**Business:** PPAs may be established because the owner wishes to start a business, such as in nature-based tourism. This appears to be particularly common in countries like Costa Rica and the Pantanal of Brazil which have a well-established appeal to tourists, as do southern and eastern Africa (see country reviews from Namibia and Kenya).

**Public support:** A PPA may be created as a result of the support and involvement of people living on or near the property. The place, or what lives on it, may be of importance to the local community that, if threatened, may allow mobilization of widespread public support to help in raising funds or creating enabling conditions to conserve the place as a PPA. Examples of this sort can be found from the UK to the Republic of Korea (see country reviews).

**Preserve the sacred:** Individuals or religious groups may create PPAs to preserve sacred spaces, objects or species (see box 5). This category is particularly important when addressing the 'associated cultural values' that are part of IUCN's definition of a protected area. Sacred natural areas include a number of PPAs established by monastic communities such as found in Spain and Bulgaria.

**Prevent land-use changes:** In areas with major changes in land use and land cover there is often an interest from local people or NGOs in preserving natural values. One of the tools for this is PPA creation that, in this context, is often deployed to prevent housing, agricultural expansion or other forms of development or in the case of PPAs in less strictly protected categories, to maintain traditional farming practices. This action has been documented in countries like Colombia and Mexico (see country reviews).

**As part of development projects:** Particularly prevalent in new housing developments, where it is called 'conservation development', is the custom of setting aside a portion of an area to be developed and conserved as a PPA. Development then occurs on the remainder of the property. This motivation can be found in the western USA for example.

### Box 5

#### Religious reserves as PPAs

Religious institutions and faith groups, large and small, own land and water throughout the world. A growing number of these groups see conservation of nature as an important reflection of their stewardship of creation, in places that are considered sacred, i.e. those thought to be particularly holy or associated with divine power. Faith bodies can influence conservation through their influence on followers; with their policies towards lands they own and lease to others; and most significantly through ways in which they manage areas more directly under their control.

Sacredness often implies that an area will be managed with great care; at one extreme it means no-one is allowed to enter and visitation will often although not always be controlled. Many faiths believe in a duty of care to other species so for example hunting would often be banned in such areas. The conservation value of these sacred natural sites has been increasingly recognized by conservation biologists over the years, although in most cases the fact that a sacred site contains high levels of biodiversity is a side effect of its protection for faith reasons rather than a result of conscious conservation management. However, a growing number of religious bodies are involved in more active conservation management. In Europe, monks resident in several Christian monasteries located within national parks are actively managing a proportion of their lands for conservation in cooperation with park authorities: examples include the Montserrat Monastery in the

natural park of the same name in Catalonia, Spain, and the monastery at Mount Athos in Greece. The Rila Monastery Natural Park exists as a strict protected area within Rila National Park in Bulgaria; 19,000 ha of the 25,000 ha Natural Park is owned by a monastery. Many other faith groups have private in-holdings within protected areas, including for instance Buddhist temples within several national parks in the Republic of Korea, and Hindu temples within national parks such as Periyar in India.

The extent to which these are PPAs, or would wish to be recognized as PPAs, varies between faith groups. And even sacred natural sites consciously being managed for nature conservation and which meet the IUCN definition of a protected area are unlikely to be listed on the WDPA unless they already exist within a national park or similar. There is considerable potential both for increasing the conservation values of many areas owned and managed by religious organizations, and for getting better recognition of this contribution at national and international level (Papayannis & Mallarach, 2009).

**For more information see:** the Delos Initiative investigates links between faiths and protected areas in the developed countries ([www.med-ina.org/delos/](http://www.med-ina.org/delos/)) and the WCPA Cultural and Spiritual Values Specialist Group works globally on sacred natural sites ([www.iucn.org/about/work/programmes/gpap\\_home/gpap\\_people/gpap\\_tilcepa/gpap\\_spiritual/](http://www.iucn.org/about/work/programmes/gpap_home/gpap_people/gpap_tilcepa/gpap_spiritual/)).

**As a condition of development/resource use:** In a similar fashion, in some industries and some countries the right to develop an area or harvest resources such as timber or minerals is made conditional on the company establishing a PPA on the area being developed/harvested – sometimes called a ‘biodiversity offset’ or a ‘mitigation’ effort. In some cases such PPAs are required as a condition for certification of the product being harvested (e.g. FSC certification of timber products in Chile). This has also been used less formally to protect water catchments by companies including Suntory in Japan.

**Major political change:** Though rare, there is a motivation for creating PPAs associated with major political change. This is best illustrated by the Germany country review where significant areas of land became available to the German government when West and East unified. The Government decided that it was unable to support the creation of numerous new protected areas so they worked with the non-profit sector to establish a number of PPAs (see country review).

**Financial support:** The government may provide sufficient incentives to make an otherwise uninterested, or resource-limited, property owner willing or able to create a PPA. Incentives may also be important in allowing NGOs to achieve their goals of creating PPAs. These incentives may be put in

## Box 6

### Company reserves: the unknown PPAs

A growing number of commercial companies own and run protected areas, for a variety of reasons. If PPAs in general are under-recognized in the conservation field, company reserves experience this to an extreme; few if any are listed on the WDPA and those running company reserves are, with a handful of exceptions, isolated from the wider conservation community.

Companies have a range of different options for engaging in active protection. Four main types can be distinguished:

1. Donation or sale of land or water to conservation organizations or similar (e.g. old mining or quarrying sites, abandoned agricultural land or unproductive forestry land)
2. Contributing land or water for biodiversity conservation and handing over management to other organizations or individuals (e.g. conservation easements, covenants, donation etc.)
3. Owning and managing land or water for biodiversity conservation
4. Managing leased land for conservation purposes.

The first two options have both proved useful ways of contributing to conservation but are beyond the scope of this box, which focuses on owning and/or managing land directly.

Many companies that own large areas of land end up managing a proportion for conservation, usually because it is unproductive, or because it has exceptional biodiversity, or through personal interest and commitment of company executives. Various certification schemes, such as the Forest Stewardship Council, can also require that a proportion of land be set aside for conservation; the stage when this passes from a temporary agreement to attain the status of a PPA will vary with circumstances. For example, the Ramsar site, Santuario de la Naturaleza Laguna Conchalí, in Chile is owned by the copper mining

company Minera Los Pelambres. The reserve is a brackish coastal lagoon representative of wetlands in central Chile and a key area for migratory birds along the central Chilean coast. When Los Pelambres purchased the site in 1997, the environmental permit indicated that the wetland area should be protected. In the Atlantic Forests of Brazil, the Swedish-Finnish company Stora Enso owns and manages some of the remaining fragments of natural forest recognized within the UNESCO World Heritage site. The French quarrying company Lafarge has established nature reserves within or adjacent to quarrying sites in France, the UK, Spain, Kenya and elsewhere. There are many other examples (Stolton & Dudley, 2007).

Major resource management companies tend to lease more land than they buy; therefore it follows that much of the land managed for conservation by companies is owned by other entities, usually the state, and managed under leases of varying length. This creates some as yet unresolved challenges in recognition of PPA status, but the net conservation results can still sometimes be very important. In Indonesia for instance, Yayasan Sabah owns extensive holdings in the Danum Valley, some of which is used for timber and palm oil plantations, while the 43,000 ha Danum Valley Conservation Area is protected (Dudley & Stolton, 2007).

Bringing company reserves into the mainstream of protected areas requires some consideration, particularly with respect to long-term security. The enthusiasm of a few staff can be undermined by changes at the head of the company or sale of the company to another with different expectations. One option, discussed but yet to be explored in detail, would be to develop some kind of association of company reserves with principles and commitments attached to membership; this would not on its own prevent changes from occurring, but would make them more public and subject to greater peer pressure. Further work on this issue is needed.

place to help the government achieve national conservation goals such as takes place in Australia, Finland or South Africa (see country reviews). Some countries offer tax incentives for owners to donate land for the purpose of creating PPAs; this is the case in some provinces of Canada for example.

### 3.5 Conservation advantages and disadvantages

The 17 country reviews highlight a number of characteristics that give PPAs both potential advantages and disadvantages as compared with other protected area governance types.

Most of the **advantages** outlined below relate in one way or another to the *flexibility* of PPAs as a mechanism and the *opportunity* they provide for people (whether as individuals, or through membership of conservation NGOs, or the board/managers of companies etc.) to express a commitment to conservation.

**Connecting and expanding conservation:** In some countries governments incentivize PPA creation to meet a number of national conservation priorities. These include expanding the size of an individual protected area under conservation management by the creation of PPAs along the boundary of the government protected area. This has been used in Mexico and Finland (see country reviews) and in South Africa where PPAs in the form of Contract National Parks exist alongside government owned and managed National Parks. The landowners in these cases are either

private or communal (see country review). A second role PPAs can play is linking conservation sites together. This has been used in Australia and Brazil for example (see country reviews) and in the UK (see box 7). In Mexico, it is widely recognized (and clearly illustrated – see figure 5) that PPAs can play an important function in enhancing connectivity between government protected areas, although no formal policy or specific programme that encourages such a function has been implemented. Other examples of PPAs performing this function come from Brazil, Finland, South Africa and the USA. Finally, PPAs can help contribute to national and global conservation targets in biomes or regions of the country that are under-represented in protected areas. In Finland the METSO programme for forest protection in southern Finland is expanding protection in this biome (see country review).

**Involving private land and landowners:** Closely linked to the need for connectivity and expansion are the ways that PPAs can be used to bring private land and owners into conservation. This has both practical advantages in increasing land and water in protection, but also importantly brings a wider group of stakeholders into the conservation movement, fostering new partnerships and wider understanding of aims. In Chile, for example, although 14.5 million ha (19 per cent of national territory) is under official protection, the national protected areas system is unevenly distributed, leaving critical habitat unprotected. Recent studies indicate that 65 per cent of property outside the Chilean National System of Protected Areas is in the hands of private landowners; as exemplified by the critically under-represented Mediterranean ecosystem,



Figure 5: **Government protected area (grey) and PPA (black) coverage in Mexico.**  
 Note: PPAs were drawn larger than their corresponding scale for clarity.

## Box 7

**Connecting local landscapes: the Avalon Marshes, UK**

In countries with millennia of intensive cultural land use and increasingly high population densities conservation is often about taking opportunities to restore landscapes rather than conserve pristine sites. The Avalon Marshes, a low lying wetland area in the county of Somerset in the south west of England, UK, provides a good example of how PPAs and government protected areas are slowly recovering an important wildlife habitat.

Despite being exploited, altered and managed by humans for over 10,000 years the Avalon Marshes has a rich and varied biodiversity. Only five metres above sea level in places, water management is a major issue and the landscape is characterized by a network of rhynes (i.e. drainage ditches, or canals, used to turn areas of wetland into pasture). The landscape has also been shaped by peat extraction. Peat cutting began after Britain became part of the Roman Empire when peat was used to fuel the coastal salt-making industry. Peat cutting for fuel continued up until the mid 20th century when horticultural uses of peat took over. Eventually, concerns over the impacts of peat cutting led to a reduction in the use and demand for peat. This in turn has had an impact on the development of the Avalon Marshes landscape and land prices (land with peat deposits has traditionally fetched high prices); providing new opportunities for conservation and sustainable development.

Over the last 20 years, conservation organizations have been increasing their presence and activity in the Avalon Marshes. Land has been brought into conservation as it has become available, leading to a diversity of organizations with different governance types, resources and objectives being involved. Land acquisition is generally focused on exhausted peat workings or agricultural fields in areas recognized nationally for biodiversity (e.g. Sites of Special Scientific Interest or SSSIs – see UK country review for more details). Once purchased, land is restored to wetlands, meadows, heath, fen and/or moors. Protected areas in the Avalon Marshes include:

**Government protected areas**

- *Shapwick Heath National Nature Reserve*: over 500 ha owned by Natural England (government agency). Habitats include wildflower meadows, fens, wet fern woods, open water and reed beds.
- *Huntspill River National Nature Reserve*: 148 ha owned and managed by the Environment Agency (government agency).

**PPAs**

- *Ham Wall National Nature Reserve*: managed and owned by the Royal Society for the Protection of Birds (RSPB, a large national NGO). The reserve covers 77 ha, part of a total wider reserve of 235 ha; the former commercial peat extraction land has been extensively



The Somerset levels © Equilibrium Research

restored to create wetland habitats, particularly reed beds: a protected area designated by the government but owned and managed by an NGO as a PPA.

- *Catcott Complex*: owned and managed by the Somerset Wildlife Trust (a local NGO but part of a national network of wildlife trusts); this 52 ha area is made up from a number of former reserves (Lows, North, Heath, South and Fen) now managed together. The reserve consists of a number of semi-natural habitats with some still under restoration.
- *Westhay Moor National Nature Reserve*: 101 ha owned and managed by the Somerset Wildlife Trust. A major restoration project to restore peat field, degraded fen and acid mire. Again a PPA recognized as a protected area by the government.
- *Shapwick Moor*: a 55 ha site owned by the Hawk and Owl Trust (a small national NGO), which was formerly used to grow arable crops and is being restored to permanent wet grassland status.

For the last few years, Natural England, Somerset Wildlife Trust, the RSPB, the Hawk and Owl Trust, Somerset County Council, English Heritage and the Environment Agency have been part of an informal partnership to increase recognition of this important wetland area by:

- establishing a community led group to undertake projects and develop new initiatives;
- enabling more strategically planned conservation and use of resources for mutual benefit; and
- creating mechanisms for communication, consultation and better information about conservation activities between the local communities and conservation organizations active within the area.

By working together in this way, each small area protected is ensuring that the conservation landscape is being slowly reconnected across the marshes.

where only 0.8 per cent of its area is under official protection and 90 per cent of the area is owned by private landholders (TNC, 2013). In this setting, PPAs have a key role to play if conservation is to be expanded, which should be recognized in conservation policy. In the USA, for example, the *Safe Harbors Agreements* of the Endangered Species Act provides incentives for private landowners to help in the conservation of threatened and endangered species.

**Quick to apply:** Government owned/managed protected areas usually take many years to negotiate and agree. This can be problematic where land/water conversion or degradation is taking place quickly and the area's values may be lost by the time protection is in place. Private individuals, companies, research organizations, NGOs etc. can often fill a gap by purchasing areas more quickly to conserve them from destruction. For example, in the Colombian Orinoco, NGOs are reacting to rapid land conversion by buying PPAs, with government incentives, at a speed that it would be hard for the government to match through national park creation. Such resulting PPAs are sometimes later sold or given to the government to become part of the national protected area estate. In the USA State of Maine PPAs are put in place in areas of conservation value surrounded by working forest

lands (see box 8). Other examples come from the Republic of Korea, where PPAs were established as a response to rapid infrastructure development.

**Possible in places where state protection is**

**problematic:** Private institutions are sometimes able to take advantage of opportunities that are difficult for governments, in situations where government protected areas would be resisted in principle; because all land is in private hands; because the state is not trusted by local stakeholders; or conversely because the state itself is opposed to further protection or short of available funds/management capacity. A combination of judicious purchase by conservation organizations and voluntary actions by a proportion of owners can fill a gap in protected area systems, for example, in parts of southern Scandinavia where unmanaged forests have virtually disappeared and in parts of the Cape region of South Africa. Unwanted state land in former East Germany was given away after reunification and a proportion of these areas became PPAs; here, it was cheaper for the state to divest itself of land holdings than invest in their rehabilitation and management. PPA mechanisms and opportunities also allow reserves to be set up in places where national legislation is either unhelpful or non-existent.

**Box 8**

**PPAs in the state of Maine, USA**

Author: Tom Rumpf, Associate State Director – Maine, The Nature Conservancy

Maine is one of the largest states in the north-eastern USA, covering eight million hectares. Unlike many of the other states within the USA it is largely privately owned, with 7.5 million ha or 94 per cent in private hands. State conservation lands total >320,000 ha (>4 per cent) and include Public Reserve Lands, State Parks and Wildlife Management Areas. Federal ownership in Maine is limited to 80,000 ha (1 per cent), including Acadia National Park and four national wildlife refuges. As a result, the success of conservation in Maine depends heavily on actions by private owners and their partners in the government.

The role of private owners has a long history in the conservation movement in Maine, starting with the gifts of private land that created Acadia National Park in 1919 and Baxter State Park in 1962 (private acquisitions began in 1930). Private land protection expanded in the 1970s with the growth of the land trust movement. Between 1970 and 1995 over 100 individual land trusts were formed throughout Maine, and private land protection expanded to another 240,000 ha.

The last two decades witnessed an explosion in large-scale conservation projects, with another million ha conserved. Between 1995 and 2014 the amount of permanently conserved land in Maine tripled from six to

18 per cent. Eighty per cent of this increase was through the acquisition and donation of conservation restrictions (conservation easements) on privately owned land. So, while the dominance of private ownership in Maine has not dramatically changed, the amount of conserved land has increased dramatically, and the form of protection has moved more to conservation easements, maintaining private ownership. Much of this dramatic growth was fuelled by a turnover in land ownership from integrated forest products companies to investment owners, more willing to sell conservation easements on their land as a rational means of capitalizing development values. Northern and eastern Maine is dominated by few people and large land ownerships, facilitating large projects. The largest conservation easement in the world (300,000 ha) was sold by Pingree Associates to the New England Forestry Foundation in 2001. In many cases public and private land acquisition is focused on areas of high conservation value, with surrounding managed lands being protected through working forest easements that allow for sustainable timber management, maintaining the working forest matrix as a buffer around the protected lands, while preventing development and fragmentation. The future of land conservation in Maine will likely continue to rely heavily on collaborative action with private landowners, as efforts continue to maintain Maine's unique expanse of intact mixed temperate forests which cover 90 per cent of the state and serve as a principal driver of the state's forest products and tourism economy.

**Promoting local and national engagement:** PPAs provide an opportunity for individuals or groups of individuals to respond to conservation needs, either through purchasing or donating land or contributing funds for other institutions to do the same. In the UK, the Royal Society for the Protection of Birds (RSPB) has over one million members, whose membership fees help to support conservation on large areas of land. Similarly, many individuals are willing to donate land to NGOs for conservation (like the National Trusts, see for example the country review from the Republic of Korea). The easements and land trusts of the USA are similar broad scale, inclusive initiatives for conservation. Engagement is often locally based, but in many cases people will support conservation efforts for sites remote from their homes.

**Opening up innovative funding mechanisms:** PPAs also open up funding opportunities that are not always applicable to state or community-managed protected areas, such as tax breaks (including on inheritance tax), easements, grants and subsidies open to private owners who set aside some or all of their land as PPAs. Some PPA managers have also been entrepreneurial in finding new sources of funding, particularly through various types of Payment for Ecosystem Service (PES) schemes, such as provision of pure water. For NGOs, the often small and discreet nature of PPAs which focus on a particular landscape feature (such as a wetland area or patch of remnant forest) or species with limited habitat needs (e.g. amphibians, some bird or butterfly species); or habitats under immediate threat from development, can be useful in developing focused, locally relevant fund-raising campaigns for land purchase and management. Easement mechanisms have revolutionized private protection of land in the USA by providing the right mixture of incentives to conservation-minded private landowners. Avoidance of income and inheritance tax duties is a major reason for people to donate land to the National Trust in the UK (HMRC, 2014).

**Individual effort:** The majority of individuals who work in conservation are dedicated to their work and often inspired by altruistic motives. Many people involved in the development of a PPA start their initiatives with little more than a passion to save something or some place that has special meaning to them. The first few PPAs in China were developed by enthusiastic individuals who literally spent all they had trying to protect land (see China review).

**Prioritizing species-specific conservation:** Many PPAs have been created to conserve populations of individual species, particularly plants, amphibians, mammal and most particularly birds. This was an early reason for the creation of TNC preserves in the USA and remains a driving factor in creation of PPAs by BirdLife (see box 11). PPAs designed primarily for species conservation can be found in a wide range of countries from the UK to Brazil and the Republic of Korea (see country reviews).

Possible **disadvantages** or **challenges** associated with PPAs generally reflect a lack of clarity about what the PPA is setting out to achieve, the lack of permanence and confusion about aims and motivations. Some of these issues are addressed in other parts of the report so are summarized more briefly below.



**Monitoring breeding success on the Farne Islands, a PPA managed by the National Trust in the UK** © Equilibrium Research

**Lack of clarity about definition and management:** The confusion about what is meant by the term PPA has many repercussions (see part 2 and table 3). In particular, it means there are no standards against which to report or document the global estate of PPAs. Although the IUCN definition of a protected area is well known and implemented in state-governed protected areas, it has not been clearly linked with PPAs. In part, this is due to lack of understanding about or interest in the definition amongst those managing private conservation areas, which is indicative in many countries of the weak links between state organizations managing protected areas and PPAs and a lack of incentives for the PPA owners to work with government (see next point).

**Restricted quality and quantity of biodiversity:** In some PPAs the biodiversity contained in the property may not be of sufficient quality or size to mean that it is of national or subnational conservation value. Although the existence of a few very large PPAs gets a lot of attention, the majority are small, and systems that rely heavily on PPAs are therefore likely to be constrained by this ecological limitation. Small PPAs may be useful for conserving particular plant or small animal species and individual habitats such as wetlands, but are unlikely to be sufficient for larger animals or whole ecosystems. In many countries however (see for example reviews from Australia, Finland, Mexico, UK etc.), small PPAs often connect together and/or to other protected areas, thus increasing their overall importance.

Table 6: Size distribution of PPAs in Finland in 2010

Area (ha)	< 2	2<10	10<50	50<100	100<1000	>1000	Total
Number	2,519	3,103	1,603	312	312	23	7,872
Area (ha)	2,252	15,175	34,353	22,359	75,033	108,885	258,057
Percentage of total number	32.0	39.4	20.4	4.0	4.0	0.3	100
Percentage of total area	0.9	5.9	13.3	8.7	29.1	42.2	100

Source: Metsähallitus

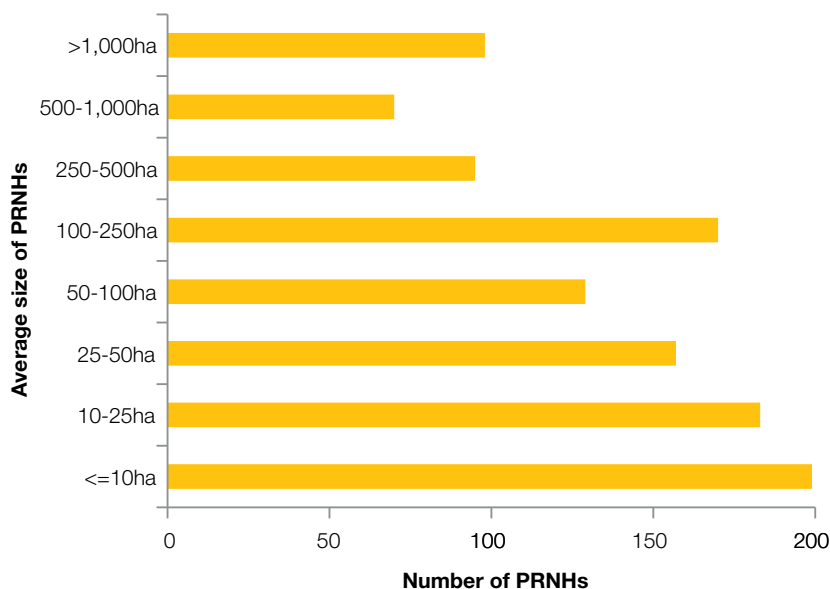


Figure 6: Average size (in ha) of private reserves in Brazil (as of June 2014).

Source: CNRPPN, 2014.

The average size of PPAs is documented in several country reviews (see Mexico and UK). In Brazil for example, where clearly there is scope for large protected areas in some regions, PPAs still tend to be small. Here, 49 per cent of PPAs (known as Private Reserves of Natural Heritage – PRNHs) are smaller than 50 ha, whilst areas larger than 500 ha represent only 15 per cent of PRNHs (figure 6; CNRPPN, 2014). In Chile, five areas (out of over 300) identified in the 2013 National Private Conservation Initiative Census conserved 1,044,655 ha, or 63 per cent of the total protected PPAs identified (Núñez-Ávila et al., 2013). Similarly, in Finland over 90 per cent of PPAs are small (less than 100 ha, with about 70 per cent less than 10 ha), the largest 20 PPAs cover more than 40 per cent of total PPA surface area and are mostly marine and coastal sites (table 6). The need for connectivity between PPAs and other, often larger, protected areas is thus crucial to conservation success (see discussion below).

**Limited capacity and engagement with conservation policy:**

Although not true in all countries, PPAs are often politically isolated from other conservation efforts. The international understanding of how IUCN defines a protected area, as well as a whole range of best practices (as outlined in the PoWPA and through much of the work of the SCBD and IUCN), has not been well communicated to those owning/managing PPAs. This in turn impacts the development of

management priorities, approaches and expected outcomes of PPAs. In most countries reviewed this means that PPAs have been overlooked in the development and reporting of the protected area system.

In countries where there is no unifying legislation or association and no capacity building options there is often a widespread lack of understanding about conservation biology. The fact that many PPAs exist out of the protected area mainstream means there is little PPA research, monitoring, reporting structure, management effectiveness assessment, or even clear management objectives. Individual landowners may lack the knowledge of why, and how, to undertake conservation. In Chile, in a survey of 242 landowners, 63 per cent are managing their land with an approach that is intuitive and spontaneous, rather than informed and planned (Núñez-Ávila et al., 2013). Of course intuition and spontaneity can have advantages over formalised management that can sometimes be too centralised and inflexible, however natural systems are delicate balances of processes that can easily be disrupted if management is not well-informed.

**Ineffective incentive structure:** In efforts to encourage the role PPAs could play in national or subnational protected area systems there may be incentive programmes put into place that result in unwanted outcomes. These might include





**Private Reserves of Natural Heritage Santa Cecilia II in the Pantanal biome of Brazil** © Daniel De Granville – Photo In Natura

establishment of PPAs that exclude people inappropriately or are not important areas for biodiversity or ecosystem services. Although incentives have been critical in driving the development of PPAs in some countries (see part 3), they may also distort and sometimes weaken them as well. Short-term incentives can lead to temporary protection: the US Government's Conservation Reserve Program creates incentives so that farmers either do not convert or restore highly erodible cropland or other environmentally sensitive acreage, but most farmers ploughed this land when the price of commodities increased. Longer term incentive changes can and do threaten the future of even more well-established PPAs.

**Conservation is temporary:** One of the most commonly expressed concerns about PPAs is that they may not be permanent and will stop being a protected area when owners change their minds or when ownership changes. As discussed in part 2, a fundamental assumption in the definition of a protected area is that it will be in place in perpetuity, or at least that the intent of conservation is long-term. This can never be guaranteed of course, and there is already a list of protected area degazettements, through a phenomenon known as Protected Area Degrading, Downsizing and Degazettement (PADDD) now being recognized (Mascia et al., 2014). But PADDD still reflects only a minority of sites and although many

protected areas are under increased threat due to development pressures, land use changes and the increased need for agricultural land, most governments regard their protected areas as long-term commitments.

Many PPAs are managed by individuals and future management will be subject to their own choices. Private reserves may be sold to or inherited by someone who has no interest in conservation. A few countries, such as Brazil, Finland and South Africa, have addressed this concern through legislation: in these places once a PPA is established it has the same legal protection as a state protected area and whoever owns it cannot change this at will. In the UK, the National Trust has a proportion of its land set aside as 'inalienable', meaning that an act of parliament is needed to change its status, providing very strong legal protection for these PPAs. Easements and covenants also provide stronger legal structures for private protection. In some countries, temporary agreements are often a phase in the development of PPAs (see part 3); the country review for Spain provides a good example of a conservation strategy which progresses from short-term agreements between conservation organizations and individual landowners (e.g. land stewardship agreements) to long-term management often with the

## Box 9

**PPAs in Japan**

Author: Teppei Dohke, IUCN Japan Committee

The Japan Committee for IUCN (IUCN-J) established a PPA working group with IUCN members\* and a scientific partner, National Institute for Environmental Studies (NIES), in 2013 under its Aichi Biodiversity Target implementation programme, the 'Double 20 campaign' (or Nijyu-maru Project in Japanese).

The focus of the working group is to: 1) reveal the status of PPAs in Japan; and 2) cooperate with international programmes on PPAs in order to promote wide recognition of PPAs and to promote their conservation and sustainability. In this context, during 2013, the working group made a tentative PPA definition in Japan based on the IUCN protected area definition and put it out for discussion at the Asia Parks Congress in November 2013. The working group also established a short-term programme on PPA assessment in Japan 2014-2016, which has been supported by the Japan Fund for Global Environment. During these three years, the working group will identify best practices of PPAs in Japan, provide a PPA dataset to WDPA and promote conservation in PPAs, closely working with the *PPA Futures* initiatives.

The research work is ongoing and the working group has already recognized a number of potential case studies of PPAs in Japan. The SATOYAMA / SATOUMI landscapes are mosaics of habitats and land/sea uses with harmonious interaction between people and nature to ensure the maintenance of biodiversity and ecosystem services. They are conserved by a range of trusts, conservation

agreements, and customary and religious practices.

One unique initiative, led by the Ramsar Network Japan, is Fuyu-mizu-tambo or Winter Flooded Rice Paddies. The initiative consists of biodiversity friendly farming, flooding rice paddies in the winter season without chemical fertilizers and pesticides to support ecosystem processes including habitat for migratory water birds. Another potentially good example are marine protected areas (MPAs) governed by fishery associations in Okinawa, southern Japan. They set community-based no-take MPAs and buffer zones around the no-take MPAs to enhance fishery resources. Such areas, where biodiversity and food production have been harmonized, may also be regarded as PPAs in the future. A second example was highlighted by an IUCN member, Keidanren Committee for Nature Conservation, which distributed a questionnaire to Japanese companies. The survey showed that 36 companies (31 per cent of responses most of which were large-scale companies) own property managed for the sake of biodiversity conservation, which comes to 31,828 ha in total. These properties owned by the companies are also likely to be candidates for PPAs in Japan.

The outcome of these Japanese case studies may contribute to showing how PPAs have diverse forms and could be important measures for effective land/sea management to be considered in international policy.

\* Nature Conservation Society of Japan, Wild Bird Society Japan, Ramsar Network Japan, Conservation International Japan, National Institute of Environmental Studies and IUCN Japan Project Office

purchase or donation of an area to the conservation organization (see country review).

**Level of ownership of property rights:** Conservation practice is inextricably connected to property rights (Naughton-Treves & Sanderson, 1995) including 'bundles of rights' (Rissman, 2013): for example, the distribution of different rights in a single area of land or water, such as for access, to use resources or for settlement. The extent to which an owner/manager of an area of land or water controls the associated rights varies and can impact on PPAs. For example, the fact that owners do not have mineral rights on PPAs in Australia makes the covenants that protect them relatively vulnerable (Adams & Moon, 2013). The key bundle of rights for conservation involves those necessary to achieve the desired conservation outcomes; this is sometimes very difficult to achieve in practice. It is likely to be particularly significant in the case of marine protected areas where, for example, access for shipping, fishing and other rights are likely to transcend ownership of the areas themselves.

# Chapter 4

## Key issues facing PPAs

# Part 4: Key issues facing PPAs

## 4.1 PPAs and society

All protected areas impact people to some extent, providing conservation benefits and sometimes reducing access to resources. The positive and negative social impacts of protected areas have gained high profiles in the last decade and in consequence have received much attention from protected area authorities. The social aspects of protected areas were a major focus of the 5<sup>th</sup> World Parks Congress in Durban, South Africa in 2003 and the CBD brought these issues into focus by including many social requirements within its PoWPA.

PPAs might be expected to stand apart from many of these debates because they occur on private land/water where the process of making management decisions is often more clear-cut, but in practice many of the wider social questions about protected areas have included discussions about PPAs and some issues unique to PPAs have also emerged.

Criticism of PPAs (and protected areas overall) tends to be associated with a more general disquiet about ownership patterns of large land areas rather than explicitly about conservation. A few large private conservation initiatives have received high levels of media interest, which may have led to a distorted impression that PPAs are solely linked to the rich. Not only are such initiatives rare, some may not be considered PPAs under the definition outlined in this report. There are certainly some private conservation areas that are reserved for the owner and people who have specifically been invited to enter its boundaries, either friends or fee-paying guests, but this makes these areas no different from private land used for agriculture or forestry. Overall, the issue of access to land should be more a function of management than of governance. While IUCN encourages visitation to protected areas in line with conservation objectives (noting that some management categories permit no-go areas and restrictions on visitation to protect highly vulnerable ecosystems), this is not a criterion for a protected area.

Social concern can also revolve around how the land was acquired, and whether or not it was obtained by 'land grabbing', where the rich and powerful are able to use economic, legal or physical power to expropriate areas of land or water against the wishes of people living inside or nearby (Fairhead et al., 2012). Critics have labelled some aspects of land acquisition by conservation organizations as 'green grabbing'; although there is debate about how many protected areas deserve this title (Blomley et al., 2013). The issue is often of concern when the owner of a PPA is a foreigner, which has sometimes caused controversy, particularly in South America and Africa. For example, the acquisition of a 275,000 ha Pumalin Park PPA near Puerto Varas, X Región, Chile by a US citizen initially upset some Chileans, in part because it stretched from the Pacific to the border of Argentina, effectively cutting the country in two (Blomley et al., 2013).

Much has been written about the neoliberalization of environmental governance (Peck & Tickell, 2002) in which the state is shifting environmental responsibilities away from itself and towards civil society and the private sector. Hodge & Adams (2012) argue that such claims are not helpful as a basis for understanding rural land conservation policies that feature a complex mix of government action from less to more engagement. PPAs are part of this movement and whilst worthy of support should also be monitored to ensure that their creation is beneficial to both public and private actors.

The links between land acquisition and what can be considered a protected area comes back once again to the definition of a protected area, and thus also of a PPA. The ethics of land acquisition is addressed unequivocally in the 2008 Guidelines and in the CBD's PoWPA. One of the principles accompanying the IUCN protected area definition states that: '*The definition and categories of protected areas should not be used as an excuse for dispossessing people of their land*' (Dudley, 2008). PPAs are no exception. Numerous statements in the PoWPA stress the importance of participation and prior informed consent and rights of indigenous peoples and local communities (CBD, 2004).

## 4.2 Management and planning

The conservation success of PPAs is determined by a variety of factors, the key ones of which are discussed below.

**Management needs:** in all protected areas governance types are related to the level and intensity of threats and overall management objectives. PPAs with the greatest management needs (e.g. in terms of staffing, infrastructure etc.) are often those which face serious, often multiple, threats. Similarly PPAs dependent financially on tourism/visitors will require significant infrastructure and monitoring of tourism impacts. Sites with low- or no-visitation (e.g. those assigned the IUCN management category 1a and b) will often need less active management. Similarly, in theory at least, the more intact an ecosystem the less intervention is needed compared with those protected areas which are trying to maintain ecosystem functions in fragments of habitats (e.g. IUCN category IV).

One reason for the lack of management in PPAs is that managers often secure funding for property acquisition but not long-term management (e.g. the early attempts at PPA development in China, see country review and Pasquini et al., 2011). Where some management is in place, critical activities, such as research, monitoring and reporting may still be lacking. In the USA, for example, a study in 2007 found that although 92 per cent of 119 easements held by TNC had monitored legal compliance within the previous three years, only 19.8 per cent of biological targets had been monitored quantitatively (Kiesecker et al., 2007).

Good management does not inevitably translate directly into success in conserving biodiversity. Some protected areas with exemplary management still lose species because of factors beyond the manager's control while, conversely, some badly managed protected areas still retain all their species. However, it is important to link management efforts with conservation outcomes through explicit management models (e.g. Conservation Measures Partnership Open Standards; [www.conservationmeasures.org/initiatives/standards-for-project-management](http://www.conservationmeasures.org/initiatives/standards-for-project-management)) to ensure that management actions are assessed for effectiveness and that resources are used as efficiently as possible. Evaluating management effectiveness allows managers of individual protected areas or protected

area systems to review results of management and assess whether management is resulting in effective conservation (see box 10). Assessing management effectiveness may arguably be all the more important for PPAs as many are not part of wider protected area networks/systems; they often have limited resources; and/or are specifically required to account for their actions to funders (including members of NGOs).

Of the 17 PPA country reviews commissioned for *PPA Futures*, only two had implemented management effectiveness assessments, despite several countries (e.g. Australia, Finland, Namibia, Germany and the Republic of Korea) having carried out assessments for government-run protected areas.

## Box 10

### Management effectiveness in PPAs

IUCN WCPA developed a *Framework for Assessing Management of Protected Areas* in 2000 and revised this guidance in 2006 (Hockings et al., 2006). The WCPA Framework provides overall guidance on the underlying logic and 'best practice' approach to evaluation and defines a set of elements and associated criteria that should be evaluated to assess protected area management effectiveness fully. Many management effectiveness evaluation tools have been developed using the Framework, which are being applied around the world. Perhaps the simplest of these tools, and thus not surprisingly the most implemented, are the *Management Effectiveness Tracking Tool* (METT) (Stolton et al., 2003) and the *Rapid Assessment of Protected Area Management* (RAPAM) (Ervin, 2003). To date, not many PPAs have undertaken management effectiveness assessments; however this is a best practice management activity to be encouraged. Two assessments which lead the way are reported below.

**ME in Chile:** an adaptation of the METT (HEEM – Herramienta de Evaluación de Efectividad de Manejo; Tacón et al., 2004) was implemented in Chile by WWF and GEF-SIRAP in 2012 (Tacón et al., 2012) in private conservation initiatives. The authors of the *PPA Futures* country review (see page 65) sum up the findings of the assessment as follows: "the 39 evaluated initiatives in all likelihood had higher management effectiveness scores than could be expected from a representative sample, it is interesting to note that the average management score was only 49 per cent, with especially low scores for indigenous and community conservation initiatives. These results highlight the urgent need for external technical and financial support for PPAs, in order to improve effectiveness."

**ME in Brazil:** a system of management evaluation adapted from Cifuentes et al. (2000) has been applied to 34 Private Reserves of Natural Heritage (PRNHs) in Brazil; of these 20 per cent had 'very poor' management levels, 32 per cent 'poor', 18 per cent 'average', 18 per cent

'good' and 12 per cent achieved a standard of 'excellence in management'. As in Chile, the authors note that the results do not differ substantially from those found in management evaluations in Brazilian public protected areas. The strongest areas of management included clear legal status and compatibility with protected area management guidelines and rules and protected area design (e.g. size and shape of the protected area as well as physical integrity of the natural cover). Management weaknesses included poor administration (human resources, equipment, infrastructure, administrative and financial sustainability); planning (existence of planning tools such as management plans and zoning); and knowledge (the availability and quality of information used for management and the existence of monitoring programmes) (Pellin, 2010).

The data available from PPAs so far are too limited to draw firm conclusions. But the fact that in both Chile and Brazil levels of management effectiveness were surmised as similar to state-run reserves is significant; given that PPAs are presumably in most cases set up by highly motivated individuals (either personal motivation to contribute to conservation or motivated to run a successful profit-making private reserve). Poor results may be due to lack of understanding of management needs – in other words of capacity issue – or perhaps in some cases because it is possible to entice visitors to pay for a wildlife experience even in a place that is generally of poor ecological quality. It might, for example, be that private for-profit reserves focus on maintaining a few high profile individual animals to show visitors while the rest of the ecosystem continues to degrade (see example given above from South Africa in Child et al., 2013). Protected areas run by private companies through accidents of land ownership or because it is part of certification requirements may be left without active management or protection. At the moment we do not have enough information to be sure, or to know if the findings in South America are duplicated in other parts of the world: an important knowledge gap.



**A rare prairie remnant protected by The Nature Conservancy in Texas, USA where seeds are collected for restoration projects** © Equilibrium Research

**Increasing management capacity:** One response to lack of management effectiveness is to promote the development of greater capacity amongst PPA owners and managers. Some NGO-run PPA networks, such as those in the USA and Europe, can draw on well-established and resourced networks of scientists and practitioners; their capacity may exceed that of many governments and include printed and online resources, hands-on assistance and training courses. However, many smaller NGOs, individual PPA owners and those involved in PPAs with commercial objectives may have far less access to advice and information, though there are some notable exceptions. A number of options are or could be made available to these PPAs.

Several countries have set up learning networks of PPAs, and the country reviews include examples from Australia, Brazil, Chile, Mexico, Kenya and Spain. In the USA the Land Trust Alliance provides similar services. Networks can provide information sharing, including dissemination of useful resources, an opportunity to meet people attempting similar things, a political voice and a more effective way of interacting with other parts of a national protected area estate. In the Australian state of Victoria, Conservation Management Networks (CMNs) coordinate the protection and management of fragmented ecological communities across a range of tenures and with a variety of protection mechanisms. Each new CMN brings new stakeholders into coordinated conservation planning and activity (Crosthwaite et al., 2013).

In Kenya a new umbrella organization, the Kenya Wildlife Conservancies Association (KWCA), was formed in April 2013, bringing together a dozen different Regional Associations and their respective memberships. Its stated mission is: *'to be the forum where landowners have a unified voice, share experiences and actively participate in protecting and benefiting from wildlife'*. Chile and Brazil both have national associations of PPAs and a regional PPA organization exists, coordinating Latin America and the Caribbean. PPAs in countries like Canada and Finland also have the opportunity to draw on national capacity building programmes to some extent.

Similarly, regional initiatives provide advice for their members, such as the Western Landowners Alliance and the Western Hemisphere Shorebird Reserve Network in North and South America. Globally, the IUCN WCPA has a specialist group focused particularly on PPAs and the IUCN National Committees are becoming increasingly active in implementing the IUCN protected areas categories system, which often involves working specifically on PPAs (see country reviews from the UK, Finland and Japan). The International National Trusts Organisation (INTO) has 64 member organizations, large and small, involved in cultural and natural heritage protection around the world, and provides forums, resources and campaigns to assist member organizations. Birdlife International is a partnership involving 120 organizations – one per country – dedicated to bird conservation, many of which run their own protected areas (see box 11).

Box 11

**The BirdLife International Partnership**

Author: Lincoln Fishpool, BirdLife International

BirdLife International is the world’s largest nature conservation partnership, currently comprising 120 NGOs worldwide – one per country (see [www.birdlife.org](http://www.birdlife.org)). Data available for 115 of these organizations show that 63 of them (54 per cent) own or manage one or more protected areas. By no means all of these sites, however, have bird conservation as their sole, or even main, aim since the remit of many BirdLife Partners is the conservation of biodiversity as a whole. In all, this sample of BirdLife Partners has management responsibility for at least 1,553 protected areas, but the data available do not discriminate between PPAs and other governance types, which national Partners manage on behalf of governments.

There are considerable regional differences in the numbers of sites for which BirdLife Partners have responsibility, with the overwhelming majority located in Europe and Central Asia (see figure 7).

When, however, the data for these sites are analysed by area, a different picture emerges, as can be seen in figure 8. Indeed, the mean size of the sites in Africa is 28,800 ha,

in the Americas it is 20,300 ha while in Europe and Central Asia it is only 500 ha (which drops to 229 ha when one site managed by the BirdLife Partner in Kazakhstan is omitted).

There is variation in the number of protected areas owned or managed by individual organizations. This ranges from one (19 Partners) all the way up to 500 (one Partner), with 16 managing more than 20 sites and five over 100.

It should be noted that BirdLife Partners work for the effective protection and management of a much larger number of protected areas worldwide, even if they do not have direct management responsibility. The numbers above also exclude those protected areas where local community conservation groups established and/or supported by BirdLife Partners may play a role in protected area governance or management.

The BirdLife Partnership therefore provides an excellent example of the way that a federation of NGOs, many of them individually relatively small, collectively make a significant contribution to site protection and biodiversity conservation.

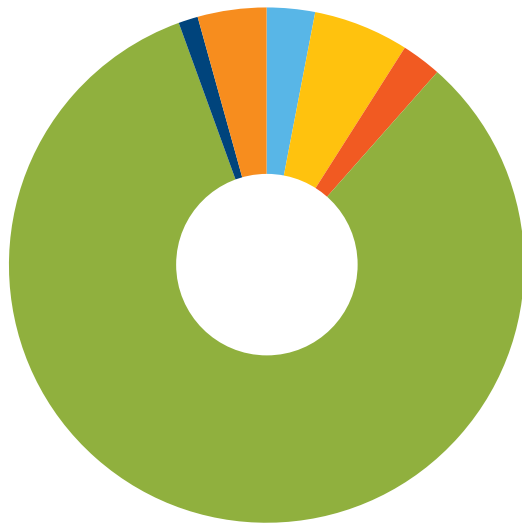


Figure 7: **Number of protected areas owned or managed by the BirdLife International Partnership, shown by region. Data from 115/120 Partners**

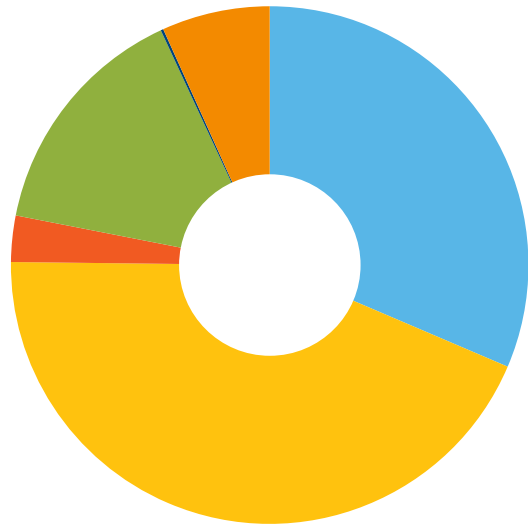


Figure 8: **Area (in ha) of protected areas owned or managed by the BirdLife International Partnership, shown by region. Data from 115/120 Partners**

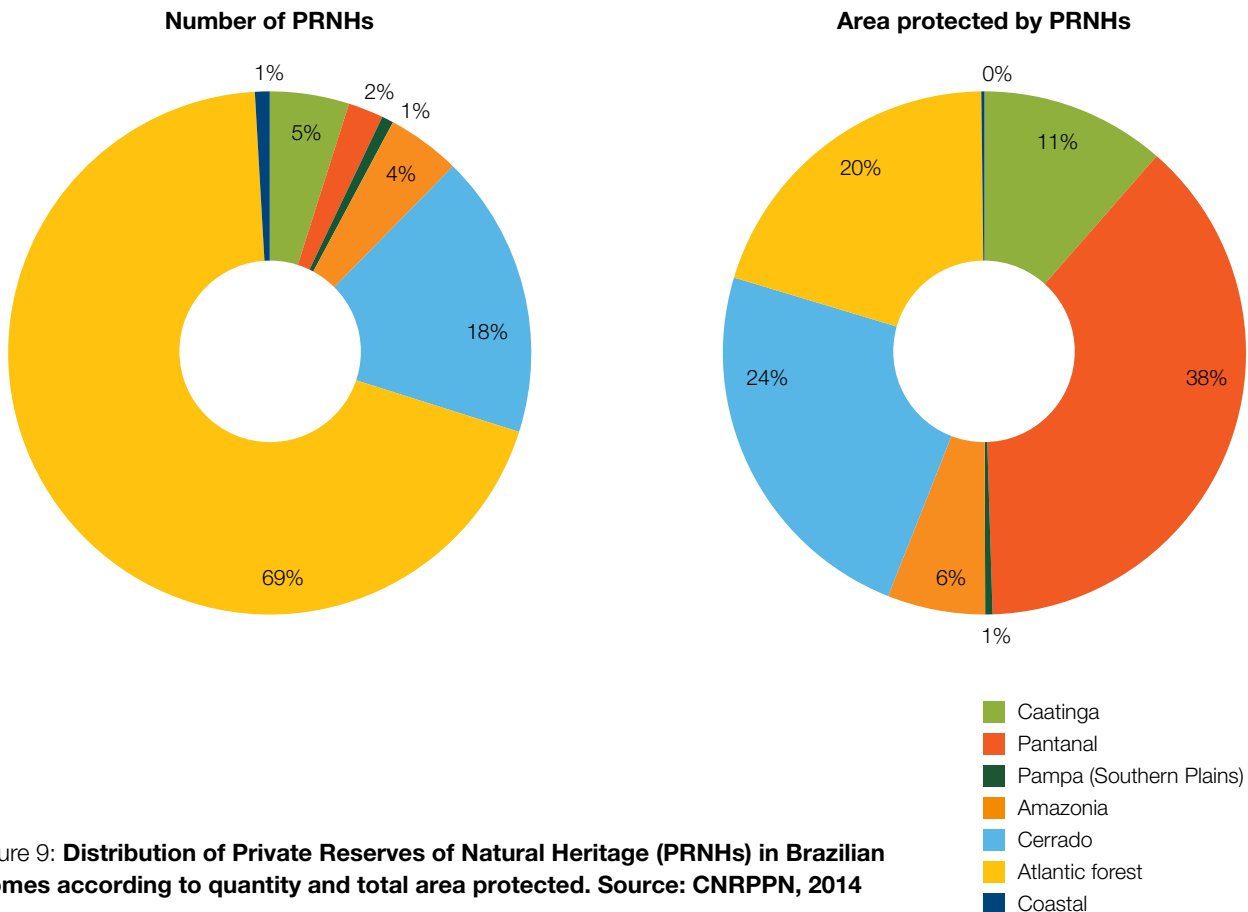


Figure 9: **Distribution of Private Reserves of Natural Heritage (PRNHs) in Brazilian biomes according to quantity and total area protected. Source: CNRPPN, 2014**

**Systematic planning:** PPA effectiveness is closely related to where they are situated: sites chosen due to prior ownership or personal choice are likely to contribute less to national conservation targets than PPAs that reflect priorities of conservation planning.

In South Africa, government support for PPAs is predicated on them being in places already identified as conservation priorities. In the USA, although links with conservation planning are less formalized, a study of land acquired by TNC found that 86 per cent was in areas defined as priorities for conservation, in line with the NGO’s own planning processes. It was noted that this alignment was in lands acquired before and after formalized conservation planning had been implemented, indicating that TNC has long focused attention on areas of high biodiversity (Fisher & Dills, 2012). Many of the country reviews prepared for *PPA Futures* where systematic planning has not been carried out nevertheless note the contribution of PPAs to achieving national conservation targets. In Brazil PPAs are considered as increasing the connectivity of natural landscape and the protection of key areas throughout biomes. The largest number of Private Reserves of Natural Heritage (PRNHs) is concentrated in the Atlantic Forest – 69 per cent; however due to the small size of PRNHs here this biome represents only 20.2 per cent of the total protected by PRNHs nationally. However, the Atlantic Forest has already been very severely degraded, with some estimates that as little as 7-8 per cent of the original still remains (Galindo-Leal & de Gusmão Câmara, 2003), making some of these small reserves of critical importance (figure 9).

In some countries PPAs provide specific means to fill gaps in conservation efforts in a less formal but nonetheless state-supported way. In Finland, most state-owned protected areas are in the north and east, where more government-owned land has been available, whilst most PPAs are found in the south and west in the more populated regions where protection more commonly involves land purchase or donation. Thus, to promote conservation of land in the south of the country, the government’s Forest Biodiversity Programme (METSO) aims to use PPAs to bring about 96,000 ha of land into protection (see Finland country review).

In other countries, PPAs are established independently of national conservation planning. NGOs sometimes have to rely on donations of land or water that may not be in the areas that would have been selected through conservation planning (for example, the land made available in Germany post reunification). NGOs have different policies towards land acquisition; some tend to build strategy around land they are offered while others are more likely to reject donations that do not match identified conservation priorities (or take them as real estate assets on the understanding that they may be sold on).



### 4.3 Reporting

The WDPAs are the primary source for information on protected areas worldwide. However, although data on protected areas has been collected globally since the 1960s, data on governance type only started to be recorded on the WDPAs in 2008 (after inclusion of protected area governance types in the 2008 Guidelines). As there has been no guidance on assessing governance until recently (Borrini-Feyerabend et al., 2013) and, until this publication, no detailed global guidance on what IUCN considers to be a PPA, it is not surprising that the data currently held on PPAs by the WDPAs provides little illumination on their status worldwide. More to the point, the lack of any governance information in the WDPAs has masked the overall lack of PPA data holdings. UNEP-WCMC, the managers of the WDPAs, analysed data they hold on possible PPAs for the *PPA Futures* project in October 2013. A total of 17,505 records were identified from 29 countries relating to possible PPAs; however, further analysis highlighted the confusion with the data on private governance (i.e. sites which have reported private governance to the WDPAs) not correlating with data on protected areas whose names indicate private governance (e.g. sites called private nature reserves). It is also clear that some well-known and long-established PPAs are missing from the WDPAs (see discussion in Holmes, 2013a, 2013b). The conclusion drawn is that the data in the WDPAs do not represent the global network of PPAs.

There are two issues related to reporting of PPAs which need resolving:

- The general under-reporting and incorrect reporting of all governance types to the WDPAs, which impacts on PPA reporting
- The specific lack of reporting of PPAs.

#### **Governance under-reporting and incorrect reporting:**

encouraging reporting of all governance types is linked to education, commitment and willingness to engage in reporting processes.

- **Education:** If people are not familiar with the concept of governance or with the benefits of recording and reporting governance then there is little chance of global databases such as the WDPAs ever having accurate records. Capacity development around the whole concept of governance is needed.
- **Guidance:** The incorrect reporting of governance type to the WDPAs may be as a result of the misunderstanding of the terminology and confusion between governance, ownership and management. Publication of guidance on assessing governance (Borrini-Feyerabend et al., 2013) should improve the reporting of governance type as data providers update their data (which happens on average every 3-5 years).
- **Government commitment:** Reporting data on conservation is voluntary; the signatories to the CBD are requested to report a range of conservation data on a regular basis, including protected area coverage, but the accuracy and completeness of these data cannot be assured. Although there is currently (as of 2013) a request for parties to the CBD to consider implementing a wide range of governance types, there is no corresponding specific request to report on them.

### Box 12

#### **Guidance on applying the 2008 IUCN Guidelines**

The definition of a protected area is outlined in the 2008 Guidelines – but when published it was recognized that further advice was needed for marine protected areas and more detailed guidance on assignment of the definition, categories and governance type. Thus since 2008 supplementary guidance for applying the 2008 Guidelines for marine protected areas has been published (Day et al., 2012) and Best Practice Guidance on Recognising Protected Areas and Assigning Management Categories and Governance Types (Stolton et al., 2013) has been added as a new appendix to the reprint of the guidelines released in 2013. This latter document provides further explanation on assigning categories and governance types; best practice guidance for governments and others on the process of assignment, based on practical experience of applying the guidelines over the last four years; and suggests a standardized process of assigning categories and governance types, both for self-assessment and verification by IUCN WCPA by including some minimum best practices.

Anyone undertaking a national or regional process to identify PPAs is encouraged to review these publications along with the guidance provided in this report on how to implement the guidance from IUCN.

- **Owner/manager willingness:** At a national level, the willingness to provide information on PPAs is likely to be linked with the type of owners/managers of an area and the impetus behind the conservation initiative. For those organizations with influence over large (in number or area) land/sea holdings who wish to influence national and international conservation processes, the reasons to provide data and engage in conservation reporting are more evident than private landowners more focused on site management than international reporting processes.

**Lack of reporting of PPAs:** Even where there is reporting on protected-area data and governance types nationally or internationally, it is often the case that PPAs are not included in national government reports (Holmes, 2013b and see, for example, UK country review). This is attributable in part to the focus on collecting data primarily from government sources; a consequence of UNEP-WCMC's UN and CBD mandate to collect data on protected areas, which results in data being reported primarily through official government data providers. It also relates to the lack of clarity on what is meant by a PPA, and once more reinforces the need for a globally agreed definition.

Box 13

**The WDPa data standard for protected areas information**

Author: Naomi Kingston, Brian MacSharry, Heather Bingham UNEP-WCMC

The WDPa is a joint project between the United Nations Environment Programme (UNEP) and the International Union for Conservation of Nature (IUCN), managed by UNEP-WCMC, in Cambridge, UK. In collaboration with governments, non-governmental organizations, academia and industry, it is the most comprehensive global database of marine and terrestrial protected areas, comprising both spatial data (i.e. boundaries) with associated attribute data (i.e. tabular information). The WDPa is made available online through the website [www.protectedplanet.net](http://www.protectedplanet.net) where the data is both viewable and downloadable.

The WDPa Data Standard was developed in 2009 as a mechanism to make the requirements for inclusion of data into the WDPa clear for all data providers, and to ensure interoperability of the dataset. This Data Standard will be expanded in 2014 (UNEP-WCMC, 2014b) in order to streamline the WDPa with the requirements of Aichi Biodiversity Target 11, which stresses the importance of ‘other effective area-based conservation measures’.

For inclusion in the WDPa as a protected area all data submissions must meet the following five requirements:

- The site must fit IUCN definition of a protected area.
- The spatial boundaries of protected areas should be provided as shapefiles (see Data standards for more detail) in multipart polygon format, where possible. Where boundary data are unavailable, the central geographical point location (latitude and longitude) must be given as a reference point for the protected area instead. Therefore, each protected area in the WDPa is either represented as a polygon boundary, or if unavailable, as a point location.

- Recording accurate source information in the WDPa is important to ensure that ownership of the data is maintained and traceable. The WDPa Source Table conforms to the minimum geographical information and services standards as outlined in the International Organisation for Standardization (ISO) guidance report on geographic Information (ISO/TC 211). A data submission will only be accepted if the minimum source information is provided. Under the new WDPa Data Standard, data will be stored on both the data source and the party responsible for verifying the data, where applicable.
- Attributes represent essential pieces of information about the spatial data that aid in the analysis, reporting and tracking of trends in the growth and coverage of the world’s protected areas. There are a total of 25 attributes associated with every protected area in the WDPa, with these categorized as ‘minimum’, ‘core’ or ‘enhanced’ attributes. The minimum basic requirement for data to be accepted into the WDPa is that the minimum attribute information is provided.
- The data must be either provided or verified by a national government or other authoritative source. Data contributors that provide data for inclusion in the WDPa are requested to sign the WDPa Data Contributor Agreement (DCA). This ensures that there is a written record of the data provider agreeing for their data to be in the WDPa. The agreement specifically states how the data provided will be used and that it will be subject to the WDPa Terms and Conditions. The DCA also provides the data providers with an opportunity to specify whether they are willing to have the information made publicly available, or if they are making it available for the calculation of global statistics and do not wish to have it shared outside UNEP-WCMC. A data submission will only be accepted if the WDPa Data Contributor Agreement is signed.

Increasing PPA reporting requires addressing three linked issues:

- **Definition:** providing clarity on the definition of a protected area, how this is interpreted for PPAs and how this definition can be implemented.
- **National databases:** ensuring PPA data gets onto national reporting systems. Global reporting is mandated through governments, so in practice if governments do not report PPAs they are not recognized. Most organizations holding PPA data will do so in some form of database, but these will often not distinguish governance types or even land with different management objectives, so some initial analysis will usually be required.

- **International data collection:** UNEP-WCMC has a range of requirements before a site can be added to the WDPa and these all need to be addressed at national level (see box 13 on WDPa). Other regional databases, such as the protected area information collected by the European Environment Agency, should also include governance information. There is also a range of material developed by IUCN WCPA which can help people understand the international definitions and implement them nationally (see box 12 on IUCN WCPA guidance on assignment).

# Part 5

## Recommendations

## Part 5: Recommendations



**A Verreaux's sifaka (*Propithecus verreauxi*) 'hopping' across open ground to reach new feeding grounds in Berenty Private Reserve, Madagascar © naturepl.com / Anup Shah / WWF-Canon**



Birds seen during the summer season at Skomer Island nature reserve run by the Wildlife Trust of South and West Wales, UK © Equilibrium Research

The *PPA Futures* project has developed a set of recommendations, focused on the original aims of the project, based on the country reviews, the published literature, and extensive collaborative engagement with a wide range of specialists.

## Strengthen PPAs nationally and globally

**1. Use the IUCN definition of a protected area:** All other recommendations in this report hinge on clearly defining a Privately Protected Area. Our recommended definition is: **A privately protected area is a protected area, as defined by IUCN, under private governance (i.e. individuals and groups of individuals; non-governmental organizations; corporations, including existing commercial companies and small companies established to manage groups of PPAs; for-profit owners such as ecotourism companies; research entities such as universities and field stations; or religious entities).** IUCN, through its World Conservation Congress, and the Secretariat of CBD, through its Conference of Parties, should officially adopt and sanction this definition.

**2. Review national PPA systems:** Most countries have not clarified the definition or other policy and legislative structures surrounding PPAs. Countries should be encouraged by IUCN and the CBD to develop PPA data (baseline and data recording systems) and to enable policy and legislation for developing and supporting PPAs.

### 3. Develop and implement monitoring and management effectiveness systems for PPAs:

The long-term success of PPAs depends on their ability to demonstrate conservation effectiveness. Conservation organizations and government protected areas agencies need to work in collaboration with PPA owners/managers on developing monitoring and management effectiveness systems which can be integrated with existing systems.

### 4. Create/strengthen national PPA Associations:

National PPA associations should be developed/strengthened to help: 1) determine how effective PPAs are being in their conservation mission; 2) provide training to PPA owners and managers to ensure conservation effectiveness; and 3) agree what should be counted as a PPA and develop systems to report these to national and international databases.

### 5. Improve knowledge sharing and information:

Two important activities are suggested: 1) IUCN's PPA Specialist Group and WCPA should prepare a 'best practices' guide for PPAs on the management of existing PPAs and the creation of new ones; and 2) encouragement for religious institutions and companies to create, support and report on the efforts to create and manage PPAs.



A PPA in the Atlantic Rainforest, Espirito Santo, Brazil © Michel Gunther / WWF-Canon

### Extend PPA initiatives nationally and globally

**6. Understand what incentives are needed to support and promote PPAs:** NGOs and research organizations should be encouraged to carry out research on understanding the relationship between a range of incentives and: 1) why owners establish PPAs; 2) why they maintain them once established; and 3) how to ensure conservation objectives when ownership changes. From an economic perspective, all incentives potentially distort markets, thus their positive and negative impacts also need careful study.

**7. Develop incentives to increase the conservation role of PPAs:** Building on recommendation 5 above, governments and others (e.g. NGOs, private companies) should ensure appropriate PPA incentives to: 1) expand the conservation coverage of existing protected areas; 2) connect protected areas and develop protected area networks (including across national boundaries); and 3) extend coverage of threatened species and rare and endangered ecosystems. Incentives should be in the form of both conservation legislation and instruments such as taxation; and flexible enough to allow rapid development of PPAs to respond to conservation crises.

### Integrate PPAs into national and international reporting

**8. Create structures and incentives to report on PPAs both nationally and globally:** IUCN, other conservation bodies and government organizations should develop systems nationally for collecting PPA data (e.g. through Associations as outlined in recommendation 4). UNEP WCMC should collect data on PPAs, including through the support of national processes, to include in the WDPA and to report to UN bodies and others.

# Part 6

## PPA Futures

# Part 6: PPA Futures



The conservation community is at a crossroads. Though there are still opportunities, particularly in the marine biome, by and large the era of new, large state-declared protected areas is over. In the last decade the world conservation community has seen the promising rise of ICCAs as important additions to the world's protected areas. But combining both these types of protected areas under collective management – government for the people and of indigenous groups and communities – will not allow most countries to reach the Aichi Biodiversity Target. Lands and waters in private hands are also important for conservation purposes.

Private lands are found in all shapes and sizes with different distributions in different countries. Some countries have vast holdings in private hands: for example 79 per cent of South Africa is in private hands (City Press, 2013). Others have relatively small areas in private hands: in Canada only 11 per cent (see Canada country review) while in the USA about 28 per cent (Gorte et al., 2012). Concentration of ownership also varies; with some countries having very large holdings in the

hands of few owners; for example in 2013 the five largest landowners in the USA own at least 3,570,000 ha.

Land in private hands can be valuable for conservation. Millions of hectares of privately held forest, farmland, grazing lands and water bodies are vital for broader biodiversity conservation, not only because of their extent but because they can be located in areas of high resource productivity. Providing opportunities to bring such areas into conservation is becoming an increasingly important part of biodiversity mainstreaming.

There is a growing interest in the global conservation community in helping and incentivizing conservation on private lands that could be considered PPAs (Langholz & Krug, 2004). PPAs have the potential to advance substantially the ability of national governments to reach their obligations under the Aichi Biodiversity Targets. A number of reasons seem to be responsible for the growth in PPAs. These include:

- Nature-based tourism including bird-watching, wildlife photography, recreational hunting and recreational diving





**The Valero property is a large private hunting reserve (4,200 ha) partly within the National Park of Monfragüe, Spain. The private owners have a land stewardship agreement with the Foundation 'Naturaleza y Hombre' © M.Rafa**

- A desire to generate profit from conservation including all of the above
- Societal trends towards decentralization and neoliberalization
- General knowledge about the plight of the natural world and the need to take action to save nature
- Exporting, by large NGOs like TNC and BirdLife, the model of easements – especially to Latin America – and the UK model of covenants to help facilitate conservation
- The need to incorporate all segments of society in conservation
- Greater realization of the importance of representation of species and ecosystems as well as the need for larger sizes of existing protected areas and/or greater connectivity between protected areas
- The rise of economic inequality, creating a global class of super-rich philanthropists interested in conservation
- Increased opportunities for public recreation, quality of life, health and education
- Decreases in profitability of some forms of agriculture, such as the cattle economy in countries in southern Africa
- Reduced availability of public money for purchase of new conservation lands
- A lack of trust in the political systems of many countries, and of governments to take care of things that citizens desire.

Both the research carried out for the *PPA Futures* project and the peer reviewed literature show that PPAs are already providing substantial conservation gains including:

- Enhancing connectivity of existing protected areas (e.g. in Australia, see Fitzsimons et al., 2013 and Brazil, see Crouzeilles et al., 2012)
- Addressing national conservation priorities (e.g. in the USA, see Fisher & Dills, 2012; Kiesecker et al., 2007)
- Achieving ecological representation (e.g. in Australia, see Fitzsimons & Wescott, 2008; and South Africa, see Gallo et al., 2009)
- Conserving endangered species (e.g. in the USA privately held lands contain at least one population of many species listed as being federally endangered (Groves et al., 2000); in Mexico PPAs help protect significant numbers of Mexican amphibians (Ochoa-Ochoa et al., 2009))



**Ahuenco Park PPA in Chile: protects 1,200 ha of coastal and forest habitat on Chiloé Island and its ownership is shared by a community of 45 stakeholders in a real estate company, as well as its associated foundation. © E.Corcuera**

- Providing economic benefits through mechanisms such as maintenance of ecosystem services (e.g. in Brazil, Lopes de Melo & Silva da Motta, n.d.).

### Conclusions

Though just one of many tools available to support conservation, PPAs are an important and underused one. They represent a democratization of conservation, a tangible manifestation of the conservation power that lies in the hands of private individuals and entities. This conservation power is important because it signals both a willingness to take conservation action on the part of the private sector as well as an admission from government that it cannot and should not try to achieve conservation objectives without the help of the larger society. The rising interest in PPAs is part of broader movements towards stewardship of nature as seen in the 'Landcare' and 'Healthy Country' movements in Australia and the 'Land Stewardship' movement in Europe (Sabaté et al., 2013). Supporting PPAs is not a reason to ignore these broader types of biodiversity mainstreaming – all are vital.

The concept of PPAs is an intrinsically complex one in which the private sector is providing a mix of private and public benefits. It is important to recognize this mix when setting up governmental incentives that stress the public benefits. It is also vital to recognize that the scale of private action on its own will never match the scale of the conservation challenges faced around the world. PPAs are not a substitute for government protected areas, jointly managed protected areas or indigenous and community protected areas, but a complement to them. A multiplicity of governance types is good as it means that there are checks and balances and a broad segment of society invested in trying to ensure conservation outcomes.

Private conservation efforts deserve to be fully recognized, better integrated within national and regional conservation policies, encouraged and supported. Globally PPAs are at a critical stage with a creative global social movement developing around this form of in situ protection. If current trends are maintained, privately protected areas will become more and more common and will rise to play their rightful role as vital contributors to achieving individual, local, national and global conservation goals.

# Part 7

## PPA Country reviews

# Part 7: Country reviews

## 7.1 Australia

James Fitzsimons, The Nature Conservancy, Australia; and School of Life and Environmental Sciences, Deakin University, Australia

In Australia, the conservation of biodiversity on private land has been an important policy objective for the past few decades. While there are multiple mechanisms used to achieve this, conservation covenants and land acquisition are the primary mechanism used to protect natural assets on private land in the long term (Fitzsimons & Wescott, 2001; Cowell & Williams, 2006; Pasquini et al., 2011). There are a variety of conservation covenanting mechanisms with supporting programmes that currently exist in Australia that vary based on the jurisdiction and the legislation under which they are established.

The Australian National Reserve System is a national network of public, indigenous and privately protected areas over land and inland freshwater. Its focus is to secure long-term protection for samples of Australia's diverse ecosystems and the plants and animals they support. It is recognized that the National Reserve System cannot be built solely on public lands and there is a significant role for indigenous groups, local communities, private landholders and NGOs to play in establishing and managing protected areas to ensure the success of the System. The Australian Government has played an important role in growing the private land trust sector in Australia over the past 20 years. Specifically, the provision of up to two-thirds of the purchase price for strategic land acquisitions through the National Reserve System Program has seen land owned by this sector grow from thousands of hectares in the mid-1990s to millions of hectares today. It has also resulted in significantly increased involvement and investment from the philanthropic sector in the establishment of new PPAs.

### Defining PPAs

The term 'private protected area' suffers from a lack of a clear and concise definition in Australia. In this review, land held for conservation by indigenous people and groups, while substantial, are not considered 'private' for the purpose of protected area governance classifications. Rather they are considered to fall into the 'indigenous and community' governance category of IUCN protected area management categories. The only *nationally agreed* definition of a PPA is that developed by the Natural Resource Management Ministerial Council (NRMCC, 2009) that states: 'A fundamental requirement of any area's eligibility for inclusion within the National Reserve System is that it must meet the IUCN definition of a "protected area" (Dudley, 2008)' with three standards applying generally across all tenure types ('valuable', 'well managed', and 'clearly defined') and a fourth



**Neds Corner Station, a 30,000 ha former grazing property in the state of Victoria, Australia, now owned and run as a PPA by the Trust for Nature © James Fitzsimons**

('secure through legal or other effective means') specific to different tenures.

The NRMCC provides further definition of the term 'legal or other effective means' for the purposes of inclusion in the National Reserve System including:

1. Legal means: Land is brought under control of an Act of Parliament, specializing in land conservation practices, and requires a Parliamentary process to extinguish the protected area or excise portions from it
2. Other effective means: for contract, covenant, agreements or other legal instrument, the clauses must include provisions to cover:
  - Long-term management – ideally this should be in perpetuity but, if this is not possible, then the minimum should be at least 99 years
  - The agreement to remain in place unless both parties agree to its termination
  - A process to revoke the protected area or excise portions from it is defined; for National Reserve System areas created through contribution of public funding, this process should involve public input when practicable
  - The intent of the contract should, where applicable, be further reinforced through a perpetual covenant on the title of the land
  - 'Well-tested' legal or other means, including non-gazetted means, such as through recognized traditional rules

Table 7: Number and area of major conservation covenanting programmes in Australia (as at September 2013)

Covenanting programme	Number	Area (ha)	Average size (ha)
Victoria: Trust for Nature covenants	1,242	53,370	43
NSW Voluntary Conservation Agreements	367	143,050	390
NSW Registered Property Agreements	237 <sup>ii</sup>	44,150	186
NSW Nature Conservation Trust covenants	73	16,687	229
Tasmanian Private Land Conservation Program covenants	703 <sup>iii</sup>	83,644	119
South Australian Heritage Agreements	1,518	643,631	424
Queensland Nature Refuges	453	3,438,004	7,589
Western Australian (DPaW) covenants	169 <sup>iv</sup>	17,386	103
Western Australian National Trust covenants	162	17,879 <sup>i</sup>	110
Northern Territory Conservation Covenants	2	640	320
<b>Total</b>	<b>4,926</b>	<b>4,458,441</b>	<b>905</b>

**Notes:**

i Area shown is area of bushland (natural habitat). The total area covenanted (included cleared land) is 64,381 ha

ii This does not include 99 Temporary Property Agreements covering ~8,450 ha

iii Includes 39 'time limited' covenants covering 6,845 ha

iv Number of landholders

under which Indigenous Protected Areas (community conserved areas) operate or the policies of established non-government organizations.

Despite these definitions, the term PPA is often used more broadly for private land conservation mechanisms that include a legislative or contractual component (even if not in perpetuity) or generally for land owned by conservation land trusts or similar. Fitzsimons (2006) provided a detailed analysis of how each private land conservation mechanism in the State of Victoria met the definition of private protected area (based on the NRMCC 2005 definition), however it does not appear that similar analyses have been carried out for other jurisdictions.

The main 'types' of PPA in Australia are:

- Conservation covenants - binding agreements (usually entered into on a voluntary basis) between a landowner and an authorized body to help the landowner protect and manage the environment on their property
- Land purchased by NGOs through the National Reserve System Program
- Less frequently, areas protected by special legislation or under the National Parks legislation.

## Legislation and PPAs

In Australia, state and territory governments are primarily responsible for environmental management and relevant legislation including protected area legislation. The states and territories also have legislation enabling the application of conservation covenants over private land; covenants being the primary mechanism to secure conservation in perpetuity.

Where financial assistance has been given to NGOs to purchase land for conservation through the Australian Government's National Reserve System Program, protection

takes two main forms. Firstly, there is a funding agreement between the Australian Government and NGO that specifies that the property is being managed for biodiversity conservation, the management activities to be undertaken and activities which are not appropriate. There is provision in many of these agreements for funding to be returned if provisions are not met. Secondly, and critically, there is a requirement in all contracts for a conservation covenant (or similar) to be signed between the NGO with the relevant state/territory covenanting agency within a couple of years of purchase.

Unlike most national parks in Australia, the establishment of a conservation covenant or purchase of a private reserve through the National Reserve System does not prevent mineral exploration or mining. There have been recent threats to some private protected areas due to mining approvals being given by a state government, against the wishes of the private landholder (Adams & Moon, 2013).

## How many PPAs are there?

Although Australia has a relatively comprehensive national database for recording the location, size and management intent (IUCN categories) of public protected areas and indigenous protected areas, the national reporting of PPAs is *ad hoc* and not comprehensive. Protected area data are compiled nationally every two years or so as part of the Collaborative Australian Protected Area Database (CAPAD). However, only some jurisdictions provide information on conservation covenants. As such gaining a comprehensive picture of the number and area of PPAs in Australia is difficult.

Nonetheless if considering all 'in perpetuity' conservation covenants under a dedicated program to be private protected areas and land owned by NGOs and managed for the purpose of biodiversity conservation, there were approximately 5,000 terrestrial properties that could be

Table 8: **Number and area of private reserves owned by major non-profit conservation land owning organizations in Australia (as at 30 June 2013)**

Organization	Number of properties owned <sup>i</sup>	Total Area (ha)	Average Area (ha)
Bush Heritage Australia	35	960,000	27,429
Australian Wildlife Conservancy	23	>3,000,000	130,400
Trust for Nature (Victoria) <sup>ii</sup>	47	36,104	768
Nature Foundation SA	5	499,705	99,941
Nature Conservation Trust of NSW	12 <sup>iii</sup>	10,182	849
Tasmanian Land Conservancy	11 <sup>iv</sup>	7,283	662
South Endeavour Trust	7	80,846 <sup>v</sup>	11,506
<b>Total</b>	<b>137</b>	<b>4,594,120</b>	

**Notes:**

<sup>i</sup> Not all properties may have legal protection to the extent outlined earlier but all properties are effectively managed as PPAs;

<sup>ii</sup> In addition to this figure, 55 properties purchased by the Revolving Fund since its inception, and 52 have been on-sold, protecting 5,695 ha;

<sup>iii</sup> Currently holding but to be sold with covenant as part of revolving fund – a further 12 have been sold to supportive private owners, protecting 11,823 ha (included in covenant figures in table 7);

<sup>iv</sup> All covenanted;

<sup>v</sup> The largest property, the 68,000 ha Kings Plains, is a mix of conservation and sustainable grazing.

considered private protected areas in Australia covering 8,913,000 hectares as at September 2013. This includes over 4,900 conservation covenants covering over 4,450,000 ha (Table 7) and approximately 140 properties owned by private land trusts covering approximately 4,594,120 ha (Table 8) and a small number of private protected areas owned by other organizations. Some of these large properties held by NGOs have covenants and where known these have been counted only once in deriving the total figure.

There are a number of other covenanting arrangements (or covenant-like arrangements) that may not qualify as PPAs but are effectively managed in the same way as other conservation covenants. It is recognized that not all properties owned by private conservation trusts would necessarily qualify as private protected areas under the current National Reserve System criteria (mainly due to legal protection), however they are managed with this explicit intent and are moving towards greater security and would be widely considered PPAs.

The size of PPAs varies widely and is influenced by a number of factors, including size of historical subdivision of land parcels and amount of vegetation clearing in a region. PPAs make up a relatively small proportion of the overall area protected within Australia's National Reserve System, although this area and relative proportion has increased significantly in the last 15 years (see figure 3). Almost all marine waters in Australia are Crown land and there are no PPAs in the marine environment.

## Ownership and human habitation

Conservation covenants make up the majority of individual PPAs in Australia and for most covenanted properties, people either live on (or have the provision to live on) the properties. In most cases it is private individuals or families that own properties with covenants over them. In many cases a covenant will be a smaller part of a larger property, such as a farm, that is not part of the protected area. In other cases this might be a specific zone within the covenant that recognizes

an existing or future house. Activities that might degrade the conservation value of the covenant generally are not permitted. The majority of covenants are not generally 'open access' as they are the property of a private individual and not generally dedicated for commercial purposes. PPAs owned by conservation NGOs may have a manager living onsite.

There are few PPAs owned by 'for-profit groups' (companies) in Australia. A recent example is Henbury Station in central Australia, purchased by R.M. Williams Agricultural Holdings (Pearse, 2012) whose intention for the property was both biodiversity conservation and carbon sequestration (by removing stock from this former pastoral station). Despite being purchased with funds from the Australian Government's National Reserve System Program, this property was recently sold and less than 20 per cent will be formally protected within a conservation covenant. Earth Sanctuaries Ltd was the first publicly listed company in Australia to have wildlife conservation as its primary goal, owning 11 private reserves covering c.100,000 ha at its peak of land ownership. It sought to generate income by placing a monetary value on the threatened species it owned (Sydee & Beder, 2006) but was delisted in 2006.

Ownership of PPAs can change in a more deliberate way. For example, a number of private land trusts operate revolving funds whereby a property is purchased by the NGO and then sold (usually to individual landowners) with a conservation covenant attached. Private land trusts can also transfer private reserves into the public protected area estate.

There have been a smaller number of acquisitions by community groups, such as the Twin Creeks Community Conservation Reserve. There are also emerging hybrid models of PPAs with other governance types. For example Fish River was purchased by the Indigenous Land Corporation with financial support from the Australian Government's National Reserve System Program and NGOs (TNC and Pew Environment Group) (Fitzsimons & Looker, 2012). It is a PPA but will be handed back to the Traditional Owners in the future.



The woodland remnant at Creighton Hills, a conservation covenant in central Victoria, Australia, is important for a range of declining woodland birds, and more common species such as these Willie Wagtails (*Rhipidura leucophrys*) © James Fitzsimons

## PPAs as part of the National Reserve System

Up until the mid 1990s, the public protected area system in Australia was typically created from existing public land, which itself was often the 'left overs' from land not suitable to use for agriculture. The advent of the National Reserve System and scientific principles of comprehensiveness, adequacy and representativeness (CAR) saw a much more targeted approach to reserve creation, with an emphasis on filling gaps and targeting the inclusion of under-represented ecosystems. The role of conservation NGOs is considered by the NRMCC (2009) as: 'critical, as they complement the public reserves by filling conservation gaps, purchasing or covenanting land where governments are unable to do so'. The NRMCC also recognize that many threatened species and under-represented communities occur on private land that is not for sale and that farmers and graziers are increasingly placing voluntary, in perpetuity conservation covenants on their property.

Most conservation covenanting programmes were established before the concepts of CAR were explicit in conservation policy in Australia. Nonetheless, in a review of conservation covenanting programmes in 2007, Fitzsimons and Carr (2007) found that most programmes now seek to complement the comprehensiveness, adequacy and representativeness of the

public reserve system either stating so explicitly or by aiming to protect the highest priority ecosystems on private land.

However it should be recognized that covenants are generally established for a range of reasons beyond just complementing the CAR reserve system. It is often the landholders themselves that approach a covenanting agency to have a covenant placed on their property. More recently, the Trust for Nature (2013) has shown how a more targeted approach to covenant establishment has significantly increased the proportion of covenants in under-represented bioregions.

New PPAs are also established with the explicit aim of buffering (Coveney, 1993) or linking (e.g. Bradby, 2013) existing protected areas. Fitzsimons & Wescott (2005) and case studies within Fitzsimons et al. (2013) highlight the catalysing role of land purchase by NGOs in establishing new connectivity conservation initiatives in a region.

In a number of states, covenanting leasehold land, which makes up a significant proportion of inland Australia, is significantly harder than covenanting freehold land due to legislative conflicts. This means that at a national level covenants are more skewed towards freehold properties in eastern and southern Australia and Tasmania.

## Incentives and reporting

There has been a significant increase in incentive payments, to encourage the signing of covenants in high priority, under-represented bioregions in the past decade. Where there are open calls or tenders for funding conservation activities on private land within a region, covenants will often receive a high priority. However, within the last decade there has been a focus on stewardship payments for short-term (e.g. five to 15 years) management agreements. At a national level, tax concessions are available to landowners who enter into conservation covenants to protect areas of high conservation value. Qualifying for an income tax deduction requires the meeting of multiple conditions set by the government (DSEWPC, 2012).

Requirements of owners of PPAs to report on their activities vary. As a condition of funding for land acquisition (such as through the National Reserve System Program) or management (such as through various stewardship payment programmes), reporting is required. The National Reserve System Program's Funding Deed requires Monitoring, Evaluation, Reporting and Improvement (MERI) plans be prepared for each project (Australian Government, 2013).

If conservation covenants have received funds as part of covenant establishment owners will typically have to report on annual activities and outcomes. For those established without financial assistance the level of reporting required and stewardship capacity from the covenanting agency varies. In Victoria, as part of the Trust for Nature's Stewardship Program monitoring of conservation covenants is undertaken at least once every three years and reported in a stewardship report. Management Plans are written by Trust for Nature Regional Managers, in consultation with the landowners.

There are a number of factors that seem to be currently inhibiting this national reporting:

1. Privacy concerns for private landowners in revealing the location of their properties
2. Lack of coordination/process between state governments, the Australian Government and covenanting agencies outside the state nature conservation agencies
3. Lack of assessment as to whether covenants (generally or specifically) meet the protected area classification.

Nonetheless, each state covenanting programme maintains its own database of covenants.



**Private Reserves of Natural Heritage Serra do Tombador protects an area of Cerrado in Brazil and is owned by the Boticario Group Foundation for Nature Protection © Gustavo Gatti**

## 7.2 Brazil

Angela Pellin and Cláudio Valladares Pádua, IPÊ – Instituto de Pesquisas Ecológicas, Brazil

Strategies for nature conservation on private land in Brazil group into two mechanisms: *mandatory* and *voluntary*. Among the mandatory schemes are those set out in the Brazilian Forest Code of 1934 last updated in 2012, and those provided for by the law establishing the National System of Conservation Units (NSCU). The principal voluntary mechanism is the creation of Private Reserves.

### Mandatory mechanisms

Mandatory private areas include Legal Reserves (LRs) and Areas of Permanent Preservation (APPs). According to the Constitution of 1988, in order to meet their social functions, all rural properties must properly utilize the available natural resources and preserve the environment. Thus, APPs and LRs are mandatory on all rural properties in Brazil, and the owner is not entitled to indemnification by the State.

LRs are located on rural properties and are designed to achieve the sustainable use of natural resources, conservation and rehabilitation of ecological processes, biodiversity conservation and the protection of native flora and fauna. Vegetation in LRs cannot be removed and can only be used under sustainable forest management. The physical location and extent of LRs on rural properties is negotiated with environmental authorities and varies between 20 and 80 per cent of the property, depending on the biome and region. In Brazil, no official data evaluate compliance by landowners



with the Forest Code, mainly due to a lack of information about land ownership. There is resistance from owners to comply with LR obligations because they are seen as impediments to production and as penalizing the landowner (Ranieri, 2004).

APPs may or may not contain native vegetation, and provide several functions: preserving water resources, landscape, geological stability, biodiversity, gene flow, soil protection and the well-being of human populations. These areas create buffers along watercourses, springs, lakes, ponds and reservoirs; they protect slopes, salt marshes, mangroves, edges of pans and mesas, hilltops, high-elevation areas and palm swamps. As with LRs, there are no accurate compliance data for APPs, but it is likely that most are not effectively implemented.

The Forest Code also establishes a *forest* easement mechanism, where the owner voluntarily waives permanent or temporary rights to exploitation of native vegetation above and beyond the mandates for LRs and APPs. Another more recent mechanism is the *environmental* easement created by the National Forest Law (Law 11284/06) that is similar to the forest easement, but in which the owner waives, permanently or temporarily, fully or partially, the right to use, exploit or remove all natural resources (not just native vegetation) from the property. Neither mechanism has been widely used in Brazil.

A further conservation mechanism that restricts the use of private property is the creation of protected areas on non-public land. Among the 12 categories of protected areas in the National System of Conservation Units (law 9985/00), four can be imposed on either public or private areas: Environmental Protection Areas (EPA), Natural Monuments (NM), Areas of Relevant Ecological Interest (AREI) and Wildlife Refuges (WR). Private properties on which public protected areas have been established are managed with a mutually-agreed upon balance between the objectives of the protected areas and those of the owner.

EPAs are equivalent to IUCN Category V and are usually created on large areas, with some degree of human occupation that have abiotic, biotic, aesthetic or cultural attributes that are especially important for human well-being. EPAs have as basic objectives the protection of biological diversity, buffering land occupation dynamics and ensuring sustainable use of natural resources. They may consist of public or private land and impose restrictions (within constitutional limits) on the use of private property located within them. Currently, this is the third largest category of protected areas in number and first in total area protected in Brazil, with about 44,087,900 ha distributed within 265 units, and representing 29 per cent of protected areas in the National System of Conservation Units (CNUC, 2013) (Table 9).

Other protected areas that can be established on both public and private land are less significant in number and total area protected. Natural Monuments (IUCN category III), designed to preserve natural sites that are rare, unique, or possess scenic beauty protect approximately 135,400 ha in 36 protected areas. Wildlife Refuges (IUCN category IV) protect species or communities of resident or migratory flora and fauna and protect approximately 373,100 ha distributed in 29 protected areas. Areas of Relevant Ecological Interest (also IUCN category V) are generally small, protect natural ecosystems of regional or local importance and cover about 92,000 ha distributed over 47 protected areas. The total area covered by the above protected area categories is 44,688,400 ha. Of these, only 9.8 per cent currently cover marine areas (CNUC, 2013).

## Voluntary mechanisms

Also as part of the categories established by law 9985/00 and in addition to mandatory protected areas, protected areas can be voluntarily established by landowners. In Brazil, PPAs are known as Private Reserves of Natural Heritage (PRNHs) and their primary goal is conservation of biological diversity. PRNHs are created in perpetuity on the initiative of landowners

Table 9: **Protected area types and coverage**

Protected Area	Area (ha)	Source
Ecological Station	11,580,500	CNUC , 2013
Natural Monuments	135,400	
National Parks	34,652,700	
Wildlife Refuges	373,100	
Biological Reserves	5,260,600	
National Forests	30,025,400	
Extractive Reserves	14,353,500	
Sustainable Development Reserve	11,661,500	
Fauna Reserve	0	
Environmental Protection Areas	44,087,900	
Areas of Relevant Ecological Interest	92,000	
Private Reserves of Natural Heritage	703,100	CNRPPN, 2014
<b>Total</b>	<b>152,925,700</b>	



**The Brazilian Private Reserves of Natural Heritage Engenheiro Eliezer Batista protects 13,300 ha of tropical wetland in the Pantanal, and is owned by MMX Corumbá Mineração Ltda © Instituto Homem Pantaneiro**

and are recognized by public authorities. Activities allowed in these areas include scientific research, tourism, recreation and education, as long as such activities are not incompatible with the protection of the resources. Thus, a PRNH corresponds to IUCN categories I, II, III and IV depending on the objectives set by its owner.

The decentralization of PRNHs allows national, state and municipal governments to institute legal instruments for the creation and management of PRNHs. Sixteen states now have their own legal instruments to regulate private reserves, and municipalities have begun to develop their own legislation as well. Studies show that landowners preferentially apply to the State for recognition of PRNHs, due to the stronger relations between landowners and State environmental agencies (Pellin, 2010).

Since their emergence in 1990, 1,094 PRNHs have been created, protecting approximately 703,000 ha. These are distributed in 27 states and 571 different municipalities. PRNHs occur in 10.26 per cent of Brazilian municipalities and represent 0.33 per cent of the total area conserved (CNRPPN, 2014). The average area of a private reserve in Brazil is 640 ha. However, there is substantial variation among biomes, with the average in the Pantanal being 11,160 ha and areas in the Atlantic Forest and Coastal ecoregions averaging 187 ha and 134 ha, respectively. The 25 largest private reserves in Brazil (with areas over 5,000 ha) represented less than 4 per cent of the total number in 2008, but ensured the protection of

more than 60 per cent of the total area covered by the PRNHs network (Mesquita, 2008).

Despite this small overall percentage it is believed that PPAs are extremely important in establishing connectivity of natural landscape and the protection of key areas. There are no specific regulations for locating private reserves, but they are commonly established near public protected areas. Though legislation provides that PRNHs proposed for protected area buffer zones should be given priority, in reality Pellin (2010) has shown that this has no practical effect.

According to the National Confederation of PRNHs, the vast majority of PRNHs is owned by individuals (74 per cent) with most of the remaining having unidentified owners. Some states and regions have more detailed data. For example, in Mato Grosso do Sul 46 per cent of the 36 PRNHs belong to individuals, 27 per cent to companies, 26 per cent to NGOs and 1 per cent to public foundations (Pellin, 2010). A study on PRNHs in the Atlantic Forest concluded that 50 per cent of the area protected by PRNHs belongs to individuals, 10 per cent to religious institutions, 3 per cent to NGOs and 37 per cent to companies. Among the companies an important part belongs to forestry, agricultural, and mining and steel industry sectors (Vieira, 2004).

Research on 34 reserves in Brazil shows that motivations for creating PRNHs include conservation of species and ecosystems, personal satisfaction, protecting water resources, tourism, tax exemption, protection against agrarian reform, and marketing. In this research 68 per cent of the owners

gave between two and six reasons, against 32 per cent who mentioned only one reason for creating reserves. The conservation of species and ecosystems was most commonly mentioned, being listed as primary, exclusively or associated with other motivations, by 79 per cent of interviewees (Pellin & Ranieri, 2009).

The law allows PRNHs to be used as residences by owners and workers directly involved in management of the PPA. However, because their main objective is biodiversity conservation, the use or extraction of natural resources from within PRNHs is prohibited.

Recently Amazonas State created a new category of Private Reserve called Private Reserves for Sustainable Development (PRSDs). This category aims to conserve and manage natural resources and protect ecological processes, environmental services and essential ecosystems or other relevant attributes. Logging and mining are banned within the reserves' limits. The first PRSD of 14,452 ha was created in 2013 by a Corporation in an uninhabited forest. Its management plan provides for the conservation of forest biodiversity, sustainable development of surrounding traditional and riverine communities, scientific research, and the reduction of CO<sub>2</sub> emissions generated by avoided deforestation and degradation (EBCF, 2013). This innovation may consolidate a new concept of voluntary conservation on private property that combines biodiversity conservation and sustainable management of natural resources.

## Challenges in creating and managing PRNHs

Owners of PRNHs face many challenges:

1. Excessive bureaucracy that hinders the creation of such areas
2. Lack of public policies to encourage their creation and management, and lack of societal recognition about the benefits associated with these PPAs
3. Lack of management experience of owners. Despite the large number of private reserves already established, these issues might discourage the creation of future reserves (Pádua, 2006; Costa, 2006; Rodrigues, 2006).

There is consensus that entities responsible for recognizing these PPAs are slow to perform their jobs. Moreover, the increased standards for the creation of PRNHs provide, on the one hand, more detailed procedures and legal certainty for owners, but on the other hand have made it increasingly difficult to process applications.

The lack of incentives and recognition by the government for these important initiatives are notable (Fonseca, 1994; Costa, 2006; Morsello, 2001; Padua, 2006; Pellin & Ranieri, 2009). Some benefits provided by the law are: exemption of the preserve area from Rural Property Tax (RPT); prioritization for some government conservation funds; preference for agricultural credit for productive areas of the property; the potential to receive environmental compensation; and support for owners from the Brazilian government for supervision, protection and prosecution of environmental crimes. With the exception of the RPT exemption, other incentives provided

by the law are not adequately administered. Furthermore, RPT values are often trivial and this has therefore not been considered an attractive benefit to the majority of owners. To address this deficiency, NGOs have supported the creation and management of such PRNHs (Rambaldi et al., 2005; Fonseca et al., 2006; Teixeira & Souza, 2006; Pellin & Ranieri, 2009).

Property owners associations also play an important role in supporting PRNHs, assisting owners in the creation process, the search for partnerships and resources for management, dissemination and strengthening of private reserves, training and exchange of experiences among members, and improving coordination and negotiations with environmental agencies. Currently there are 16 Associations of Owners of PRNH in Brazil, representing 19 states, as well as a National Confederation of PRNHs (CNPRNH, 2013). Owners of PRNHs, however, still often lack the necessary experience to properly administer their properties to support conservation objectives, research or even tourism. The difficulties faced by owners in managing their own PRNHs are compounded by the lack of support and monitoring by environmental agencies.

In Brazil, research evaluating management effectiveness has emphasized public protected areas, but rarely included PRNHs. One of the few such studies, undertaken by Pellin (2010), applying a management survey instrument to 34 PRNHs found that 20.6 per cent of private reserves have 'very poor' management levels, 32.4 per cent 'poor', 17.6 per cent 'average', 17.6 per cent 'good', and 11.8 per cent achieved a standard of 'excellence in management'. These scores do not differ substantially from those found in management evaluations in Brazilian public protected areas (Pellin, 2010).

Despite the few incentives and difficulties that landowners face in establishing and managing PRNHs, a large number of reserves have been created in recent years. It is believed that this number could increase if national, state and municipal governments provide more proactive regulations to promote and support the management of these areas. The main motivations to create PRNHs are conservation of species and ecosystems, the personal satisfaction of contributing to the conservation of natural environments, and of knowing that descendants will have the opportunity of knowing and enjoying an area (Pellin & Ranieri, 2009). Economic reasons are also motivations for creating PRNHs including exemption from the RPT, economic alternatives (e.g. tourism), protection against land being possessed by the government, and to add economic value (e.g. marketing) (Pellin & Ranieri, 2009).

Although economic benefits are important, other potential types of support exist: greater recognition of owners, facilitating their participation in relevant forums, availability of information generated by the public sector, and offers of technical assistance and training. An additional contribution could be increased protection of the area, which is already provided for by law, and which many owners want, but few achieve in practice.



**The Sage and Sparrow Conservation Area on the Canada-USA border protects 1,260 ha of rare grassland habitat; it is an important migratory corridor between the desert of western USA and dry grasslands of British Columbia** © Nature Conservancy of Canada

## 7.3 Canada

Cathy Wilkinson, Environmental Consultant

The vast majority of Canada's lands are owned by federal and provincial governments. These so-called 'Crown Lands' cover approximately 89 per cent of the country. As such, less than 11 per cent of Canada's land base is held by private landowners (Historical Foundation, 2014). Much of the privately-held land in Canada is found in the southern portions of the country. For example, 90 per cent of private land in Ontario, and 80 per cent of private lands in Saskatchewan, are found in the southern-most parts of these provinces (Government of Canada, 2006). There is also a high percentage of private land ownership in the Maritime Provinces of eastern Canada, although these provinces represent a small percentage of the country as a whole.

While private lands cover a relatively small portion of Canada's overall land base, they may be disproportionately important in terms of protecting biological diversity. For example, private lands cover less than 10 per cent of British Columbia but represent over 30 per cent of the lands ranked highest for conservation of species diversity (Government of British Columbia, 2004). Significant ecological pressures exist in southern Canada affecting forests, grasslands and wetlands.

As such, PPAs can make a unique contribution to overall conservation efforts in Canada. An estimated 200 independent land trusts, as well as larger non-governmental organizations (NGOs) such as Nature Conservancy of Canada and Ducks Unlimited Canada are focused on conservation efforts within this landscape, through a combination of purchase, easements and conservation agreements (Government of Canada, 2006).

### Definitions

Under Canada's constitution, responsibility for the environment is an area of shared jurisdiction between the federal and provincial levels of government. As such, there are more than 20 federal, provincial and territorial agencies that designate and manage protected areas across the country (Canadian Council on Ecological Areas, 2008), in addition to the growing number of national and regional organizations working to create PPAs. Each of these agencies determines what constitutes a protected area under the legislation or policies guiding their respective establishment or designation process. As such, there is no single definition for PPAs (or any other type of protected area) in Canada.

Efforts have been underway in recent years by the Canadian Council on Ecological Areas (CCEA), a group of protected areas practitioners representing governments and non-governmental players, to standardize protected areas classification across the country. CCEA has also led the development of a web-based system to enable standardized reporting and mapping of Canadian protected areas, called the Conservation Areas Reporting and Tracking System (CARTS).

For the purposes of tracking through CARTS, and as outlined in the CCEA-produced *Canadian Guidebook for the Application of IUCN Protected Areas Categories* (2008), protected areas must comply with the IUCN definition of a protected area. The CCEA Guidebook specifies that for sites owned by environmental NGOs, the NGO must: 'have a clearly stated charter to purchase or own properties for the purpose of protecting biological diversity and a policy to prevent, by all means within its power (e.g. not granting landowner consent), prospecting, exploration and extraction of subsurface

resources from its lands' (CCEA, 2008). For private areas other than NGO-held lands, sites must: 'have conditions placed on the deed such as conservation easements or legal protected area designations, ensuring protection of biological diversity. Conditions must be accompanied by enforcement responsibility of an environmental NGO or government' (CCEA, 2008). Finally, for PPAs that are corporately-owned, there must be legal means in place to ensure the protection and maintenance of biological diversity which is binding on the company and all subsequent owners (CCEA, 2008).

## Legislative framework

There is no single approach or piece of legislation that enables the creation and management of PPAs in Canada. At the same time, most provinces do recognize PPAs within their parks or wilderness protection legislation. All provinces also have legislation that enables the creation of conservation easements (Government of Canada, 2006).

The government of Manitoba recognizes PPAs through a series of Memoranda of Agreements (MOAs) with several NGOs, including the Nature Conservancy of Canada and Ducks Unlimited Canada. Under these MOAs, participating NGOs submit legal descriptions of relevant land parcels to the government for evaluation, review and withdrawal of Crown mineral rights where appropriate. Control and management of the land in question remains with the NGO, which is also responsible for ensuring that no person engages in restricted activities (such as logging, mining or the development of oil, petroleum, natural gas or hydro-electric power). As such, the MOAs provide a legal mechanism for ensuring that these PPAs meet the provincial definition of a protected area, and can thereby be incorporated into the province's protected areas network.

Other legislation relevant to PPAs includes the *Income Tax Act* of Canada and the Quebec *Taxation Act*. Provisions of

these acts are used to administer Canada's Ecological Gifts (Ecogifts) programme, which offers significant tax benefits to landowners donating ecologically sensitive land (or partial interests in land) to qualified recipients.

## Incentives

As of 2006, the federal government and some provinces offered tax benefits for land donations (Government of Canada, 2006). For example, the Ecological Gifts Program (Ecogifts) was established in 1995 to support individual and corporate landowners interested in donating ecologically sensitive lands to qualified environmental charities or government bodies. There are currently more than 120 eligible recipients (including NGOs and government bodies) across the country. Under the terms of the programme, donations of land (or an eligible interest/right in land) to a qualified recipient can receive a significant tax benefit under either the federal *Income Tax Act* or the Quebec *Taxation Act*. Ecological gifts must be made in perpetuity (i.e. be permanent) in order to qualify for the programme.

In addition, in 2007, the Government of Canada launched the Natural Areas Conservation Program (NACP), a CAN\$ 225 million matching funding programme (extended in 2013 with an additional CAN\$ 20 million) aimed at supporting securement (including both conservation agreements and purchase) of ecologically sensitive lands by NGOs. Several other matched-fund programmes also exist at the provincial level.

There is little information and no consistent requirements to develop management plans or report on PPAs across the country. Under the Ecogifts programme, recipients are responsible for the long-term management and conservation of the ecological gift and its ecologically sensitive features. Recipients are encouraged (but not required) to develop formal management plans (Stratos, 2012).

Table 10: **PPAs reported in the Conservation Areas Reporting and Tracking System** (As of 31 March 2013)

Jurisdiction	Agency	Area protected (ha)		Total protected areas
		Terrestrial	Marine	
Government of Manitoba	Nature Conservancy of Canada	6,403		118
	Ducks Unlimited Canada	3,442		58
	Manitoba Naturalists Society	355		8
Government of New Brunswick		785	21	1
Government of Prince Edward Island	Island Nature Trust	882	213	26
	Co-managed	1,381	298	2
	Nature Conservancy of Canada	68	21	3
	PEI Wildlife Federation	4	0	1
	Private	389	17	14
Government of Quebec		24,277		284
Government of Saskatchewan		88,254		1
<b>Total</b>		<b>126,240</b>	<b>570</b>	<b>516</b>

## PPA extent

There is currently no comprehensive information regarding PPAs across the country. 'The profile and pattern of private PPAs in Canada is scattered and difficult to synthesize, largely due to the absence of comprehensive data and information sets' (Hannah, 2006). As noted above, the CARTS programme records and reports on PPAs only for those jurisdictions that legally recognize these areas and subsequently submit information on these sites (table 10). These sites must meet the IUCN definition of protected areas to be included in CARTS and its associated reports, such as the Canadian Environmental Sustainability Indicators, which track long-term trends and overall progress in Canada.

Based on this information, private protected areas within the CARTS system cover a total of 126,810 ha, of which 126,240 ha are in terrestrial ecosystems and 570 ha are in the marine or coastal environment. A total of 516 properties are included in this listing, with an average size of 245.7 ha. Approximately 40 per cent (214 of 516) of the private protected areas included in the CARTS system are specifically identified as being held by national, regional or local non-profit groups. However, ownership information is not listed for all jurisdictions.

However, as noted above, the CARTS database is not comprehensive, and other sources suggest that the actual number and extent of PPAs in Canada may be far greater. For example, an internal survey conducted by the Land Trust Alliance of British Columbia (LTABC) suggests that the LTABC's 32 member organizations have protected a total of 556,442 ha, of which 505,857 ha (or 91 per cent) are under fee simple ownership (with the rest subject to conservation agreements).

In addition, incentive programmes have helped accelerate the creation of PPAs across the country. The Nature Conservancy of Canada (NCC) leads delivery of the NACP, in partnership with other qualified organizations such as Ducks Unlimited Canada and other NGOs across the country. According to NCC, more than 369,134 ha have been secured under the programme to date, of which 311,475 ha have been secured by NCC (Nature Conservancy of Canada, 2014). Similarly, as of October 2013, 1,054 ecological gifts valued at over CAN\$ 635 million had been donated across Canada through the Ecogifts programme, protecting over 150,000 ha of wildlife habitat. Fee simple donations (i.e. full title) constituted approximately 60 per cent of these ecological gifts. The extent to which these gifts meet the IUCN definition of protected area and are recognized by provincial governments is not known. Nevertheless, these statistics clearly suggest that the extent of private land protected is greater than currently reported numbers.

## Geographical location

PPAs in Canada are concentrated in the southernmost parts of the country. While there are land trusts and NGOs pursuing private protected areas in every province of the country, these organizations are typically not active in Canada's north, which is predominantly public land.

Within these southernmost parts of the country, priorities for private land conservation are set by a range of different players. For example, the NACP uses a science-based process for determining priority areas within which to target acquisition efforts. According to Environment Canada, priority is given to lands that are nationally or provincially significant, that protect habitat for species at risk and migratory birds, or that enhance connectivity or corridors between existing protected areas (Environment Canada, 2011).



This conservation area on the shores of Lake Ontario, Canada is a local community led initiative © Frank PARHIZGAR / WWF-Canada



**Hacienda Chacabuco part of the privately owned and managed Patagonia Park in Chile** © Conservation Land Trust

## 7.4 Chile

M.C. Núñez-Ávila, ASI Conserva Chile and Instituto de Ecología y Biodiversidad and E. Corcuera, ASI Conserva Chile and Parque Katalapi

Although private conservation projects have occurred for many centuries, it is clear that their intensity, number, reach and self-awareness as conservation projects have gained new momentum in recent decades. In Chile this global trend has strengthened since the beginning of the 1990s, with the self-proclamation as protected areas of an important and growing number of places (Sepúlveda et al., 1998).

While 14.5 million ha (19 per cent of national territory) of land is under official government protection, the national protected areas system of Chile (SNASPE) is unevenly distributed, leaving critical habitat unprotected. Recent studies indicate that 65 per cent of property outside the Chilean National System of Protected Areas (SNASPE) is in the hands of private landowners. A perfect example is the critically under-represented Mediterranean ecosystem with only 0.8 per cent of its area under official protection and 90 per cent in private ownership (Ramírez de Arellano, 2006). Private conservation initiatives can help to fill in the gaps in the protection of ecosystems, species and ecological functions, as well as improve territorial and biological connectivity between existing protected areas.

During 2012-2013, the authors led a team of people who implemented a National Private Conservation Initiative (PCI) Census commissioned by the Ministry of the Environment (Ministerio del Medio Ambiente, MMA), to Fundación Senda Darwin and ASI Conserva Chile A.G. (Núñez et al., 2013). The objective of the census was to systematically characterize existing private conservation initiatives, with regards to their number and surface, ownership, permanence, motivations, ecological importance, potential ecosystem services, and administration and management capacities. The information included in this country review is mostly based on the results of the Chile 2013 PCI Census.

### Definition

Chile does not have an official definition of a PPA. Although article 35 of Law N°19.300 recognized the term 'Private Protected Area' in 1994, it did not define it. Prior legislation had created an officially recognized protection category in the form of Nature Sanctuaries for areas of scientific interest, and included the possibility for private landowners to obtain designation as such for their lands. Given that no PPA legislation has been created, Nature Sanctuaries continue to be the only officially recognized protection category open to private landowners. However, there are only 19 private Nature Sanctuaries in the country, while a 2011 estimate placed private conservation initiatives well into the hundreds (MMA,



**A guanaco (*Lama guanicoe*) in Karukinka on the island of Tierra del Fuego; this 298,000 ha area is the largest donation of private land for conservation in Chile © Kent Redford**

2011), making it evident that any attempt to characterize PPAs in the country should not be restricted to Nature Sanctuaries.

Given the lack of a framework and definitions in the country, the 2013 PCI Census, adopted Langholz and Krug's (2003) operative definition of a PPA. This definition appears broad enough to encompass the scope of private initiatives in Chile, including those initiatives led by rural and indigenous communities: 'a land parcel of any size that is 1) predominantly managed for biodiversity conservation 2) protected with or without formal government recognition; and 3) is owned or otherwise secured by individuals, communities, corporations or non-governmental organizations'.

As of 2013, a private conservation initiative in Chile is recognized by the declaration of conservation intentions or self-proclamation of private protected status. Applying this extremely broad definition, the 2013 PCI Census identified 308 voluntary protected areas and received answered surveys from 242 of them (79 per cent response rate), which provides a solid basis in order to characterize ownership, management, objectives and permanence of PPAs in Chile.

Defining a PPA in terms of ownership is not simple. The Ministry of the Environment has generally tended to group all of civil society's land conservation efforts into the term PPA; and includes within this term agricultural community land and indigenous lands proclaimed by their owners as conservation areas. However, based on the fact that many indigenous communities do not recognize their conservation projects as PPAs, ASI Conserva Chile A.G., the national network of voluntary conservation initiatives, maintains that PPAs should be recognized separately from Indigenous Protected Territories as outlined in IUCN's 2008 Guidelines. The Latin American Voluntary Nature Reserves Alliance, however, includes both under the term 'Voluntary Conservation Initiatives'. To develop as broad an understanding as possible of PPAs in Chile, therefore, areas with these ownership and management

situations were all included within the 308 initiatives identified by the 2013 PCI Census.

ASI Conserva Chile works under the assumption that voluntary protected areas may have a range of management objectives that can be classified according to IUCN categories, ranging from strict preservation to multiple-use and conservation landscapes (Astorga & Nuñez, 2012). Given the lack of appropriate legal tools in national legislation, the association requires no more than the *intention* of protection in perpetuity from its members, expressed in a signed letter when requesting membership.

## Number, area and size

The 2013 PCI Census (Núñez-Ávila et al., 2013) identified 308 Private Conservation Initiatives, which cover a total estimated surface of 1.6 million ha. When we compare this to the area under official protection in the SNASPE (14.5 million ha), we discover that PPAs add slightly over 10 per cent to national protected areas.

An overwhelming number of the initiatives belong to small and medium landowners. Out of the PCIs that reported areas (n=242), 60 per cent were less than 200 ha. More than 77 per cent of initiatives are under 1,000 ha. Most of the protected area is in the hands of just a few very large projects: the five largest projects cover a surface of 1,044,655 ha, or 63 per cent of the total protected land identified in the Census. In terms of marine PPAs there is no definition of what may be considered under this category and no information on their number or characteristics.

## Ownership

Respondents of the 2013 PCI Census were asked to select their ownership type, and allowed to mark more than one response as there are cases where parts of the property are under different ownership status, or where they converge (e.g. community-owned real estate company). The responses (n=269) show a great diversity in ownership types but with over half (53 per cent) being owned by private persons (individuals, family inheritances and indigenous private owners).

The second most common form of PPA ownership is by commercial societies, such as limited companies or anonymous societies (civil law equivalent of public limited companies). Businesses involved in PPAs can be roughly divided into two groups with markedly different motivations and management. The first are forestry companies, who have joined the ranks of private conservation largely motivated by requirements for Forest Stewardship Council (FSC) certification. Most other types of PPA holding companies are really community organizations, created by people who see little advantage in adopting the structure of non-profit institutions, given the social context that offers them no economic incentives and few funding opportunities. Although relatively few in number, NGOs hold a disproportionate amount of the land under private protected status: the two largest PPAs in the country, Pumalin and



Karukinka parks, each cover approximately 300,000 ha, and are owned by non-profit foundations.

Another important characteristic of Chilean PPAs, is that 95 per cent of respondents have clear titles, duly registered at the Property Registry Office for their land holdings. This condition differentiates Chile from several other Latin American countries in which help for obtaining legal title is considered a motivating factor for the creation of PPAs. In Chile, land-tenure conflicts and squatting are relatively rare. Most of the people who live and work in PPAs are either their owners or hired help.

## Main management approaches

When asked to identify the main management objectives of their PPAs, respondents marked an average of 3.8 objectives. Most frequently chose objectives included 'provision of ecosystem services' (14 per cent), 'research' (13 per cent), 'sustainable resource management' (12 per cent), 'restoration' (12 per cent), and 'strict preservation' (10 per cent). When asked about motivations for creating a PPA, the most frequently chosen reason was 'protecting biodiversity'. When interviewees were asked about motivating factors for location of the PPA, the most selected alternative was 'scenic value of the landscape', explaining the high presence of PPAs in the highly scenic Los Ríos and Los Lagos regions.

Out of 242 PPAs surveyed by the 2013 PCI Census project, 51 per cent declared that they have no work plan. If we consider that those who answered 'do not know or do not answer', probably also have no work plan, we can conclude that an overwhelming 63 per cent of landowner management approach is intuitive.

Budgets are also limited: one out of every four private conservation initiatives functions with an annual operating budget under US\$ 2,000. This sum is not enough to cover minimum wages for one person; therefore, many PPAs have no park guards, staff or activities, but rather are defined by the absence of intensive resource extraction activities. Many other areas defined their primary source of income as landowner contributions from non-land related income. Eighty-three per cent of private conservation initiatives are managed by their owners, using their own time and monetary resources.

The distribution of PPAs as compared to public protected areas is also of great interest. Public protected areas tend to be concentrated in the less densely populated areas of the extreme north and south of the country. In the biodiversity hotspot of the Mediterranean Matorral, and its fringe transition areas, PPAs are already protecting roughly an equal area of habitat as the public system, and in some cases more.

## Incentives and reporting

Currently there are no incentives for PPA owners. The only recognized PPA category, Nature Sanctuaries, has good conservation practice requirements but no incentives. In practice, this places burdens on the landowner that act as significant disincentives to formal adoption of protected area status.

## 7.5 China

Li Zhang, Beijing Normal University



Sichuan Province's Pingwu County is one of the most important remaining giant panda (*Ailuropoda melanoleuca*) habitats in China; this panda was caught on a camera trap in Laohegou protected area © The Nature Conservancy

China issued its *Regulation on Protected Area Management* in 1994, which outlines the establishment of state owned nature reserves as well as their management, conservation goals and legal responsibilities. Other types of protected area were not included in this legislation (Ministry of Environment Protection, 2005; Shen et al., 2012). By the end of May 2012, China had established over 2,600 nature reserves, covering approximately 15 per cent of its national territory. China also has more than 900 scenic landscape and historical sites, 2,277 forest parks, 213 national wetland parks, over 138 national geological parks and over 1,300 water parks (Xie, 2012). In addition, there were over 60,000 nature reserves owned and managed by local communities, which covered over 1,660 million ha approximately 1.1 per cent of national territory (Zheng, 1994; Wang et al., 2006; State Forestry Administration, 2007; Yang, 2007; Yuan et al., 2010) and 17 community conserved areas with a total area of 73,000,000 ha preserved under the conservation agreement signed between local communities and governmental authorities in Qinghai, Sichuan, Yunnan and Gansu Provinces (Li et al., 2010). PPAs have however not had much attention from government agencies or conservation groups.

With the rapid development of China's economy in the last three decades, conflicts between land use change for development and biodiversity conservation have become serious (Wang et al., 2006; Zhang et al., 2006). During the middle 1990s, experts started to review the conservation status of Chinese nature reserves and found that the investment of the government was far below the needs of the conservation and management objectives of the existing protected areas. In order to overcome the lack of funding and environmental deterioration, they suggested introducing private management into state owned protected areas (Liao & Zhou, 2007). But these discussions mainly focused on using business models and private sector management tools to manage the state owned forest and tourism resources and

properties to raise money and fill the gap of protected area funding, so that the government did not need to pay for the management cost of protected areas. Nevertheless, the use of market based tools to manage state owned nature resources started to appear in the minds of conservationists (Wang et al., 1994; Shen, 1997).

## The first PPA in China

Private individuals or organizations cannot own land in China, but can lease land from the state or the community. The maximum period for a land lease agreement is 70 years. All PPAs in China are thus leasehold.

In 1995, Chang Zhongming, a sales manager assistant at the Jiangguo Hotel in Beijing, paid RMB 32,000 yuan (approximately US\$ 4,000 at that time) to lease 10.7 ha of valley forest for 70 years, where he established the first private protected area in China named Baiyanggou (White Goat Valley) in Changping District outside Beijing (Tang, 1995). Two years later, Chang resigned from his hotel position and concentrated on the daily management of his PPA. In 2001, the Ministry of Environment praised Chang for his efforts (Ministry of Environment Protection, 2001). But Chang's Baiyanggou PPA was not all plain sailing. Chang run out of money for the construction of a road and accommodation facilities inside the protected area as well as the cost of daily management. In July 2001, he had to find a new job and left his PPA. Today, Baiyanggou is a scenic parkland managed by tourism companies.

## Challenges to PPAs managed by individuals

Chang's initiative highlighted the difficulties and challenges for an individual to manage a PPA in China. Lack of continuous funding, lack of long-term conservation planning and goals, as well as increasing conflicts with locals and pressure from poaching are always challenges to individual owned PPAs.

Despite these difficulties other Chinese farmers started to realize their nature conservation dreams on their land. Xing Yiqian, a businessman in Hainan Province, leased 66 ha for a real estate development in his hometown at Mingrenshan of Wenchang City in 1994. He started to purchase trees from nearby forest sites and planted them on his land. After three years, the place became a paradise for wild birds. Xing recruited a patrol team and established his PPA. But Xing also ran out of his savings and had to sell his house to cover the daily costs of his PPA. The Wenchang City Government recognized his PPA in 1997. In 2000 and 2002, the city government issued another two documents approving expansion to 2,173 ha and the inclusion of 38 villages with over 2,000 households inside the PPA. Today the protected area receives donations from visitors and eco-tourism businesses. The local forestry bureau also helped Xing's protected area with financial and technical support.

All of China's five individually owned PPAs underwent similar trajectories. All were originally a natural forest or wilderness leased by locals for agriculture or business development on

which the owners created the PPAs by themselves. Lack of continuous funding is the biggest challenge to all of the five PPAs owned by individuals. When the owner runs out of money, they have to go to local government for financial support, or develop tourism to attract visitors to fill the gap of the PPA's daily needs.

## Enforcement challenges

Without legal support, another major challenge to PPAs in China is lack of enforcement authorization to protect wildlife and other nature resources from illegal hunting or logging. Xu Xinbang is a local farmer in Fangchenggang City of Guangxi Province. His family lived in Wanheshan for 50 years and voluntarily protected egrets living in the forested hills behind his house (Huang et al., 2002). However, without enforcement authorization, poaching for egrets by outsiders happened frequently in his PPA, and he was wounded during a conflict with poachers. In 2006, Beihai Frontier Checkpoint police officers confiscated 300 dead egrets on the main road and they learned that the poachers killed those birds in Wanheshan PPA. They decided to help Xu and voluntarily patrol the PPA and protect birds from then on (Zhang, 2011). In July 2007, Xu Xinbang received the China Environment Award, the national top environment reward for his efforts to protect Wanheshan.

All five PPAs are still suffering from poaching due to the lack of authorization to enforce wildlife laws; in spite of the fact that some of the PPAs had been recognized as county level protected areas and approved by local government. With the current *Regulation on Protected Area Management*, the private owners and PPA managers are not government officials and therefore cannot arrest poachers or confiscate illegally taken resources.

## Eco-compensation policy

Being an important component of the natural habitat for giant pandas as well as the home of 25 nationally protected mammal species, 41 threatened bird species and 11 nationally protected flora species, Yujiashan Forest in Pingwu County together with the neighbouring state-owned and collectively owned forests connects the nature reserves of Tangjiahe, Baishuijiang, Wanglang, Wujiao and Xiaohegou. It also protects drinking water for Pingwu County. In 1998, Liu Yong of Pingwu County leased 894 ha of collective forest from villagers of Yujiashan and established the Yujiashan Forest Farm. After the state issued a nationwide logging ban Liu's business dream was over.

China has spent more than US\$ 100 billion on 'eco-compensation' to buy back development rights from local communities to secure the continued provision of ecosystem services (Liu et al., 2008). In an attempt to protect Yujiashan Forest the People's Government of Pingwu County approved the establishment of Yujiashan Private Nature Reserve, a county level protected area but owned and managed by Liu. Run and managed by one person with limited funding from the state's Nature Forest Conservation Fund (the national eco-compensation fund for old-growth forest conservation),

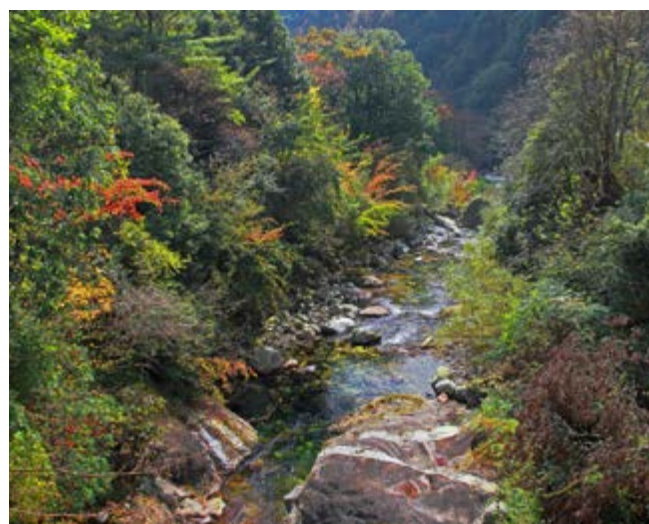
Yujiaoshan Reserve is supervised by the Forestry Bureau of Pingwu County. In September of 2006, Conservation International signed a cooperation agreement with the Forestry Bureau, which allowed a Conservation Steward Program to be conducted in several areas of the Huoxi River Valley including Yujiaoshan, which was also regulated as a PPA with the conservation agreement. Partially funded by Conservation International, Yujiaoshan carried out a biodiversity baseline survey and started wildlife monitoring with clear conservation objectives during the two-year project period.

In 2008, thanks to collaboration with Conservation International, Marriott International and other private sector organizations, Pingwu County established a payment for ecosystem services (PES) fund known as Pingwu Biodiversity and Freshwater Conservation Fund. The fund is based on eco-compensation principles, and aims to provide financial support to rural development and conservation activities in key watershed old growth forests outside protected areas in the county. Yujiaoshan PPA received funding from this PES fund to recruit rangers and strengthen the patrol inside the protected area.

### Land Trusts: A new model of private protected area in China

Laohegou (Old Creek) was a state owned forest farm established in 1972. It produced 3,000 m<sup>3</sup> of timber annually before the 1998 national logging ban. In June 2008, the Chinese government published *The State Council's Decision on Promoting the Collective Forest Tenure Reform* that officially launched the reform processes for privately owned collective forest nationwide (Central Government of the People's Republic of China, 2008). The purpose of the reform was to clarify property rights for individual farming households, thereby enabling farmers to invest in new means of production to increase their economic returns; and also allowing for new conservation initiatives.

In 2009, TNC signed a Memorandum of Collaboration with the State Forestry Administration to explore the creation of



**Laohegou PPA connects several existing nature reserves in China that need well-guarded buffer areas to help reduce risk of poaching** © Zhang Ming

Land Trusts as a new conservation model in China. About 20 top Chinese entrepreneurs formed the Sichuan Nature Conservation Foundation (SNCF) through TNC's efforts and started to raise funding to test the land trust concept in China. In February 2012, Sichuan Nature Conservation Foundation signed an agreement with the Pingwu County Government in Sichuan and leased 11,000 ha of old growth forest including state owned Laohegou Forest Farm and surrounding collective forest for 50 years, and officially formed Laohegou Protected Area (also known as Motianling Land Trust Protected Area).

It is estimated that there is a population of around 10 giant pandas living in the Laohegou area together with about 200 butterfly species, 12 species of amphibians, 12 species of reptiles, 188 bird species and 23 mammal species, all recorded in the first year's biodiversity assessment. In addition, Laohegou PPA is located between Baishuijiang of Gansu Province and Tangjiahe of Sichuan Province, the two national panda reserves, and thus is an important corridor for pandas and other threatened species.

Table 11: **Private Protected Areas in China**

Name of PPA	Owner	Location	Area (ha)	Conservation target	Year of establishment
Baiyanggou	CHANG, Zhongming	Changping District, Beijing	20	Watershed forest	1995
Bielahong	GE, Bailin	Raohe County, Heilongjiang Province	50	Wetland and water- fowl habitat	1996
Mingrenshan	XING, Taiqian	Wenchang City, Hainan Province	2,173	Wild birds	1997
Wanheshan	XU, Xinbang	Fangchenggang City, Guangxi Province	30	Egrets and their habitat	2003
Yujiaoshan	LIU, Yong	Pingwu County, Sichuan Province	849	Wildlife and watershed forest	2006
Laohegou	Sichuan Nature Conservation Foundation	Pingwu County, Sichuan Province	11,000	Giant panda and wildlife habitat	2012

Laohegou is the only PPA owned by the newly established NGO, the Sichuan Nature Conservation Foundation, which is technically managed by TNC. With abundant funding from private donations, SNCF invested over RMB 20 million (approximately US\$ 3.3 million) in Laohegou Protected Area in its first two years for biodiversity baseline assessments and the costs of facility construction. In contrast, the government-managed Wanglang National Nature Reserve only received about RMB 15 million (approximately US\$ 2.5 million) in total for facility construction and daily management since being established in 1965 (Chen, 2013). TNC estimates that the annual management cost of Laohegou could be RMB 2 million (approximately US\$ 328,000), which will be secured and raised by SNCF. In addition, SNCF aims to raise RMB 180 million (nearly US\$ 30 million) in the next three years to fund and establish more land trusts in key biodiversity regions in Sichuan Province.

Another unique trait of Laohegou compared to other PPAs is its clear conservation goals and objectives. Led by TNC China's science department and a group of scientists from universities and the Chinese Academy of Sciences, biodiversity research and monitoring formed the backbone of Laohegou's daily work. Meanwhile, TNC's community working group also introduced organic farming into communities surrounding the PPA, and helped villagers to sell their organic products including honey, poultry and other agriculture products in high-end markets in the cities. By increasing the rural economy, Laohegou also gained the support and participation of locals in its conservation efforts.

In September 2013, Pingwu County Government officially approved Laohegou as a county level protected area. SNCF and TNC are planning to establish a local NGO in Pingwu to manage the PPA, so SNCF can focus on fundraising and developing new land trust sites in the province.

## PPA opportunities

The experience of Laohegou brings China's environmental NGOs and private conservationists a new model to preserve key biodiversity areas with systematic conservation planning tools. With China's rapidly developing economy the raising of public and private funding to meet conservation needs has become reality. This is important as China's collective forest reform policy enables individual farming households to transfer or lease operation rights to outside individuals and enterprises. By allowing commercial logging, increased collection of firewood and non-timber forest products, unmanaged tourism, and certain types of industrial development in collective forests where these activities were previously restrained, the reform threatens to deforest, degrade or disturb up to 345,700 ha of giant panda habitat, or 15 per cent of what remains (Yang et al., 2013). However, it is also an opportunity for conservation groups like SNCF and TNC, as well as private conservationists to lease those forests and set up PPAs. The significance of the PPAs described (table 11) here resides in the fact that they are blazing the trail for building small-scale PPAs and contributing greatly to the enrichment of mainstream nature conservation in China.

## 7.6 Finland

Mervi Heinonen, Metsähallitus Natural Heritage Services

The core of the Finnish protected area network is formed by National Parks (NPs) and Nature Reserves (NRs) on State lands, owned and managed by the government agency Metsähallitus Natural Heritage Services (NHS). These have been established under the Nature Conservation Act over the decades since the 1930s. There are presently about 570 State-owned NPs and NRs covering some 1,683,000 ha. NRs are complemented by other State protected areas such as twelve large Wilderness Reserves (WRs) in Northern Finland, established in 1991 under the Wilderness Act and covering 1,489,000 ha (see table 12).

### PPA development

PPAs in Finland fall into two categories specified in the Nature Conservation Act: Private NRs preserving ecological and cultural landscapes and Habitat or Species Protection Areas targeting specific features. First designations can be traced back to the 1920s and 1930s, when Private NRs were established to protect particular natural features, landscapes and especially valuable herb-rich forests and bird sites in the archipelagos of the Baltic Sea coast. For historical reasons all NRs on non-State lands are called Private NRs, although many are now owned and/or governed by municipalities. Some of the best known sites are located within the present borders of the cities of Kuopio, Hämeenlinna, Hanko and the capital city Helsinki. Unlike in many other countries Private NRs in Finland retain their designations when ownership is transferred. By the beginning of the 1970s there were some 170 PPAs encompassing a total of 4,550 ha.

Most Private NRs (90 per cent of total area) have been established within the national nature conservation programmes (see table 12). The implementation of these programmes, beginning in the 1970s, led to the establishment of many Private NRs. Establishment accelerated from the 1990s, after several government resolutions were enacted on financial programmes to support land acquisition and compensate landowners. In addition, the Forest Biodiversity Programme (METSU 2003-2025) aims to establish about 96,000 ha of new protected areas in the southern parts of Finland by 2020; this would be about 0.3 per cent of Finland's surface area. Through this programme voluntary protection of private lands is growing dramatically: between 2000 and 2005 some 2,600 new Private NRs were established, with another 3,000 between the years 2006 and 2010 (figure 10). Since 2010 nearly 2,000 new PPAs have been protected within different nature conservation programmes.

A new proposal for a Peatland Nature Conservation Programme is being drafted in a national working group with wide stakeholder representation. The aim is to find and protect the most valuable mires and peatlands still in their natural states. Remaining sites have been estimated at about 0.5 per cent of Finland's surface area. These will most probably also include sites on private lands, although the emphasis will be on State lands.



A PPA on Lenholmen Island in the Finnish Archipelago © Equilibrium Research

Table 12: **Programmes related to nature conservation in Finland: Government resolutions and supplementary decisions 1976–2014** Source: Ministry of the Environment, 2014

Programmes	Government resolutions and supplementary decisions
National Parks and Strict Nature Reserves Development Programme	1976, 1980, 1985, 1988
Mire Conservation Programme	1987, 1991
Waterfowl Habitats Conservation Programme	1982
Shoreline Conservation Programme	1990
Herb-rich Forest Conservation Programme	1989
Old-growth Forest Conservation Programme	1993, 1995, 1996
Esker Protection Programme	1984
Natura 2000 sites	1998, 1999, 2002, 2004, 2005, 2006, 2012
Forest Biodiversity Programme (METSO)	2003, 2008, 2014

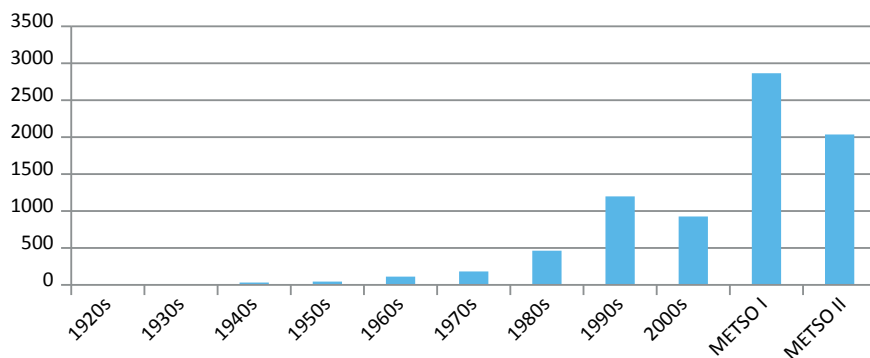


Figure 10: **The number of Private NRs established in Finland per decade from 1920-1999, and for the years 2000-2002 (2000s), 2003-2007 (METSO I) and 2008-2010 (METSO II)**

Source: Metsähallitus, 2010.

## Private NR establishment and management

Administrative responsibility for the development and management of Private NRs is assigned to the regional Centres for Economic Development, Transport and the Environment (ELY Centres). Operational responsibility is often taken over by the NHS, but always in cooperation with the landowners. Funding for the management of PPAs comes indirectly from the State budget (through the ELY Centres and the NHS).

To be designated a Private NR within the Finnish Nature Conservation Programmes requires having general objectives stated in the relevant programme and means that the site is protected by provisions of the Nature Conservation Act (and other Acts). Designation, conservation objectives, as well as provisions of management and use of the sites, are stated in the site-specific regulations issued by the ELY Centres. Once agreement on the protection of a site is made and regulations given, the Private NR is registered and marked on the ground by the ELY Centre.

Management plans are drafted if considered necessary. Large and remote protected areas often need no active management measures, have few visitors or significant threats, and thus have no need for a detailed management plan – so long as conservation values are retained. Many small NRs (including those privately-owned) on the other hand need an operational plan for specific habitat restoration or management measures. These are normally drafted without a heavy participatory management planning process, but on private lands owners are always consulted and have the last say on management measures. The prescribed conservation measures and restrictions laid out in the management plans drawn by the authorities are considered recommendations to landowners, if they are not statutorily based. The ELY Centres make decisions on permitting actions restricted by regulations or management plans.

Most Private NRs are established permanently. Only recently has there been a possibility to establish non-permanent ones (10-20 years); a mechanism used almost exclusively in

the METSO Programme to protect small but valuable forest sites in southern Finland. These non-permanent areas are few in number and small in total area (only 5 per cent of all PPAs established in the Programme) and landowners are encouraged to renew conservation contracts, when they expire.

The ELY Centres may also make a resolution on protection of a private property without a landowner's consent, if the site is included in one of the nature conservation programmes approved by a government resolution.

## IUCN management categories

Most PPAs have yet to be officially assigned IUCN categories, but the national guidelines for applying the categories have been drafted and approved in 2013. The site-specific categories for State-owned PAs have now been assigned and categories for PPAs will be assigned before 2020. The bulk of the PPAs in Finland are IUCN category IV sites (Habitat/species management areas). Many of these have been subject to forest or mire restoration, some herb-rich forest sites need repeated management measures and traditional agricultural habitats need continuous management measures. However, there are some large wilderness-like (category Ib) sites that need no intervention. There are a few private sites in category III (Natural monument), which are typically old designations, and in category V (Protected landscape/seascape), especially in the archipelagos on the coast.

## PPA coverage

The number, coverage and estimated network percentage of protected area types that comply with the IUCN definition of a protected area is presented in table 13. Not all the statistics for sites on privately-owned area are available at the present, however, it is clear that the majority of protected surface area is on State lands, but protected sites on private lands are by far the most numerous. There are currently (2014) over 9,000 established Private NRs and 1,300 PPAs protecting habitats or species on private lands. Altogether PPAs cover some 295,000 ha, which is about 6-7 per cent of the Finnish

Table 13: **Finland's national protected area network: number, surface area and area type**

Source: Metsähallitus 1.1.2014. Statistical details on State-owned protected area types are not presented.

Protected area on State and privately-owned lands	Number	Surface area (ha)	% of national protected area network	comment
Total nature reserves established on state lands	573	1,683,400	37	Nature Reserves established by statute under the Nature Conservation Act (National Parks, Strict Nature Reserves, other NRs)
Other protected areas on state lands	2,856	2,539,300	56	Wilderness Reserves, pending Nature Conservation Programme sites, Protected Forests, etc.
<b>Total protected areas on state lands</b>	<b>3,429</b>	<b>4,222,700</b>	<b>93</b>	
Private nature reserves	9,450	295,300	6	Established by ELY decision under the Nature Conservation Act
Habitat or species protection areas	1,300	2,500	< 1	Established by ELY decision under the Nature Conservation Act
Other protected areas on private lands	National statistics not available	National statistics not available	< 1	Sites designated by Government resolution to be statutorily established as Private Nature Reserves)
<b>Total protected areas on private lands</b>	<b>&gt;10,800</b>	<b>&gt;298,000</b>	<b>7</b>	
<b>Total protected areas</b>	<b>&gt;14,000</b>	<b>&gt;4,520,000</b>	<b>100</b>	

ELY = (Regional) Centres for Economic Development, Transport and the Environment

protected area network. Not all those described as PPAs may actually fall within that governance category, as it is estimated that Private NRs governed by municipalities cover about 8,200 ha (see above under PPA development).

About 45 per cent (100,000 ha) of the total PPA coverage is water and most of this marine. Much of this area has been designated in the Programmes for Waterfowl Habitats and for Shoreline Conservation and the proportional share of protected marine area may increase further as the Finnish Inventory Programme for the Underwater Marine Environment (VELMU) progresses.

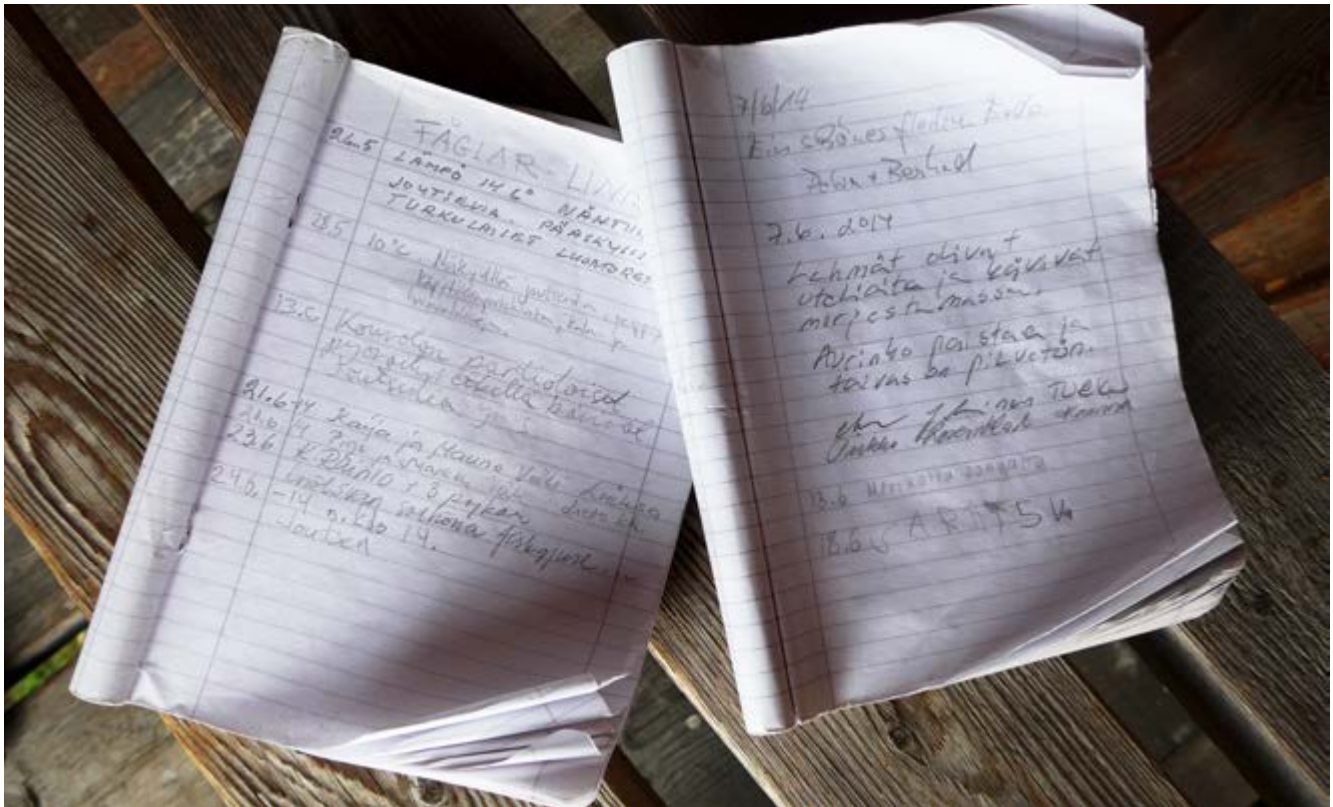
## Legislation and regulation

The 'new' Nature Conservation Act (enacted in 1996, repealing the previous one from 1923) emphasizes traditional area-based protection with the aim to conserve the biodiversity (from genetic variation to ecosystem level), preserve its ecological integrity (composition, structure and function) and evolutionary potential. Specific prerequisites of establishment, as well as provisions and derogations to them are stated for all NRs (regardless whether situated on State-owned or privately-owned lands).

## Geographic coverage

The Finnish protected area network needs further development when it comes to geographical distribution, connectivity and representativeness. The greatest challenges are in southern Finland, where habitats are fragmented and land use pressures are much greater than in the north. The majority of the State-owned protected area in Finland is however situated in the north and east, where relatively pristine State-owned land has been available (see green area in figure 11). PPAs are mostly scattered over the southern half of the country (see red areas in figure 11), with the larger PPAs concentrated mostly in the western parts. In the south, PPAs complement State protected areas, which tend to be small in the midst of more populated regions. Particularly significant is the complex mosaic of PPAs and State-owned areas in the Bothnian Sea, some of which are contained in the Kvarken Archipelago World Heritage Site. Similar complexes are found also in other parts of the coastal archipelagos.

Especially important to the national protected area network are PPAs protected as waterfowl sites (over 70 per cent of the total area in the Programme for Waterfowl Conservation) and those protected as valuable shore sites (over 45 per cent of the area in the corresponding Conservation Programme). Privately-owned protected mires are also proportionately important in the south, because State-owned protected mires are small.



Records from a bird hide on a PPA on Lenholmen Island in the Finnish Archipelago © Equilibrium Research

### Incentives and compensation

Acquisition of lands by the State to be established as NRs has been the predominant way of implementing the national nature conservation programmes in Finland. When a landowner sells property to the State for nature conservation, s/he is eligible for full compensation, the extent of which is determined between the landowner and the regional ELY Centre. Not all landowners want to sell their properties; many apply for protection of their lands as PPAs, and are eligible for partial compensation for income loss. If protection is imposed without consent of the landowner, compensation may be granted if significant income loss is caused.

The government has invested an equivalent of €190 million from 1971 to 1995, and another €550 million from 1996 to 2007 in land acquisition, by purchase and exchange of lands, and in other protection compensations. Of the total budget allocation an estimated €185 million has been invested on compensations for establishment of Private NRs since 1996 in the national nature conservation programmes. Another €81 million has been allocated to PPA compensations in the METSO Programme since 2005, and the compensations are tax-free to landowners.



Figure 11: State-owned and privately-owned protected areas in Finland

Source: Metsähallitus 2013. Private protected areas (red) complement State protected areas (green) especially in the south.





**Jüterbog former military training area in Germany now managed by the Brandenburg Wilderness Foundation** © LaNaServ/K.Winter

## 7.7 Germany

Tobias Garstecki, Consultant

The German protected area system has been formed through close cooperation between State and Civil Society actors, but protected area establishment has been primarily a State responsibility. Until recently, land acquisition has not been a major strategy of German conservation NGOs, and thus the contribution of PPAs has been minor. The role of individuals and business companies as PPA owners has been even smaller. The perception of protected area establishment as primarily a State responsibility is also reflected in German legislation and policy. The Federal Nature Conservation Act, and corresponding legislation of individual Federal States, stipulate that protected areas be legally designated by the Federal States, irrespective of their land ownership.

While some PPAs were established in western Germany before 1990, German reunification has led to important changes in the governance of protected areas in Germany. A total of 125,000 ha of former military training areas, exhausted open-cast lignite mines and former border areas has been made available for nature conservation as areas of National Natural Heritage (*Nationales Naturerbe*) (Johst & Unselt, 2012). Most Federal States hesitated to take responsibility for these new areas, because of the financial burden involved (Unselt, 2012), and thus the State-funded federal foundation *Deutsche Bundesstiftung Umwelt (DBU)* with a few public foundations of individual Federal States, NGOs and private foundations stepped in to accept their ownership

and responsibility. As a consequence the land ownership of charitable foundations and NGOs was boosted through the transfer of more than 16,000 ha of National Natural Heritage land, free of charge since 2005 (Johst & Unselt, 2012). Most of these areas could not have been purchased by these organizations on the free market, particularly considering increases in German property prices following the global financial crisis. The handover of National Natural Heritage sites to charitable foundations and NGOs is based on contractual agreements, which include binding conservation targets and goals as well as an obligation to develop comprehensive management plans for the areas. The new owners have to report on financial issues but are not formally obliged to report on conservation issues (e.g. progress towards the agreed conservation goals and the site management plans). However, the Federal Government reserves its right to evaluate these sites at its discretion (Culmsee & Kathke, 2012) and some assessment systems are being developed.

This handover of National Natural Heritage areas to private foundations and NGOs has led to a significant rise in non-State ownership of protected areas, but there are other developments that also contribute to an increasing number of – and interest in – PPAs in Germany. For example, land ownership is considered the most effective approach to establishing wilderness areas, for which there is growing demand in Germany (Scherfose, 2006; Succow, 2013). The existing protected areas, which have often been legally established on private lands by State agencies, typically allow some types of natural resource use (e.g. forestry, agriculture,



Jüterbog PPA in Germany © D. Kolöchter

hunting and fishing etc.), have relatively weak protection regimes and are therefore not suitable as wilderness areas. Additional factors contributing to the increasing interest in PPAs in Germany are the progressively better-known example of PPAs in the USA and elsewhere (e.g. Disselhoff, 2013; Gazenbeek, 2013), as well as a general trend towards a withdrawal of the State from the management of public goods, including nature and biodiversity (Brendle, 2006).

### Definitions, legislation and incentives

Despite this increasing interest there is neither an official (e.g. legally established) nor a generally accepted definition of a PPA in Germany. The boundary between private and State-owned protected areas is not entirely clear because NGOs and private individuals have contributed significantly to some predominantly State-funded foundations owning protected areas. Some charitable foundations with PPA ownership, such as the NRW-Stiftung, are almost exclusively State funded. Others have mixed funding: for example, the Brandenburg Wilderness Foundation, a charitable foundation which holds about 12,000 ha of former military training areas in the Federal State of Brandenburg, had an initial foundation capital of €2.46 million, €1.33 million of which came from the Federal State of Brandenburg. The remaining €1.13 million were contributed by several NGOs (including the Frankfurt Zoological Society, NABU (Nature and Biodiversity Conservation Union), WWF Germany and a local conservation society) and one private individual (Brandenburg Wilderness Foundation, 2014). Furthermore, the German legal framework for protected areas was designed for State governance (irrespective of land ownership) and lacks specific provisions to accommodate PPAs. For instance, private landowners cannot legally declare their PPAs. It remains to be seen if this will become a constraint in reaching the full potential of PPAs for nature conservation in Germany.

As PPAs are not officially acknowledged as a separate governance type under German legislation, there are also no specific provisions on tax related or other incentives for their purchase or management. However, the general tax incentives for nature conservation and protected area establishment as a common interest also apply to PPA-owning associations, organizations, charitable foundations and NGOs. Although not specifically aimed at PPAs, these tax exemptions may act as incentives for charitable foundations and NGOs to include ownership of PPAs among the approaches that they use to meet their common interest (nature conservation) goals. However, there are no significant tax incentives that would make establishment of PPAs a financially attractive option for private landowners.

### Data and connectivity

There is no central database of PPAs in Germany, although some of the larger NGOs and charitable foundations owning PPAs have published data about their areas, and there is a compilation of areas owned by members of the *Nationales Netzwerk Natur*. The current number, area and distribution of PPAs in terms of owner categories can be roughly estimated from these sources (see appendix 1). Overall, the area of German PPAs is a more useful measure than their number because land owning foundations and NGOs often acquire several land plots (sometimes many hundreds) successively and aggregate them into PPAs. In order to evaluate the quantitative importance of PPAs in Germany, their overall area can be compared to that of the entire area of PAs in Germany. PPAs currently occupy approximately an area equivalent to eight per cent of protected areas (IUCN Categories I, II and IV) but less than one per cent of all PAs in Germany.

The spatial distribution of PPAs in Germany is determined by a combination of purpose and opportunity – particularly land availability. Wherever they have become available, high conservation value lands have been purchased by, or transferred to (in the case of the National Natural Heritage) conservation NGOs and charitable foundations. Once the nuclei of continuous PPAs have been established, the owners usually try to fill remaining gaps by buying or leasing additional lands. Sometimes, when this is not possible, they negotiate a supporting management regime with neighbouring landowners, such as agricultural businesses. Constrained land availability is also the major reason why PPAs usually cannot specifically be located to serve as corridors to connect other (e.g. State designated) protected areas. Exceptions are PPAs within the European Greenbelt along the former Iron Curtain and three former military training areas now owned by the Brandenburg Wilderness Foundation, which jointly contribute to the 'South Brandenburg Ecological Corridor. This links a number of pre-existing protected areas and runs from the Polish border to the western border of the Federal State of Brandenburg with Saxony-Anhalt.

## 7.8 Kenya

Robert Olivier, Consultant

In Kenya today, all PAs that are not State-owned are almost invariably referred to as ‘Wildlife Conservancies’ of which three basic types are recognized: Community (CWC), Group (GWC) and Private (PWC), but whose variety of actual ownership and governance blurs the internationally assumed criteria that distinguish ICCAs from PPAs (see table 14). Furthermore, most CWCs contract-out the management of their Conservancies to the private sector through lease agreements, and then effectively operate exactly as would a genuine PWC (Carter et al., 2008). It is because the blurred distinction between private and community is so pervasive that the national umbrella organization, the Kenya Wildlife Conservancies Association (KWCA) caters to all Conservancies. Another example of the blurred distinction is provided by the Association of Private Land Rhino Sanctuaries which, despite its name, has two members whose land is in fact community owned. The consensus at a recent stakeholder workshop held to review an important new study of different types of protected areas conducted by the African Wildlife Foundation (AWF) was that in Kenya it is most helpful to think in terms of all non-State protected areas together, rather than PWCs and CWCs separately as though they have fundamental legal and functional differences.

### Legal and institutional framework

Although the reasons for establishment vary and their management structures are diverse, Conservancies represent voluntary decisions by landowners to give priority to wildlife/ biodiversity conservation in all or part(s) of their land. The term ‘Conservancy’ is merely a label used to describe the land over which such a decision has been taken: when a Conservancy is formed what changes is the management of the land involved, not its legal status. Nevertheless, the word Conservancy may feature in the name adopted by the legally registered institution (e.g. Community Based Organization, Association, Trust or Company Limited or occasionally an NGO) formed to manage the affected land.

On 24 December 2013, a new *Wildlife Conservation and Management Act* received parliamentary assent. The new Act, which came into force on 10 January 2014, provides the first ever legal definition of the term Wildlife Conservancy,



**Lewa Conservancy PPA in Kenya offers activities that are not usually permissible in government managed protected areas** © Geoffroy Mauvais

namely: ‘*land set aside by an individual landowner, body corporate, group of owners or a community for purposes of wildlife conservation in accordance with the provisions of this Act*’. The Act makes provision for the promulgation of subsidiary legislation within six months of its enactment, including Regulations applicable to the formation, operation and registration of Conservancies. From both the Act and the draft Regulations it is apparent that the intention is to recognize Conservancies formally through a voluntary process of registration with the Kenya Wildlife Service (KWS) and County Wildlife Conservation and Compensation Committees (CWCCCs). Registration will be based on certain criteria, which for PWCs and GWCs are limited in the current draft to some basic information only, whereas for CWCs are augmented with detail of the community’s structure and functioning. Incentives for registration require further development, and those envisaged so far include access to grants from a KWS-managed Wildlife Endowment Fund which could cover training of managers and armed scouts, management and business planning etc. As such these incentives are aimed primarily at CWCs and GWCs rather than PWCs, the latter being viewed – fairly for the most part – as better resourced.

Table 14: **Different types of Wildlife Conservancy in Kenya**

Type	Land ownership	Governance	International equivalent
Community (CWC)	Trust Land (land held in trust by Government for indigenous local communities)	Community Based Organization, Association, Trust or Company	ICCA
Community (CWC)	Group Ranch	Community Based Organization, Association, Trust or Company	ICCA
Group (GWC)	Grouping of multiple, usually small, contiguous privately-owned individual plots	Association, Trust or Company	ICCA or PPA
Private (PWC)	Single privately-owned property (usually large)	Individual(s), Trust, or Company	PPA



**Lewa Conservancy in Kenya targets high end tourism to cover management costs** © Geoffroy Mauvais



**OI Pejeta Conservancy in Kenya is East Africa's largest black rhinoceros (*Diceros bicornis*) sanctuary** © Geoffroy Mauvais

In parallel to the legal reforms outlined above, the umbrella organization KWCA was formed in April 2013, its stated mission being: 'to be the forum where landowners have a unified voice, share experiences and actively participate in protecting and benefiting from wildlife' (KWCA, 2014). KWCA aims at a future where wildlife and communities benefit from a network of functional Conservancies that complement State-owned protected areas. It represents Conservancies of all types by bringing together a dozen different Regional Associations and their respective memberships. Membership is granted on the basis of criteria similar to those required for registration with KWS, meaning in effect that KWCA and KWS will be maintaining parallel registers. At the time of writing KWCA has registered 140 community and private Conservancies covering 6 million ha but the list is still evolving.

### Management approach and effectiveness

To date, the great majority of Conservancies in Kenya have been established in otherwise unprotected rangelands, in which over 70 per cent of Kenya's wildlife co-exists with livestock. These are savannah and bush habitats in which livestock husbandry is the original and predominant economic land use, whether through traditional pastoralism or more intensive ranching. There are relatively few Conservancies in forested or coastal/marine habitats, although the latter are gaining momentum.

At present the predominant motivation for forming a Conservancy is to enter the lucrative tourism market with a product which, by allowing walking, horse riding, open-top vehicles, night drives and closer interaction with indigenous tribal cultures, differs significantly to that offered by State-owned protected areas. Strategies to this end vary considerably, but some degree of zonation is invariably involved, with sometimes all, sometimes only part or parts, of the property being nominally set aside for wildlife and the tourism dependent on it. In practice, however, livestock will still be taken into the latter areas in times of drought, and wildlife will range throughout the property as different zones are seldom fenced.

In Kenya Wildlife Conservancies, particularly PWCs, play a crucial role in the conservation of endangered species. This is especially true for rhinos for which, at great expense, a handful of well endowed and managed Conservancies provide sanctuary to a significant proportion of the national herd. Other species to which this also applies include Grevy's Zebra, Rothschild's Giraffe and Wild Dog.

Conservancies in Kenya have two important characteristics. Firstly, almost all have people living inside them, PWCs included. Secondly, few if any are devoted solely to wildlife/biodiversity conservation. Rather the proportional emphasis given to conservation relative to livestock varies not only between Conservancies, but also within Conservancies according to performance of the relevant markets: wildlife based tourism will be favoured when the livestock sector is depressed (e.g. by drought), conversely, the livestock will be favoured when tourism is depressed (e.g. terrorism, or first world economics). Effectively therefore, it is impossible to assert that Conservancies in Kenya are 'predominantly managed' in favour of conservation and thus whether they meet the IUCN definition of a protected area. There is also, at present, a lack of any formal, independent mechanism for assessing a Conservancy's effectiveness in terms of sustaining or improving its biodiversity resources.

The formulation of Conservancy Regulations offers an obvious opportunity to rectify this lack, but apart from allowing Conservancies to apply voluntarily for de-registration, the existing draft makes no provision for enforced de-registration. While thought is being given by KWS, KWCA and others to this matter, much work remains to reconcile varying opinions as to the minimum criteria needed to guarantee 'effectiveness'. For example, insistence on having a fully fledged management plan is one obvious measure, but some fear this would act as a disincentive to registration and believe an outline zonation plan would be sufficient for initial registration purposes, provided access to technical assistance with management planning preparation at a later stage is available. Either way, the issue of where to develop the capacity to assess a Conservancy's performance against management aims remains a challenge.

## Conservation in perpetuity

With extremely few exceptions, no PWC, GWC or CWC in Kenya can guarantee its protected status in perpetuity. As far as PWCs are concerned, the owner has the right to change management policy at any time. Even if the current owner is personally and passionately committed to dedicating land to conservation, there is no guarantee this policy will be sustained by the owner's heirs, or by a new owner following a sale. The same applies to the owners of the individual private plots that make up a GWC. While the sale of collectively owned land managed as a CWC would be complicated if not impossible, the community can still revoke the underlying decision to manage the area set aside as a Conservancy at any time, or the area may simply revert to 'normal' use by default should its governance institution cease to function, perhaps due to failure to manage it as a viable business venture. To guard against this, most CWCs enter into various types of lease agreements with private sector partners whereby, for example, an operator might be given exclusive rights to build a camp or lodge and operate in the Conservancy for an agreed period. Some of these leases can be for as long as 50 years but not only is that not 'perpetuity', escape clauses for both parties invariably are included.

The most robust way in which land use in a Conservancy can be committed to conservation in perpetuity is through the grant of an appropriately formulated Conservation Easement by the owner (Watson et al., 2010). This approach is available in Kenyan law through provisions of both the Environmental Management and Coordination Act and the new Wildlife Conservation and Management Act. Easements provide for permanence in land use as they are registered in the High Court. Heirs may sell but the land use should legally never change, and this is said to be the main reason very few easements have been successfully negotiated.

The process involved in securing easements is very complex, time consuming and little tested to date, but this is part of the core mission of the Kenya Land Conservation Trust (KLCT). Easements are necessarily linked to land for which there is a discrete title, which constrains their applicability to CWCs. Conservancies on Trust Land would first have to apply for an initial registration of title, while those within a Group Ranch would have to obtain separate title through a process of sub-division. Quite apart from unfamiliarity with the approach and all the legal challenges and costs involved, many owners will be wary of signing over responsibility for compliance with the restrictions of the Easement to the Grantee (typically a conservation NGO, but could be a State organ such as KWS) even though they remain the legal owner. KLCT is working to overcome these disincentives and reports that to date (2013) one Conservation Easement has been registered in Kenya with respect to a PWC, and that it is now starting to explore the feasibility of the approach with selected CWCs.

Another way to secure the long-term dedication of non-State-owned protected areas to conservation is through the outright transfer of ownership, by gift or sale, of all or part of the property to a conservation NGO which can then either hold the land in Trust 'in perpetuity', or then gift it to the State. An example of the former is TNC's purchase of a core

part of Lewa Wildlife Conservancy, Kenya's premier PWC, as part of an incremental strategy to guarantee its protection in perpetuity called *Lewa Milele* (Lewa Forever). The land involved is said to be subject to a conservation easement under common law (KLCT, personal communication). A similar deal has been brokered by FFI for OI Pejeta, another leading PWC. An example of the latter is the purchase by AWF and TNC of Eland Downs Ranch that was then given to the Government for KWS to manage as a State-owned protected area, and subsequently declared as Laikipia National Park.

## National records

As yet there is no centralized database covering all types of protected area in Kenya, although AWF is taking on this initiative as a follow-up to its recently completed study of the effective complementarity between State-owned protected areas, ICCAs and PPAs in Kenya (see Elliott et al., in prep; Gibbons & Kaelo, 2013; King et al., 2013). A first draft of a national protected area database has been developed, which has 273 entries and includes PPAs (24.6 per cent), ICCAs (32.7 per cent) and State-owned protected areas and forest reserves (42.7 per cent) collated from a variety of sources. Reviewers of this database were quick to note both missing, overlapping and redundant entries, as well as inconsistencies with both KWCA's emerging database and the WDPA's listings for Kenya. The need to identify and agree on a national Agency to be given the responsibility of collating protected area data from all different sources into a coherent and integrated database is clearly both urgent and timely, given the ongoing registration of Conservancies by KWCA, and that expected soon by KWS and CWCCCs. At the same time, more work is needed on the data fields to be included in the database, particularly with regard to compatibility between any national database and the WDPA.



Mexico's National Áreas Commission (CONANP) and The Nature Conservancy reintroduced a herd of American bison (*Bison bison*) in El Uno Ranch PPA in Janos Biosphere Reserve, Chihuahua, Mexico © Nérida Barajas – TNC

## 7.9 Mexico

Juan E. Bezaury-Creel, The Nature Conservancy – México

Private conservation efforts are not a new phenomenon in Mexico. The first post-Independence effort took place around 1824, when Karl Sartorius, a German botanist, arrived in Mexico. Sartorius acquired 'El Mirador', a large property near Huatulco, Veracruz where he owned a coffee plantation and protected tropical vegetation that he cherished and studied. At its time, El Mirador functioned as an international biological research station, where biologists studied its flora and fauna (de la Maza-Elvira & de la Maza-Elvira, 2005). Despite this early precedent the PPA movement largely began in the last quarter of the 20<sup>th</sup> century.

A precise and broadly accepted definition of PPAs has not been explicitly articulated for Mexico. Nevertheless a consensus exists that: 'a private protected area (PPA) refers to a land parcel owned by individuals, corporations or nongovernmental organizations and managed for biodiversity conservation with or without formal government recognition; in all cases, authority for managing protected land and resources rests with the landowners, who are responsible for decision-making, determine a conservation goal and impose a management regime' (Borrini-Feyerabend et al., 2008). A small deviation from this definition derives from Mexico's unique land tenure system, where conservation efforts on individual parcels within communally held territories, are considered as PPAs. An additional three categories of land may be considered PPAs: 1) municipal lands not declared as public protected

areas; 2) lands owned and managed by parastatal companies that have been voluntarily certified for conservation purposes; and 3) Federal Coastal Zone conservation concessions.

Mexico's PPAs do not fully comply with IUCN's definition of a protected area (Dudley, 2008). Specifically, the requirement for a 'long-term' conservation commitment cannot be guaranteed because most PPAs are established based on a unilateral voluntary commitment by both certified and uncertified landowners (see below for details). A preliminary assessment of the use of legal instruments in Mexico indicates that only 12 per cent of the land covered by private initiatives and 2.3 per cent of land covered by joint social/private initiatives used fee simple acquisition, contracts or easements for achieving long-term nature conservation goals. All other stipulated terms of IUCN's definition are fully met by Mexican private and community land conservation efforts.

### Mexico's unique rural land tenure structure

Mexico's current rural land tenure structure is a mixture of the country's pre-Hispanic heritage, its 19<sup>th</sup> century struggle to incorporate land into a 'new' market-based economy, and the results of the land redistribution process that was carried out as a consequence of the early 20<sup>th</sup> century agrarian Revolution. Pre-Revolution traditional communities with titled lands (*bienes comunales*, 2,344 properties), together with untitled community lands and post-Revolution properties, recognized or distributed to legally landless rural communities or groups (*ejidos*, 29,441 properties), represent

Mexico's social property, which together cover around 53 per cent of the country's total terrestrial area (Reyes et al., 2012). By 2007, 31.7 per cent of Mexico's social property had been legally parcelled out (INEGI, 2009a). A subset of these parcelled lands, excluding those with active agricultural activities, currently represents 7.4 per cent of Mexico's total terrestrial area (INEGI, 2009b). A portion of these parcelled lands could potentially be considered within the scope of IUCN's private governance type, to be used for conservation and restoration efforts as PPAs, since land management decisions upon these parcels are actually taken by individuals and not by the whole community. Precise official data on privately held rural properties coverage in Mexico is much harder to obtain.

The compulsory breaking up of pre-Revolution large land holdings also resulted in the establishment of strict limits on the size that small private property landholdings could attain according to different uses. Limits of between 100 and 600 ha for agricultural lands, 800 ha for forestry lands, and the land necessary to sustain 500 head of large livestock or their equivalent for small livestock are established as the maximum amount of land that one landowner can possess as a 'small landholding' (SRA, 1992). Up to 25 small landholdings can be combined as a commercial or civil enterprise, as long as the same number of small landholders participates in it (SRA, 1992). This sets an upper limit on the size an individual PPA can attain. Conservation is still currently not explicitly considered by the Agrarian Law as a valid rural land use as it only recognizes: agriculture, livestock and forestry lands (SRA, 1992).

Mexico's Constitution specifically designates a 100 km strip along its international borders and a 5,000 ha strip along its shoreline that are considered as a 'restricted zone'. Within this zone, fee simple land acquisition by foreign persons or entities is not permitted, thus foreigners can only own the right to use land through an approved trust fund, which needs to be renewed every 50 years (SECOFI, 1993).

## Legislation

Currently two types of private and community land conservation efforts are legally recognized by the General Environmental Protection Law. Article 59 states that indigenous groups, public or private social organizations and other interested persons may request the establishment of a governmental protected area upon property they own or upon which they hold encumbrance rights (SEMARNAT, 1988). These areas should be used for preservation, protection or restoration of biodiversity. Even if they actually become permanent governmental protected areas through this process, management responsibility is retained by the owners. In this case, even if property and management remain in private or community hands, they cannot be considered as ICCAs or PPAs since they actually become government protected areas with shared governance with their owners.

The second type of private and community land conservation effort is defined by Article 77 BIS (SEMARNAT, 1988), which indicates that indigenous groups, social organizations, public or private legal entities or other interested persons may

request Federal certification of property they own as Voluntary Conservation Use Areas (ADVC - **Áreas Destinadas Voluntariamente a la Conservación**). These areas are considered as a special kind of Federal protected area that are established, administered and managed by their owners. ADVC are created for a limited period: a minimum of 15 and a maximum of 99 years. Around half of Mexico's states includes this type of private and community protected areas in their local legislation, although it has only been applied in two states. Mexico's first ADVC was certified in 2002.

In Mexico PPAs also exist outside the formal legal framework, as PPAs that are not certified by the Federal Government. Since uncertified PPAs by their own nature correspond to independent and highly decentralized sets of individual conservation initiatives, data used in this review includes only an incomplete set of properties that the author has been able to compile and geo-reference to include in Mexico's currently most comprehensive PPA and ICCA database (Bezaury-Creel et al., 2012b).

Thus two general groups of PPAs and ICCAs currently coexist in Mexico. On one side officially recognized government certified ADVCS, and on the other side, independent and uncertified private and community land conservation efforts on their properties.

## Ownership

Private conservation efforts in Mexico include seven different types of land ownership that can be grouped within three broad categories:

- Social Lands: *Ejido* parcelled lands ('*ejido*' and 'community' common use or un-parcelled lands, are considered as ICCAs and thus not quantified in this review).
- Private Lands: Private individual property lands, private company lands and NGO owned lands.
- Government Lands: Government owned company lands (currently only PEMEX, Mexico's national oil company), certified municipal owned lands (different from municipally established protected areas) and Federal Coastal Zone conservation concessions to NGOs (20 m federally owned strip adjacent to the coast and beginning on the highest tide line).

The following figures (12-17) illustrate the number of certified ADVCS and uncertified properties (surface area covered and average size expressed in ha) of the different types of private protected areas in Mexico.

*Ejido*-parcelled lands represent the greatest number of certified PPAs, while NGO lands represent the greatest number of uncertified PPAs. The number of private and Government-owned company lands, plus those NGO or municipal-owned ADVCS are basically not significant contributors.

Even though by number private company-owned PPAs are not relevant (only 10 parcels), their coverage, together with that of private owners presents the highest territorial coverage. *Ejido*-parcelled lands together with NGO lands comprise a

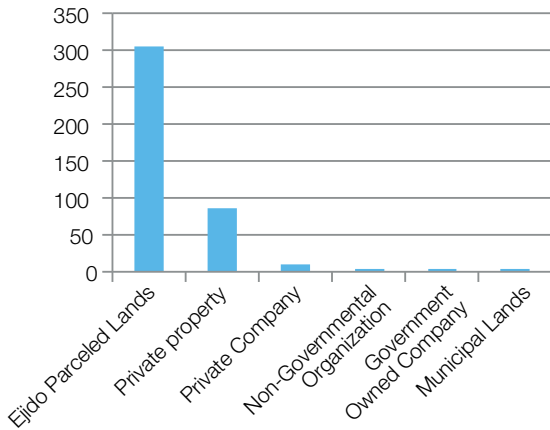


Figure 12: Breakdown of PPAs certified as ADVCs per ownership type (407 certificates in 2012)

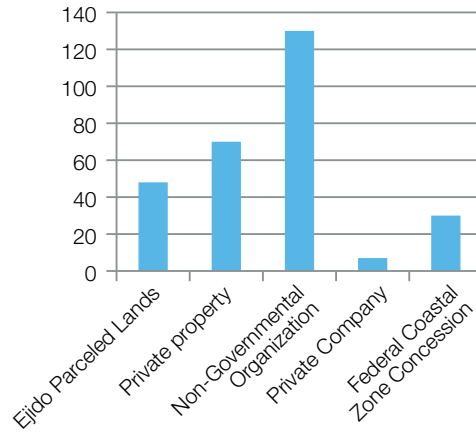


Figure 13: Breakdown of uncertified PPAs per ownership type (285 areas in 2012)

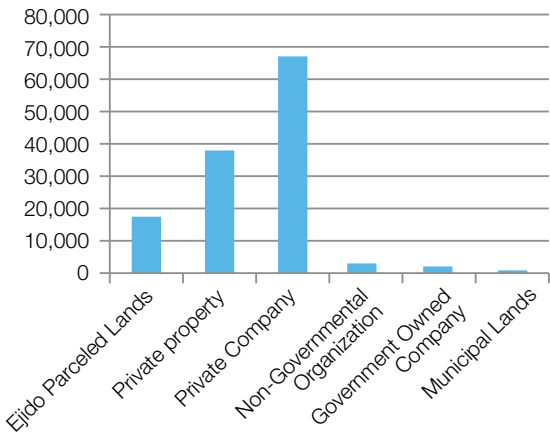


Figure 14: Total PPA area certified as ADVCs per ownership type (Total 128,369 ha in 2012)

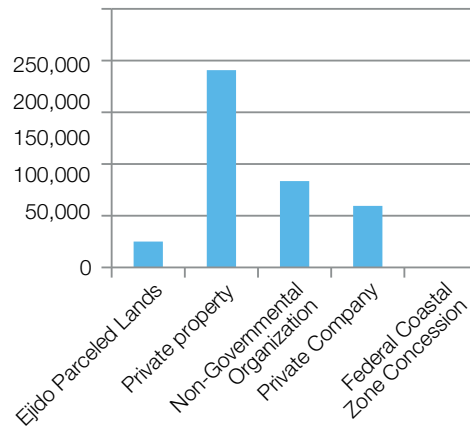


Figure 15: Total uncertified PPA area per ownership type (358,920 ha calculated from partial data in 2012)

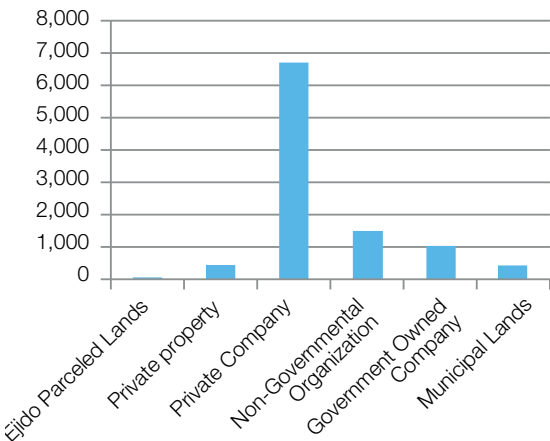


Figure 16: Average size of PPAs certified as ADVCs per ownership type (Total 128,369 ha in 2012)

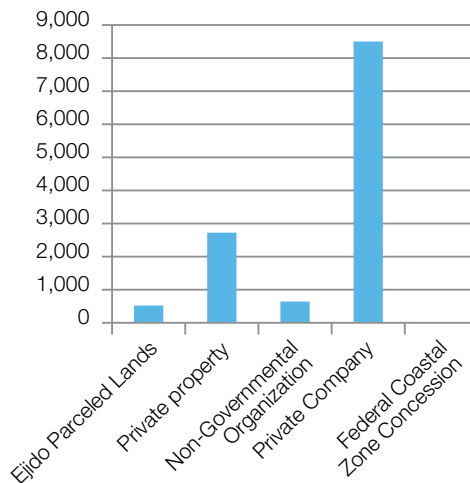


Figure 17: Average size of uncertified PPAs per ownership type (358,920 ha calculated from partial data in 2012)



very large number of PPAs though they cover a much smaller area. Conservation of uncertified *ejido*-parcelled lands in this case is the result of NGOs providing monetary incentives that are formalized through easements.

The size of certified ADVCS averages 315 ha, while uncertified PPAs average 1,504 ha, resulting in an overall average of 704 ha for Mexican PPAs. Private company lands in general present the largest average size properties on both certified and uncertified PPAs, while *ejido*-parcelled lands and Federal Coastal Zone concessions account for the smallest.

## Coverage

Mexico's PPAs include a total of at least 692 territorial units comprising 487,289 ha that represents 0.25 per cent of Mexico's terrestrial surface. The states of Hidalgo and Veracruz are the only ones that as of now have State certified private protected areas, which currently include a total of 70 territorial units covering only 10,330 hectares (due to the lack of precise data, State certified PPAs are not included in the statistical analysis within this review). PPAs include a total of 407 certified Federal ADVCS covering 128,369 ha (Bezaury-Creel et al., 2012b) and at least 285 properties encompassing 358,920 ha of uncertified PPAs (there no comprehensive list of these latter properties so this is a minimum estimate; Bezaury-Creel et al., 2012b). In Mexico PPAs can be established independent of or within governmental protected areas. Within governmental protected areas: 11 ADVCS with a coverage of 55,680 ha and 126 uncertified PPAs with 118,932 ha have been established, for a total of 140 territorial units with 174,631 ha a situation that could be interpreted as shared governance.

PPAs are not evenly distributed within Mexico's territory. Both certified ADVCS and uncertified PPAs have been established in 10 Mexican states, only ADVCS in seven states, and only uncertified PPAs in another eight states. Seven federal entities currently do not contain PPAs. Mexico's 12 northern states include more than half of the country's terrestrial territory. Mostly arid, with temperate sierras and sky islands, these states have a low population density. The 234 PPA territorial units within this region, while representing only 34 per cent of the country's total, include 93 per cent of the total area of PPAs.

## Management

A 'management strategy', which is equivalent to a basic management plan, has to be developed by the owner and approved and stipulated by the National Protected Area Commission (CONANP) within each individual ADVCS certificate. Although a formal exercise for assigning IUCN categories to private protected areas has not been developed, most Mexican PPAs are consistent with Category VI management objectives. Many PPAs include limited natural resources harvest within their boundaries such as lumber and useful plants. Others include management for sustainable cattle activities, whilst some protect the large trees that form the forest canopy and intermediate forest strata while allowing for growing coffee plants in the understory. Others focus on developing nature tourism activities or environmental education and some are dedicated to only conservation

or research purposes. Since all private protection efforts in Mexico are voluntary, there are no rules or laws that influence resource management practices when people live in PPAs, however in ADVCS areas management will be outlined in the CONANP-approved strategy noted above.

## Incentives

Currently only certified ADVCS-PPAs are eligible to receive limited incentives due to their official status. Since ADVCS are considered to be protected areas by the Environmental Law, they are automatically subject to its regulations. Thus through the certification process PPAs attain the same legal status as a federal protected area and in theory their owners can defend them against outside threats. Due to previous stipulations (SRA, 1992), one potential threat derives from the fact that conservation is still not recognized as a valid land use. Uncertified PPAs with legally based enforceable 'rights' such as easements, usufructs etc. can also be legally defended from certain outside threats.

Currently only limited financial incentives are provided for the establishment and management of certified PPAs and ICCAs. The Mexican Payment for Environmental Services Program is investing in conservation of forest cover in priority areas mainly for the enhancement of hydrological resources. The Program is managed by Mexico's National Forestry Commission (CONAFOR), which provides financial compensation to owners of forest lands in order to maintain conditions that favour environmental services production. CONANP also provides limited support to PPAs through the PET (Temporary Employment) and PROCODES (Conservation for Sustainable Development) programmes.

## Reporting

There are currently only very basic reporting obligations required for certified PPAs in Mexico. Noncompliance to the terms of the management strategy or to the landowners' general obligations, are a cause for de-certification; however currently CONANP's institutional capacity for verifying existing certified ICCAs and PPAs is very limited. One solution to this problem would be the establishment of a network of national and regional non-governmental conservation lands practitioners and owners. Pronatura A.C., a national organization with regional chapters initially took upon itself this role, but it is currently concentrating on managing the large networks of conservation areas it has created.

---

## Acknowledgements

I would like to thank The Nature Conservancy through Rosario Álvarez-Gutiérrez and Susan Anderson who facilitated my time for the project and Juan Francisco Torres-Origel who provided GIS support. The Rockefeller Foundation Bellagio Center, provided the ideal setting for consolidating the databases and clarifying ideas for working on documenting private and community conservation efforts in Mexico.

---



Tourism provides the funding for many PPAs in Namibia © Equilibrium Research

## 7.10 Namibia

Brian T. B. Jones, Consultant

Outside urban areas, Namibia is mainly divided into land held under private freehold tenure and communal land which is held in trust by the state and for the benefit of traditional communities. At Namibia's independence from South Africa in 1990, freehold farmland (almost entirely white-owned) represented 43 per cent of the land and communal land about 41 per cent. Subsequently government has bought some freehold farmland for resettlement of groups of landless black people and a number of farms have been bought by black individuals.

### Definition

There is no comprehensive definition of a PPA in Namibia that addresses issues of ownership, management, objectives and permanence. There are different categories of land on freehold (i.e. private) farmland that provide some form of wildlife and habitat conservation. Legislation provides for Private Game Reserves and Private Nature Reserves but does not define these entities or even the purpose for which they may be officially proclaimed. Many private land holdings are called 'private game reserve' or something similar by their owners. They are usually large areas of land and often consist of several private farms that have been purchased and consolidated into one unit. They usually have some form of conservation objective but many are primarily run as tourism businesses. They have a variety of wildlife which may include species indigenous to southern Africa, but exotic to Namibia. Mr Kenneth /Uiseb, Deputy Director, Wildlife Monitoring and

Research in Namibia's Ministry of Environment and Tourism (MET), suggested that PPAs are: 'privately owned and managed with no involvement from the government, and were mostly aimed at sustainable tourism, using business (tourism) to support conservation and *vice versa*' (personal communication, 20 August 2013.). This is Mr /Uiseb's personal definition and does not reflect an official definition by MET.

The MET has a database of private game parks and nature reserves established under the Nature Conservation Ordinance of 1975 (see below), but this is not kept up to date (C Sikopo, Director of Regional Services and Park Management, personal communication, 19 September 2013, Zimmerman et al., 2012).

There are no people living in private game parks and nature reserves in Namibia apart from owners/employees. There are no incentives for PPAs, tax or otherwise, in Namibia. Owners of PPAs in Namibia are not required to report on their activities apart from providing returns to MET on numbers of game animals hunted, sold etc. which is provided for under the wildlife utilization sections of the Nature Conservation Ordinance.

### Private conservation in Namibia

Three types of private conservation are found in Namibia.

**1. Private Game Parks and Nature Reserves established under legislation:** Established in terms of Section 22 of the Nature Conservation Ordinance of 1975. The Ordinance is the main legislation governing the establishment of protected areas in Namibia and the utilization of wildlife. It

Table 15: **Examples of privately owned land units with conservation and business objectives not established under conservation legislation**

Land unit	Details	Contacts
Gondwana Collection: Gondwana Cañon Park (126, 000 ha), the Gondwana Kalahari Park (10,000 ha) and the Gondwana Namib Park (100,000 ha)	Freehold properties owned by one company in different parts of Namibia and developed for tourism and conservation, each has a clear conservation objective and well developed management plans	Gondwana Collection, 2008 and <a href="http://www.gondwana-collection.com">www.gondwana-collection.com</a>
Erindi Private Game Reserve (70,719 ha)	Combines tourism and conservation, much of the wildlife is re-introduced. Hunting was stopped in 2007. There are a number of research projects such as collaring and monitoring of large predators.	<a href="http://www.erindi.com">www.erindi.com</a>
Onguma Game Reserve (34,000 ha)	Tourism venture on the eastern boundary of the Etosha National Park (but no connectivity as Etosha is fenced). Incorporates the 7,000 ha Fischer's Pan Game Reserve which is under separate ownership but is managed as part of Onguma with fences between the properties removed.	<a href="http://www.onguma.com">www.onguma.com</a>
Ongava Private Game Reserve (32,116 ha)	Tourism venture on the southern boundary of the Etosha National Park (but no connectivity as Etosha is fenced). Ongava has its own wildlife research centre to support reserve management and is owned by Wilderness Safaris Namibia	<a href="http://www.ongava.com">www.ongava.com</a>
Kulala Wilderness Reserve (37,000 ha)	Close to the dunes of the Sossusvlei area and adjacent to the state-run Namib-Naukluft Park. The reserve is owned by Wilderness Safaris Namibia.	<a href="http://www.wilderness-safaris.com/namibia_sossusvlei/kulala_desert_lodge/introduction">www.wilderness-safaris.com/namibia_sossusvlei/kulala_desert_lodge/introduction</a>
GocheGanas Nature Reserve (6,000 ha)	30 km south east of Windhoek, with lodge and wellness village.	<a href="http://www.gocheganas.com">www.gocheganas.com</a>
Waterberg Wilderness Reserve (3,500 ha)	Part of the Waterberg Plateau and adjacent to the state-run Waterberg Plateau Park (but fenced from it).	
Wabi Private Game Reserve (no size information available)	Includes several species outside their normal range, tourism focused.	<a href="http://www.wabi.ch/e_wabi.htm">www.wabi.ch/e_wabi.htm</a>
Okonjima Game Reserve (20,000 ha)	Specific focus on leopard and cheetah conservation, and home to the Africat Foundation. Includes tourism but stated aims include to promote conservation awareness of captive carnivores and to use tourism as a conservation strategy.	<a href="http://www.okonjima.com">www.okonjima.com</a>
NamibRand Nature Reserve (202,200 ha)	Adjacent to the state-run Namib-Naukluft Park. No game proof fencing so natural wildlife movements allowed, there is a livestock-proof fence between the Reserve and the Park. Wildlife population research and monitoring is carried out. Hosts an Environmental Education Centre.	<a href="http://www.namibrand.com/Conservation.htm">www.namibrand.com/Conservation.htm</a> and <a href="http://www.wolwedans.com">www.wolwedans.com</a>
Okonjati Game Reserve (Mount Etjo) (30,000 ha)	Includes several exotics, tourism focused.	
Otjiwa Game Farm (12,000 ha)	Tourism focused, it hosts a vulture research and education centre	
Sandfontein Nature Game Reserve (76,000 ha)		<a href="http://www.namibiareervations.com/sandfontein.html">www.namibiareervations.com/sandfontein.html</a> and <a href="http://www.sandfontein.com">www.sandfontein.com</a>

was introduced by the South African colonial administration and has yet to be replaced by more modern legislation. MET is working on a new Bill which would replace the Ordinance. Section 22 of the Ordinance enables the Minister of Environment and Tourism to declare any area a private game park or private nature reserve on application from the owner of the land concerned. These areas are officially proclaimed in the Government Gazette, and retain their legal status unless they are de-proclaimed in the Government Gazette. The legislation enables the Minister to withdraw the proclamation of a private game park or nature reserve, but does not stipulate that this should be at the request of the landowner. These areas are mostly single farms owned under freehold tenure with some municipal land included as well.

Section 23 of the Ordinance sets out restrictions on the use of wildlife within private game parks. There are certain ambiguities in the legislation. There is no actual distinction in the provisions of the legislation between a private game park and a private nature reserve although the wording seems to imply that a private game park is established to regulate hunting of game and wild animals while a private nature reserve is established to regulate the picking of indigenous plants. Further the rights to use game animals provided for in private game parks are not substantially different to those provided elsewhere in the Ordinance to owners of freehold farmland of a certain size and with livestock proof fencing. In these cases farmers may use species designated as huntable game for own use without permits or quotas and have to obtain permits for the use of protected or specially protected game. Owners of such land may also allow others to hunt on

their land subject also to permits issued by the Minister. It is therefore not clear what substantial advantages either for conservation of biodiversity or for the landowner are gained from the proclamation of a private game park under the Ordinance.

The MET has a register of private game parks. According to Zimmerman et al. (2012) the register indicates that the 153 private game parks and nature reserves cover an area of 1,311,600 ha, which covers 1.6 per cent of Namibia's land surface. However these figures might not be accurate. According to Zimmerman et al. (2012) the list appears incomplete as it includes reserves subsequently de-proclaimed and some Government Gazettes include private reserves that are not contained in the register. It is striking that only four private game parks have been registered since 1980, the last one appearing on the register was in 2009.

## 2. Large privately owned land units with conservation and business objectives not established in terms of conservation legislation:

There are several large areas of land privately owned that the owners call game reserves or which have some form of stated conservation objective or activities, but which have not been established in terms of Section 22 of the Ordinance. The land is held under freehold tenure and has been developed by the owners for conservation and tourism purposes. In most cases land has been converted from livestock farming or mixed livestock and wildlife to wildlife only and most have game proofed fences. There is no official register of these land units. The conservation objectives of some of these land units are not always clear. For example some have introduced species not naturally occurring in the area of Namibia where the reserves are located. Erindi for example has waterbuck (*Kobus ellipsiprymnus*) which is well out of their natural range in Namibia and Otjiwa has roan antelope (*Hippotragus equinus*) which are also outside their natural range in Namibia. Wabi has introduced at least one species that does not occur in Namibia, nyala (*Tragelaphus angasii*), but which occurs in South Africa. Some have large iconic species such as elephant (*Loxodonta africana*), lion (*Panthera leo*), black rhino (*Disceros bicornis*) and white rhino (*Ceratotherium simum*). Others such as the Gondwana reserves have clearly defined conservation objectives contained in detailed management plans. Some of these land units are specifically called Private Game or Nature Reserves, but not all. The private game reserves noted below (excluding Wabi) cover a combined area of 700,835 ha (see table 15). However the area under private game reserves of this type could be larger, depending on definition and there could be land units that might qualify under this category that have not been captured in this search.

## 3. Freehold conservancies which combine several privately owned farms for wildlife management:

A third group are the conservancies that have been established on freehold land. In freehold conservancies the individual farmers have combined their land, financial and human resources to manage wildlife over a larger area of land than their individual farms. Some farms in a conservancy might only have wildlife but most combine wildlife and livestock. Most have retained their internal fences including game proof fencing which inhibits the movement of certain species. In 2011 there were 25

freehold conservancies mostly concentrated in the central and northern parts of the Namibian freehold farmland (Lindsey, 2011).

A conservancy has been defined by the Conservancies Association of Namibia (CANAM) which represents the freehold conservancies as: 'a legally protected area of a group of bona fide land-occupiers practicing co-operative management based on: (1) a sustainable utilization strategy, (2) promoting conservation of natural resources and wildlife, (3) striving to re-instate the original bio-diversity with the basic goal of sharing resources amongst all members.' Despite the use in the definition of 'legally protected area', unlike their communal area counterparts there is no specific legislation providing for freehold conservancies which means that they are not a 'legally protected area'. The conservancies are Voluntary Associations and any protection or conservation measures stem from agreements between the landowners on how they wish to manage the area.

Lindsey (2011) reported the results of a survey of freehold farmers in Namibia including conservancy members. The most common reasons given by survey participants for joining conservancies were to provide for improved/co-ordinated wildlife management and to conserve wildlife. During the survey, farmers belonging to conservancies frequently voiced dissatisfaction and disillusionment with conservancies over their lack of legal recognition (Lindsey 2011).

## The challenge of identifying PPAs in Namibia

In conclusion, it is clearly difficult to identify PPAs in Namibia in the absence of any government policy or legislation that specifically provides for such protected areas. A lack of sport or commercial hunting for meat and other products might be used as a distinguishing factor in terms of defining PPAs as most of the large Private Game Reserves or Nature Reserves do not allow sport or commercial hunting. Some, such as the Gondwana reserves do harvest meat for their lodge restaurants and use meat from animals culled to reduce numbers as part of park management. However, trophy hunting is allowed in some state-run national parks in Namibia so the lack of hunting does not necessarily provide a useful criterion. The existence of specific conservation objectives and the exclusion of livestock might be a better way of defining PPAs, but such a definition would exclude the freehold conservancies discussed above. In addition, the freehold conservancies might also be considered community protected areas as they involve collective action by several individuals cooperating in joint wildlife management. There is thus in Namibia a growing number of areas under freehold ownership that could be considered as private protected areas and which contribute to the conservation of natural habitat and wildlife.

## 7.11 Republic of Korea

Hag Young Heo, Research Fellow, Korea National Park Service

The Republic of Korea (South Korea) has more than 1,400 protected areas covering 2,460,900 ha designated by government bodies (KPAF, 2013). All these protected areas have legal status and are mostly managed by central or local government. Traditionally, rivers, mountains and oceans are regarded as public assets in Korea and although legally all mountains are royal domain, most sites are considered freely open for public use (Do-won Lee, 2004).

### Definition of PPA in Korea

PPAs under individual, NGO or corporate control and/or ownership are not well developed in Korea. During the last two decades, since the industrialization of Korea, private conservation movements have been emerging led by NGOs such as the National Trust of Korea (see below). Some Buddhist temple forests, owned and/or managed by Buddhist monks over a long time, could possibly be defined as PPAs even though the main management aims are not explicitly stated as conserving biodiversity and ecosystems.

In order to encourage voluntary conservation approaches from the NGO sector the Korean government enacted the 'National Trust Act for the Natural Environment and Cultural Heritage' in 2006 (see below). The Act contains various articles to support private conservation approaches such as tax reductions, the right to collect entry fees, negotiating conservation agreements with owners and fundraising. The Act stipulates the need for conservation planning, for example, the requirement for master plans every 10 years, conservation management plans and annual action plans.

In addition, according to the Natural Environment Conservation Act (article 37), the Ministry of Environment or other relevant government agencies may sign conservation contracts with owners, occupants or managers of land for biodiversity management. Contracts contain details of conservation management practices (e.g. cultivation methods, decrease of chemical use, creation of wetlands, etc.) and are focused on target areas of land/sea which are:

- necessary for protection of endangered wild fauna and flora;
- where promotion of biological diversity is needed; or
- where biological diversity is unique (e.g. endemic) or excellent (e.g. highly diverse, well conserved etc).

The contract for biodiversity management obligates the relevant government agency to compensate the landowner for any reduction in earnings from the land concerned due to the limitations imposed by the contract.

### The National Trust of Korea: a conservation NGO

The National Trust of Korea is based on the National Trust which was established in the UK in the 19<sup>th</sup> century, and which has since fostered a worldwide movement of National Trusts in nearly 30 countries worldwide. National Trusts are



The rare maewhamarum plant (*Ranunculus kazusensis Makino*) is protected in the National Trust of Korea's reserve on Gangwha Island in the Han River estuary © Jong-kwan Choi

civic environmental movements (e.g. NGOs) run by voluntary donations, contributions and money raised by fundraising campaigns which are then used to acquire environmental and cultural resources that are preserved and cared for by the citizens.

The National Trust movement in Korea started in the early 1990s. The Trust was formally established in 2000, with the aim to secure quality cultural and environmental properties through public donations and maintain the properties through autonomous management for permanent preservation and enjoyment of future generations.

The National Trust has three approaches to conservation management: 1) direct management of sites owned by the Trust (see examples below); 2) potential sites which the National Trust plans to conserve (e.g. through raising funds to purchase sites or donations of sites); and 3) linked sites (e.g. sites owned by other organizations or individuals) where working partnerships have been developed with the National Trust to carry out conservation activities.

An example of the National Trust's conservation work in Korea is the conservation of the rare maewhamarum plant (*Ranunculus kazusensis Makino*) on Gangwha Island, an island in the estuary of the Han River on the west coast of the Republic of Korea. Maewhamarum grows in swamps and lakes and until the 1960s was very abundant in Korea. However, pollution and loss of pond and wetland habitat reduced the plants habitat so significantly that it was at one time considered extinct. In 1998 the National Trusts identified maewhamarum on a site in Gangwha which was facing

destruction due to re-development plans for the area. In order to protect the habitat various meetings were organized with local residents and local government officials. One of the landowners, Mr Jae-gu Sa, donated an area of 0.0369 ha to the National Trust for the conservation of the plant, and in 2002, after a public fundraising campaign, the Trust was able to purchase an additional 0.264 ha. The Trust is currently carrying out conservation work in the Gangwha maewhamarum habitat and the area was designated as a Ramsar site in 2008. Other sites owned and managed by the National Trust include forest in Yeon-cheon DMZ (Demilitarized Zone) and toad habitat on the Wonheungee Embankment. The Yeon-cheon forest is located in the CCZ (Civilian Control Zone) close to the DMZ, which has been designated as a 10 km corridor of the MDL (Military Demarcation Line) between the Democratic People's Republic of Korea (North Korea) and the Republic of Korea. Mr Joong-kwan Shin, who donated 3.9372 ha of land to the National Trust, hopes to overcome the tragic division of the country through conservation of nature. The area is very important bio-geographically due to the Imjin-gang River which originates in the Democratic People's Republic of Korea and flows into the Republic of Korea through the DMZ.

The Wonheungee Embankment is a representative habitat for the Asiatic toad (*Bufo gargarizans*), which is relatively rare on the Korean Peninsula. This small wetland surrounded by banks, which is near Chungju-city (south west of Seoul), lies about 200 m above sea level and is used by an estimated 100,000 toads for egg laying. In 2002 the area faced destruction due to plans to build a complex of government office buildings on the site. Fundraising by local NGOs (Friends of the Toad) and the National Trust provided the funds to purchase an area of 0.1008 ha as an eco-park; fundraising continues to acquire land in and around the core area and the long-term plan is to restore forest on the former agricultural land.

## The National Nature Trust

The National Nature Trust was established by the National Trust Act of 2006 to protect natural assets in danger of disappearing due to development, through encouraging the creation of common property based upon the traditional community-based protected sites based on village treaties ('Gye'). Currently, the work of the National Nature Trust is focusing on a range of projects including protecting Asiatic Black Bear (*Ursus thibetanus*) habitat, protecting the Jeju Gotjawal forest on the Island of Jeju and habitats in the DMZ.

## Conclusion

As the examples above show, most PPAs in the Republic of Korea are small in size; and relatively much smaller than other governance types of protected areas (e.g. National Parks cover an average 31,700 ha and Provincial Parks cover an average 3,490 ha). They are also less recognized. However, the role of PPAs might become very important in constructing an effective national protected area system to achieve Aichi Biodiversity Target 11 and the Republic of Korea has both the legislative basis in place and the public support for conservation to see a rapid expansion in PPAs.

## 7.12 South Africa

Tracey Cumming and Fahiema Daniels, South African National Biodiversity Institute (SANBI)

In South Africa, protected areas are defined as geographic areas that are formally protected by the National Environmental Management: Protected Areas Act (Act 57 of 2003) (hereafter referred to as the Protected Areas Act) and managed mainly for biodiversity conservation. The Protected Areas Act recognizes a range of governance types of protected areas, each with different objectives and degrees of land use restriction. The Protected Areas Act allows for protected areas to be declared on private land with the consent of the landowner. The Act requires that a management authority (a 'suitable person, entity or organ of state') be appointed.

The term 'private protected areas' (PPA) is not defined in national legislation or policy. However, the classification of a protected area as a private protected area is widely understood to be based on land ownership. Private protected areas are considered to be those owned by private individuals, corporate entities, non-government organizations and trusts. Communal land is also included in this classification as although owned by the state (usually the national Department of Public Works or the national Department of Agriculture, Forestry and Fisheries), it is essentially held in trust for the sole use of the communities that live on and use the land. This differs from the IUCN-recognized governance types of protected areas, which would categorize protected areas on communal land as ICCAs (Dudley, 2008). Landowners may reside or conduct commercial and revenue-raising activities on their land, subject to the relevant protected area regulations and specific agreements between the landowner and the state.

As PPAs are inherently integrated into protected area legislation, they are subject to the same legal requirements as state owned protected areas. PPAs are considered to fulfil a necessary and critical role in the country's protected area network, and contribute to national and provincial protected area targets (Government of South Africa, 2010). The Department of Environmental Affairs is required to maintain a register of all protected areas, including private protected areas, and recently began a process of collating and verifying all protected area data.

The conservation sector also recognizes geographic areas that are *not* recognized by the Protected Areas Act as protected areas, but receive some form of protection by the landowners and are managed at least partly for biodiversity conservation. These are called conservation areas. While conservation areas do not officially contribute to the national protected area estate, they do contribute to the broader *conservation* estate, and are important elements of South Africa's landscape approach to the conservation and management of biodiversity (Cadman et al., 2010). Contractual agreements between landowners and conservation authorities (without declaration as a protected area), such as Biodiversity Agreements used in biodiversity stewardship programmes, would classify as conservation areas. Biosphere reserves and Ramsar sites are also classified as conservation areas.



Tourists elephant watching on a PPA in South Africa © Claire Fulton

## Types of PPA in South Africa

Six different types of PPA, varying substantially in terms of purpose and practice, can exist in South Africa.

- 1. National Parks:** these may only be declared if the area:
- Is of national or international biodiversity importance or contains a viable, representative sample of South Africa's natural systems, scenic areas or cultural heritage sites, or to protect the ecological integrity of one or more ecosystems in the area;
  - Prevent exploitation or occupation inconsistent with the protection of the ecological integrity of the area;
  - Provide spiritual, scientific, educational, recreational and tourism opportunities which are environmentally compatible; and
  - Contribute to economic development, where feasible.

A National Park not owned by South African National Parks (SANParks) is known as a **Contract National Park** and is established through a contract with the landowner. There are currently 512,099 ha under Contract National Park status in South Africa, making up a little over 12 per cent of the total area of National Parks according to SANParks data of September 2013.

In most cases, a Contract National Park is created adjacent to an existing state owned National Park. In some cases SANParks is declared the management authority over the Contract National Park, in other cases it is the community or landowner and the conservation activities will be delegated to

SANParks by the management authority. These contracts are typically binding for a duration of 50-99 years.

Landowners of Contract National Parks benefit from the biodiversity conservation resources and expertise of SANParks, as well as the tourism marketing platform supporting the country's network of National Parks. In parts of the country supporting large game animals, SANParks may support the introduction of large game onto the privately owned land where appropriate.

**2. Special Nature Reserves:** may only be declared in order to protect highly sensitive, outstanding ecosystems; species or geological or physical features in the area; and to make the area primarily available for scientific research or environmental monitoring. No Special Nature Reserves are fully owned or managed privately. Only one Special Nature Reserve is partly owned by a private entity, with the remainder of the reserve owned by the state, and management responsibility held jointly by state and private landowners.

**3. Nature Reserves:** may be declared in order to fulfil one or more of the following objectives:

- Supplement the system of National Parks;
- Protect the area if it has significant natural features or biodiversity, is of scientific, cultural, historical or archaeological interest, or is in need of long-term protection for the maintenance of its biodiversity or for the provision of environmental goods and services;



**Burchell's zebra (*Equus burchellii*) in Elandsberg Private National Reserve, Republic of South Africa © Martin Harvey / WWF-Canon**

- Provide a sustainable flow of natural products and services to meet the needs of a local community;
- Enable the continuation of such traditional consumptive uses as are sustainable; or
- Provide for nature-based recreation and tourism opportunities.

Creating and managing Nature Reserves is generally the ambit of nine provincial conservation authorities. Nature Reserves exist on private land through two mechanisms. In the past, provincial legislation allowed Nature Reserves to be proclaimed on private land, at the request of the landowner, without systematic provincial or national conservation planning guiding the location of these declarations. These sites are sometimes referred to informally as 'old ordinance Nature Reserves'. Before the Protected Areas Act came into effect, old ordinance Nature Reserves were not required to have management plans, and while some of the properties are managed in a manner compatible with biodiversity conservation, many are not. A complete and verified dataset of these Reserves is currently being compiled. The national unverified dataset on old ordinance Nature Reserves indicates that there are approximately 1,277 of these nature reserves spread across the country, totalling around 1,784,000 ha.

Since the early 2000s, the creation of Nature Reserves on private land has been done primarily through provincial biodiversity stewardship programmes (see below). Under these programmes, potential Nature Reserve sites are systematically identified as areas of high biodiversity importance; management plans are developed in collaboration with the landowner; management assistance is provided to the landowner; the management of the land is audited annually; and incentives are provided where possible. Furthermore, the land is protected through both the declaration under the Protected Areas Act, (registration of which is made on the title deed which is binding on successors of title) as well as a legally binding contract with the landowner.

As of 1 September 2013, 35 properties totalling just under 72,000 ha have been declared as Nature Reserves through

biodiversity stewardship programmes according to the provincial conservation authorities or agencies implementing biodiversity stewardship programmes. There are an additional 267,000 ha of Nature Reserves 'in negotiation' through biodiversity stewardship programmes. Sites are considered to be in negotiation either when there has been some degree of verbal commitment to signing an agreement, and the legal documents and management plan are in the process of being negotiated and developed, or when all the documentation has been negotiated and finalized. If these are declared as Nature Reserves during 2014, as expected, it would bring the total area of Nature Reserves declared through biodiversity stewardship to 9 per cent of the total area declared as nature reserves – a significant increase in just a few years.

**4. Protected Environments:** may be declared in order to:

- Regulate a buffer zone for Special Nature Reserves, National Parks, Nature Reserves or World Heritage Sites;
- Enable landowners to take collective action to conserve biodiversity on their properties;
- Protect areas sensitive to development due to biological diversity, natural characteristics, scientific, cultural, historical, archaeological or geological value, scenic and landscape value or the provision of ecosystem services;
- Protect a specific ecosystem outside Special Nature Reserves, National Parks, World Heritage Sites or Nature Reserves;
- Ensure sustainable use of natural resources; or
- Control change in land use in the area if the area is earmarked for declaration or inclusion in a National Park or Nature Reserve.

As in the case of Nature Reserves, Protected Environments are declared by the provincial or national Minister responsible for biodiversity conservation, and can only be de-proclaimed by the same authority. This type of protected area is designed to allow for multiple land uses, as well as multiple landowners. Similar to old ordinance Nature Reserves, there are a small number of provincial 'private natural environments' that exist in the landscape and are considered by the Protected Areas Act to be Protected Environments.

Since the 2000s, private Protected Environments have primarily been negotiated and declared through provincial biodiversity stewardship programmes on systematically identified areas of high biodiversity importance. These areas are protected by both the legal declaration in terms of the Protected Areas Act, as well as a contract signed between the landowner and the conservation authority created for a particular duration of time (usually 10-30 years). Management plans are developed, and adherence to these plans is audited annually. Management assistance and incentives are provided where possible.

By September 2013, three private Protected Environments have been declared through biodiversity stewardship programmes, totalling around 66,496 ha. There are an estimated 20 additional private Protected Environments in negotiation across the country through biodiversity stewardship programmes, totalling around 226,286 ha. No state owned Protected Environments currently exist.



**5. World Heritage Sites:** are declared in terms of the World Heritage Convention Act (Act 49 of 1999), which gives effect to the World Heritage Convention. UNESCO recognizes eight World Heritage Sites in South Africa, covering over two million hectares (core and buffer). World Heritage Sites in South Africa are a combination of private and state-owned protected areas. Specific data pertaining to the extent of privately protected areas under World Heritage Sites was unavailable at the time of writing.

**6. Mountain Catchment Areas:** were declared in terms of the Mountain Catchment Areas Act (Act 63 of 1970). The Act was designed specifically for mountain catchment areas under private ownership (Rabie & Burgers, 1997). The purpose of Mountain Catchment Areas is the conservation, use and control of mountain catchment areas, with a particular reference to soil erosion and removal of unwanted vegetation. The provisions of the Act should be applied through issuing 'directions' in accordance with the purpose of the Act. However, no directions have ever been issued, making Mountain Catchment Areas largely ineffective in practice. The total area of declared Mountain Catchment Areas is just over 627,000 ha, according to SANBI data of 2012, existing almost entirely in the Western Cape Province.

## Provincial Biodiversity Stewardship Programmes

Biodiversity stewardship is implemented through the negotiation, establishment and ongoing support of agreements with landowners that promote and support the wise use and management of natural resources and biodiversity.

Biodiversity stewardship programmes, largely implemented by provincial conservation authorities, are now operational in six of South Africa's nine provinces, and have been initiated in the remaining three. In most provinces they receive implementation support from conservation NGOs. At the national level, the Department of Environmental Affairs and the South African National Biodiversity Institute, SANBI, provide technical and coordination support, and a community of practice among implementers and national supporting entities has been created across the country.

Biodiversity stewardship programmes may operate on any land that is not already owned by a conservation authority – this includes land that is owned by other state entities, private individuals, corporate and non-profit organizations. However, efforts are focused on particular areas of national and provincial biodiversity importance, referred to as biodiversity priority areas defined by the National Biodiversity Assessment identified using a systematic process, using the best available science (Driver et al., 2012).

Biodiversity stewardship programmes have a range of different agreement options, arranged in a hierarchy. At each level the landowner commitment, biodiversity importance and conservation authority investment increases. In all but the lowest category, biodiversity stewardship sites are protected by a legally binding contractual agreement between the landowner and the conservation authority. This contractual

agreement is binding within a particular time frame, up to 99 years, or in perpetuity. The agreement sets out management requirements for biodiversity conservation, on which the landowner is audited annually.

The biodiversity conservation sector endeavours to provide a range of incentives to landowners participating in biodiversity stewardship programmes. These include recognition of landowner commitment, creating partnerships in ecotourism ventures, providing technical advice or direct assistance in biodiversity management, and fiscal incentives. Fiscal incentives are provided in two pieces of legislation, though the efficacy of these fiscal incentives in their current form is weak (Cumming, 2013), and work is underway to improve them.

Almost 138,500 ha have been declared as protected areas (Nature Reserves or Protected Environments), and an additional 493,000 ha are expected to be included in the protected area estate by the end of 2014 under the biodiversity stewardship programmes. In addition, there are 35 Biodiversity Agreements in existence, totalling some 23,793 ha. While Biodiversity Agreements are not considered privately protected areas in South Africa (they are considered to be conservation areas in South Africa), they may be considered privately protected areas under the IUCN definition (Dudley, 2008).

## Conclusions

PPAs have an important role to play in securing land of high biodiversity importance, contributing to South Africa's protected area network, and supporting the landscape approach to biodiversity conservation. The different privately protected area types in existence in South Africa provide a range of tools with which to protect biodiversity, offering different degrees of protection, catering for different degrees of use, and allowing landowners to form agreements with both national and provincial conservation authorities. At the provincial level, biodiversity stewardship programmes are proving to be an effective mechanism for creating and supporting privately protected areas. As more provinces begin implementing biodiversity stewardship programmes, and the existing provincial programmes are scaled up, biodiversity stewardship is expected to become a major contributor to the expansion of protected areas across the country.

---

## Acknowledgements

The authors would like to acknowledge the expertise and insight provided by the following individuals: Mark Botha, private consultant; Peter Bradshaw, SANParks; Shamilla Chettiar, Cradle of Humankind World Heritage Site Management Authority; Mandy Driver, South African National Biodiversity Institute; Stephen Holness, SANParks; Kallie Naude, Department of Environmental Affairs; Matthew Norval, Wilderness Foundation; Thumeka Ntloko, Department of Environmental Affairs; Willeen Olivier, Department of Environmental Affairs; Genevieve Pence, CapeNature; Tracey Potts, Eastern Cape Parks and Tourism Agency; Kerry Purnell, CapeNature and Malinda Swift, Gauteng Department of Agriculture and Rural Development.

---



The 5,352 ha Alinyà Mountain PPA in the Catalan Pyrenees mountains, is owned by Catalunya-La Pedrera Foundation and is the largest PPA in Spain © FCLP

## 7.13 Spain

Miquel Rafa i Fornieles, Director of Territori i Medi Ambient at Fundació Catalunya-La Pedrera

Spain is the most biodiverse country in Europe and a large network of nearly 1,700 protected areas has been developed within the country, especially in the last 20 years, to protect this richness of the natural heritage. Spain is also a decentralized country, with 17 Autonomous Regions that have the capacity to legislate and declare their own protected areas.

The declaration of a protected area in Spain is irrespective of the ownership of the area and, except in most of the National Parks (where about 80 per cent is public land), a larger proportion of the area protected is usually in private hands (in 2008 only 39 per cent of protected areas were public lands). There is however currently no specific programme or fund to purchase new public lands and the present economic situation has erased any existing budgets available for this activity, both in the Central as well as in the Autonomous Governments. The role of PPAs may therefore become increasingly important in protecting biodiversity in Spain.

Most PPAs in Spain are established by NGOs. Usually, these initiatives are on the basis of a voluntary agreement or a lease with the private landowner; direct ownership of the land by the NGOs is always more difficult to achieve, due to financial constraints, willingness of owners to sell land etc., except by a few larger Foundations and NGOs.

### Land stewardship in Spain

The Spanish National Law 42/2007, on Natural Heritage and Biodiversity, is the basic framework for PAs and nature conservation, and contains several key points in respect of PPAs (although this governance type is not mentioned in the text): The law

- Recognizes the concept of 'Land Stewardship' as a mechanism for managing natural areas (Art.3), within or outside the limits of existing protected areas;
- Opens the door for co-management by stating that: '... (it's the) duty of Public authorities (...) to encourage private initiatives' to support nature conservation (Art.5);
- Develops 'incentives for positive externalities', as done by private landowners and managers, in respect of nature conservation actions (Art. 73);
- Creates the 'Natural heritage and Biodiversity Trust Fund' (Art. 74), although this fund is still not developed at this time.

The definition of land stewardship (LS) organization is established by Law 42/2007: 'a public or private organization, non-profit, that undertakes initiatives that include land stewardship agreements for the conservation of the natural heritage and biodiversity'. According to the most recent data (2013) 346,006 ha are under LS schemes across Spain (0.68 per cent of the total land surface); however many of these are short-term agreements which would not meet the IUCN definition of a protected area. About 214 organizations are involved in these schemes and there are up to eight regional Networks to coordinate and promote this work. In 2012, 16 of the main Spanish Foundations who focus on long-term

nature conservation created the Spanish Association of Nature Conservation Foundations (AFN), which between them manage 174,108 ha (see table 16).

## Definition

In addition to the LS agreements there are some 40 different designations associated with protected areas in Spain; however none is specifically labelled 'Private Protected Area'. This is an indication of the development of this approach in Spain being at an initial stage, at least on the legislative side.

## PPA pioneers: NGOs and foundations

Despite the lack of clarity around the definition of a PPA, a range of conservation initiatives has developed in recent decades in Spain, many of which may meet the definition of a PPA. The pioneering examples were under the leadership of the famous Spanish naturalist Felix Rodriguez de la Fuente and WWF-Spain (at this time, named ADENA), back in the late 1960s. An international campaign to protect the famous wetland of Coto de Doñana became one of the initial actions that led to the creation of WWF International, through the acquisition of 6,300 ha in Doñana in 1963 at a cost of 33 million pesetas (€198,334). This was followed in 1969 by a second purchase of the Reserva del Guadiamar (3,200 ha). Together the properties became the Doñana Biological Station, and were declared a National Park in 1969. In a second initiative in 1974, Felix Rodriguez made an agreement with the small municipality of Montejo de la Vega (Segovia in central Spain), to create a Hunting Reserve in the communal lands to protect an important Vulture colony. This reserve, of 2,100 ha, is considered the oldest example of a LS agreement in Spain and is still managed by WWF Spain.

A second pioneer was the NGO, ADENEX, from the nature-rich Extremadura region; between 1977 and 1983 they established seven Biological Reserves through LS agreements (mostly leases) with owners in highly valuable areas for raptors and Mediterranean forests. Currently, this network has 15 sites covering 5,441 ha. Of these, over 30 per cent (1,724 ha) have been purchased by ADENEX. Similarly, between the 1970s and 1990s, the private Foundation, José María Blanc, created by an influential lawyer, hunter and member of the Club of Rome, bought and established three private reserves: la Cañada Real in El Escorial (Segovia, near Madrid) of 17 ha (which is now, a popular environmental education centre); Lucio del Cangrejo, in the buffer zone of Doñana and El Masiegar in La Mancha (central Spain), where a Centre

## Box 14

### A case study from Catalonia

Territori i Paisatge (FTP) was created by the Savings Bank, Caixa Catalunya, from which it received almost all of its core financial support until 2011 (some €20 million) for land conservation projects all over Spain (many of the organizations mentioned benefited from this funding). In 2012, the Foundation became independent of the bank with a new status and name (Foundation Catalunya-La Pedrera, FCLP), its own resources and income (mainly from the €1 million received annually from visitors of La Pedrera, one of the iconic buildings designed by Antoni Gaudí in Barcelona). FCLP owns a network of 24 natural sites (7,800 ha purchased), called Xarxa Espais Natura, which is Spain's largest privately-owned network, almost all within the Natura 2000 Network. Additionally, they manage other lands under LS agreements (15 sites, 561 ha); contracts for timber rights and other rights paid for environmental services (27 forest reserves, 197 ha); and, finally, other agreements for conservation planning (64 agreements, almost 160,000 ha). The total land equals 5.18 per cent of the Catalonia region. FCLP also has an important educational programme, with two environmental education centres in the Pyrenees and in the Ebro delta.

for Hunting Research operated during the 1990s. Little information on the areas themselves and the management objectives are available. Mr Blanc is also said to have hunting rights for more than 200,000 ha all over Spain which are managed 'for conservation and sustainable hunting'.<sup>1</sup>

In the 1990s, private reserves in Spain had a second phase of development, the creation of nature-oriented Foundations. In 1992, the Fundación Oso Pardo (FOP) was set up to protect the brown bear (*Ursus arctos arctos*) in the Cantabric Mountains. The purchase of rights within mountain communal lands, made FOP technically co-owners of the land (together with the local villagers) and helped them influence the management and conservation of those areas. FOP currently has co-proprietor rights in 14 mountain areas (11,000 ha) and owns 114 small sites totalling 48 ha, all in good bear habitat.

<sup>1</sup> Public speech at the Rewilding Europe Seminar (Cañada Real, December 2012), <http://www.rewildingeurope.com/news/articles/first-rewilding-seminar-held-in-spain/>

Table 16: **Estimated terrestrial PPA coverage in Spain**

Organizations	Total land PPA/LS	Year of data	Ownership
AFN Foundations (16)	174,108	2012	41.2 per cent owned land; 58.8 per cent managed but not owned
Fund. Catalunya-La Pedrera	8,592	2013	91.2 per cent owned land; 8.8 per cent managed but not owned
Other LS/PPAs from Spanish Inventory	127,035	2010	(not available)
<b>Total</b>	<b>309,735</b>		



Figure 18: **Options and tools for Land Stewardship: a roadmap towards a full property transfer.**

Source: Sabaté et al., 2013

SEO / Birdlife purchased its first Ornithological Reserve in 1992, El Planeron (Belchite, Zaragoza) 700 ha of steppe habitat in the Ebro valley. They currently own eight reserves across the country totalling about 2,000 ha. They also launched a Land LS programme *Alzando el Vuelo*, aimed at the protection of Imperial Eagle habitat in central Spain, which encompasses 150 individual agreements for protecting 25,000 ha. The Global Nature Foundation (GNF) was created in 1993 after its relative in Germany. In 1994 they acquired their first land in Siera de Almenara (Murcia), to protect the habitat of the Spur-thighed Tortoise (*Testudo graeca*). They continued to enlarge this programme by means of LS agreements. They also started other programmes in central and northern Spain protecting valuable 'Dehesas' (a type of agroforestry land) and wetlands, and currently (2011) their network of Biological Reserves totals 14,000 ha. Out of these, they own 345 ha. The Foundation Naturaleza y Hombre (Man and Nature Foundation) was established in 1994 in Santander. Thanks to EU funded programmes and LS agreements with private owners and municipalities, they developed three regional PPAs networks; one of which (Western Iberia Network) is supported by the Dutch-based Rewilding Europe organization as one of their pilot areas for rewilding.

### PPAs: individuals and companies

As noted above, although most PPAs are owned/managed by NGOs/foundations, there are a few exceptional cases of private individuals that manage their lands as PPAs. Without any direct agreement or even any contact with local NGOs, these cases easily go unnoticed.

There are also a few cases of private companies that manage a PPA. The most well-known example is the Cañada de los Pájaros, an Agreed Natural Reserve in Andalusia, managed as an ecotourist resort. Some natural sites are owned by the Catholic Church and managed privately as a tourism business (e.g. Monasterio de Piedra in Zaragoza and Sant Miquel del Fai in Barcelona) but although some conservation of natural

values is done within those areas, they probably do not meet the definition of a protected area. An interesting approach, which is only just beginning in Spain, is the co-management of public lands by LS/Conservation NGOs; an example of this is an agreement between the Water Authority and the Fundacion Tormes-EB in 2011.

### Area of PPAs in Spain

The lack of a clear definition of PPAs, and the short-term nature of many LS schemes, means it is hard to define or estimate the total area of PPAs in Spain. In practice, the ownership of most Spanish PPAs follows a progressive path as expressed in figure 18 though most organizations do not reflect their stage in this continuum when they report.

Table 16 thus provides an initial estimate of terrestrial PPAs. In the Catalonia region, Marine LS agreements have recently been used, and these include 230,000 ha of potential marine PPAs, established between an NGO (SUBMON), fisherfolk and local authorities for the protection of the Maresme's Marine Canyons System, a marine area north of Barcelona.

### IUCN categories and PPAs

The only known data regarding the assignment of the IUCN Management Categories to PPAs is a study undertaken by Territori i Paisatge (FTP) for its PPAs network in 2007. I – 9 per cent; II – 23 per cent; III – 9 per cent; IV – 50 per cent.



Royal Society for the Protection of Birds (RSPB) Ynys-hir reserve in Wales, protects 700 ha of oak woodland, wet grassland and saltmarsh habitats in the Dyfi Biosphere Reserve © Equilibrium Research

## 7.14 United Kingdom

Chris Mahon, Consultant

The UK has a long history of nature conservation and its area has been thoroughly mapped and assessed, with a variety of designations assigned to areas under protection. The PPA term is not formally recognized in any of the four nations which comprise the UK (England, Northern Ireland, Scotland and Wales), though this does not necessarily mean that land that meets a PPA definition does not exist.

Protected areas in the UK are generally known as either ‘statutory’ sites, protected through European or domestic legislation, or ‘non-statutory’ sites, usually with a degree of protection in the UK’s planning processes. The latter are generally not state-owned but land/water use is significantly influenced by Government legislation and policy at national and local authority levels. ‘Self-designated’ protected sites may also exist outside these formal identification processes, and here sites may be determined and protected for nature conservation by private or community ownership. Non-statutory and self-designated sites may qualify as PPAs subject to meeting the IUCN definition of a protected area.

### Putting Nature on the Map

Although the WDPA contains a plethora of protected sites across the UK, it has been clear to protected area practitioners in the country for some time that these data are neither accurate nor complete. Early in 2010, the former Chair of the IUCN WCPA, Nik Lopoukhine, challenged the UK protected areas community to take a leading role globally in the implementation of the 2008 Guidelines. In response, a collaborative project Putting Nature on the Map (PNOTM) was established, led by the IUCN National Committee for the United Kingdom (IUCN NCUK). The basic aim of the project is to identify all the places in the UK that meet the IUCN definition of a protected area, and then to assign them to one of the management categories and governance types. A Handbook (IUCN NCUK, 2012) has been prepared to guide this implementation process. While this Handbook is derived from the 2008 Guidelines, and should be regarded as subordinate to it, it is designed to assist UK users to apply the international guidance in the national context. Two important innovations have evolved during the PNOTM project: 1) the development of the IUCN WCPA PA Assessment Panel to verify the accuracy of the data provided by UK bodies for areas being proposed to the WDPA; and 2) the possibility being offered to NGOs etc. to provide data on their protected

Table 17: Information on the number of sites owned/managed by the UK's main environmental NGOs for nature conservation

NGO name	Total area (ha)	Average size (ha)	Number of sites & country-specific data
Butterfly Conservation	457	20	23 sites in England and Wales
John Muir Trust	24,461	2,718	Scotland 9 sites
National Trust	135,645	230	England & Wales 555 sites Northern Ireland 35 sites
National Trust Scotland	46,305	1,653	Scotland 28 sites
Plantlife	1,775	85	England 18 sites Scotland 1 site Wales 2 sites
Royal Society for the Protection of Birds	150,486	710	212 sites in the UK
Wildfowl and Wetlands Trust	2,632	292	England 6 sites Northern Ireland 1 site Scotland 1 site Wales 1 site
Wildlife Trusts	90,000	39	England 1,946 sites Northern Ireland 18 sites Scotland 120 sites Wales 216 sites
Woodland Trust	24,230	56	England 290 sites Northern Ireland 9 sites Scotland 42 sites Wales 95 sites
<b>Totals</b>	<b>475,991</b>	<b>131</b>	<b>3,630</b>

areas which are not currently put forward to the WDPA as they are not part of the official network of protected sites in the UK (Crofts & Phillips, 2013). The PNOTM project has started to provide clarity and collect information from a range of sources on all protected areas in the UK, including PPAs.

### Sites of Special Scientific Interest

Much of the UK network of protected areas is encompassed within Sites of Special Scientific Interest (SSSI – a legal designation made up of mostly privately owned areas). Sites designated as SSSIs in the UK are: ‘a national network of areas representing in total those parts of Great Britain in which the features of nature, and especially those of greatest value to wildlife conservation, are most highly concentrated or of highest quality’ (Nature Conservancy Council, 1989). SSSIs are legally protected under the Wildlife and Countryside Act 1981. This legislation ensures protection of SSSIs and safeguards their existence into the future. Owners or occupiers of an SSSI must manage the area to conserve its special wildlife and geological features, and are subject to various legal restrictions on how an area can be used and penalties for misuse.

When reviewing which areas are likely to qualify as PPAs in the UK, the first question to ask was if a site is under statutory designation, such as SSSI, and if this designation removes the ability of the landowner/manager to independently decide the management and governance of the site, would such areas

be considered a government managed area or co-managed area rather than a PPA? The IUCN WCPA UK PA Assessment Panel notes that SSSIs are a government designation that equates to a protected area under the IUCN definition. However, many SSSIs are owned/managed by NGOs. If they are all regarded as government-managed protected areas, this implies that most of the land owned or under long-term lease to NGOs is regarded as a government-managed protected area, which is not the case. Conversely, if all SSSIs are designated by land ownership, it would imply that any farmer who has an SSSI on their land is designated as a manager of a PPA. Similarly, all sites could be considered as co-managed, but this would mean that virtually all protected areas in the UK would be co-managed, thus eliminating the nuances that the IUCN governance typology is supposed to identify.

As a result, the IUCN WCPA UK PA Assessment Panel has made the following suggestion based upon which entity makes the conservation management decision:

- SSSIs on state-owned land are equivalent to government-managed protected areas
- SSSIs on land owned or managed in the long term by individuals or organizations *explicitly* as a protected area are equivalent to privately-managed protected areas
- SSSIs on common land (i.e. land owned collectively or by one person, but over which other people have certain traditional rights) are equivalent to (indigenous and) community conserved areas

- SSSIs on private land where the owner is managing primarily for purposes other than conservation and where conservation management is imposed are equivalent to government-managed protected areas.

Deciding between (2) and (4) will sometimes be difficult; for example, if a private forest company has made serious efforts to manage the SSSI part of their estate for nature conservation they might consider it a PPA. This will be a judgement call: things like management plans, active management for nature conservation etc. will help to make the distinction.

The inclusion of NGO-managed SSSIs in the PPA governance type has a significant influence upon the analysis of data for PPAs in the UK, for example:

- The Scottish Wildlife Trust (SWT) pilot for PNOTM, identifies that from the SWT wildlife reserve holding of 122 sites covering 19,764 ha, 78 sites are SSSIs (64 per cent of sites and 94 per cent of area). Similar proportions may be found amongst the other 46 wildlife trust entities as these organizations tend to target SSSIs in their strategic acquisition strategies.
- Plantlife International has 23 UK nature reserves, 16 of which (70 per cent) are SSSIs in whole or in part.
- The Royal Society for the Protection of Birds (RSPB) has 214 sites covering over 150,000 ha; 150 (70 per cent) of these are SSSI/ASSSI (Northern Ireland's equivalent to SSSI).

The distinction between whether an NGO or UK Government has the decision-making control over the conservation management of land designated as SSSI is therefore an important one when assessing the contribution of PPAs to conservation in the UK.

## PPAs in the UK

For the purposes of this review, NGO owned and/or managed land and self-designated sites are considered as PPAs. In the UK context: a UK PPA could be defined as a privately owned area of land generally without direct government involvement and outside any statutory designation (unless it is SSSI), managed for nature conservation in perpetuity (25+ years) by an individual, cooperative, NGO or corporate entity.

UK PPAs are owned by a variety of entities, including large and small landowners, NGOs and a variety of private sector organizations, and generally are not permanently occupied by people. No formal UK-wide database exists of land which may qualify as a PPA, however NGO databases allow an analysis of this one type of PPA (table 17).

## Management approach (e.g. IUCN category if this has been designated)

IUCN management categories have been assigned to statutory sites in the UK by the Joint Nature Conservation Committee (JNCC), the statutory advisor on nature conservation to the UK Government and devolved administrations of Scotland, Wales and Northern Ireland. This has been done as a rather generic exercise to date, that is, all sites either Category IV or V: SSSIs are IV (habitat/species



The osprey (*Pandion haliaetus*) became extinct in Scotland in 1916. In the 1950's a pair returned to Loch Garten and ospreys have nested in the area, now protected by the RSPB, ever since © Equilibrium Research

management area) and all National Parks and AONBs are Category V (protected landscape). These categories appear on the WDPA, however work is under way to review all these assignments through the WCPA UK PA Assessment Panel which is due to report its initial findings at the end of 2014. For example, some PPAs which are geological SSSIs may then be re-categorized as Category III (natural monument or feature) and the PNOTM pilot has already revealed that not all of an NGO's wildlife reserves are automatically Category IV. For self-designated sites, evidence for the main management approach would require examination on a site by site basis, although some sites do publish their nature conservation results publicly.



**Zapata Ranch is the largest preserve owned and managed by The Nature Conservancy in Colorado; the ranch demonstrated how cattle and bison operations can co-exist with conservation efforts** © Kent Redford

## 7.15 United States of America (USA)

Brent A. Mitchell, QLF Atlantic Center for the Environment

The USA does not formally recognize a unified national protected area system and, because it is not a signatory to the CBD, it is not compelled to do so. Thus there exists no formal definition of a protected area, and therefore none of a PPA. But this is not to say there are no PPAs.

The system of national parks in the USA is well-recognized around the world. But few people know that PPAs have been established for nearly as long. Yellowstone National Park was created in 1872, and the second national park was designated in 1890. The Trustees of Reservations, the first land trust (see below), dates from 1891. Both the public and PPA initiatives began as efforts to preserve special areas for the benefit of the public, and their purpose in land protection was likened to museums and libraries, safeguarding great works of art and literature for the public to enjoy.

The developments driving PPAs in the USA today relate not only to the geographical space, but also to the entities that own interest in that space, and the regulations on tax benefits accruing to landowners (discussed below). In summary, NGOs, the largest owners of PPAs, must qualify as charitable organizations under the USA tax code. Individuals who wish to donate conservation easements must do so to such a qualified organization (or to a government agency). The lands must qualify for conservation purposes under state laws authorizing the creation of conservation easements,

which specify the types of conservation purposes for which such easements may be created (e.g. forest land protection, open space, natural areas, etc.). Federal income tax law specifies the types of conservation purposes for conservation easements over private lands that may qualify for Federal income tax deductions.

Land in the USA conserved through private mechanisms is owned by some of the most dynamic conservation initiatives nationwide. An extensive network of private, non-governmental protected lands has evolved, which in some eastern states approaches 10 per cent of the total land area (Chang, 2010). Most of these private land conservation arrangements are negotiated and initiated by specialized charitable associations called *land trusts* that work to conserve land by undertaking or assisting in land or conservation easement acquisition, or by its stewardship of such land or easements. The number of these organizations, and the land they protect, has increased exponentially over the past 30 years with the development of legal and public policy changes designed to encourage them.

Private conservation initiatives developed in parallel with public efforts, starting in the eastern part of the country, where most land was privately owned, while national parks and reserves were first formed primarily in the west, where a majority of land was held by government. However, the rate of development of private reserves was much slower than public counterparts for the first 50 to 75 years (Brewer, 2003), which partly explains why they are less well recognized.



Today there are over 1,700 land trusts in the United States (Chang, 2010). They operate in all 50 states, with distribution quickly equalizing across the country. There are also a growing number of private foundations (another form of charitable organization under US tax law) that own, operate, manage and protect land as private reserves in their own name.

## Private land for public good

Privately owned areas can be recognized, dedicated and managed for the conservation of nature through many legal or effective means. The three most common are freehold private reserves, conservation easements, and term (time-limited) conservation tools.

**Freehold private reserves:** Private conservation organizations function like their public counterparts, owning and managing land for public benefit. (Technically of course, government does not own land, but holds it in the public trust). Private reserves are created, either through purchase or donation of the land, in a manner equivalent to national or state parks. This is called fee simple acquisition, which means the land is owned completely, without any limitations or conditions. Once created, reserves owned by private organizations must be managed, and most are maintained for public access. Many conservation organizations provide educational programmes, conduct ecological research, and undertake habitat enhancement projects on their lands. These activities are funded primarily through private donations.

Ownership and governance of protected areas can be flexible. In order to provide for public benefit but avoid long-term stewardship costs, many land trusts convey property to public agencies to manage in the public trust. Some conveyances are planned from the outset, with the NGO acting as an intermediary. But other PPAs may change governance over time, as needs and efficiencies dictate.

**Conservation easements:** The two basic land acquisition activities of 1) directly owning freehold private reserves and 2) conveying them to government, fit neatly into conventional concepts of protected areas. A second major approach to private land conservation is a bit more complicated, but is growing nationwide. This is the practice of securing partial legal interest in the land for purposes of nature conservation and heritage preservation, rather than full ownership. The legal tool used for this purpose is called a *conservation easement* (sometimes alternatively known as *conservation covenant* or *restriction*). Conservation easements typically encumber (restrict the uses of) privately owned land and most often are held by either government agencies, NGOs (land trusts) or private foundations. The restrictions of an easement run with the land. New owners are bound to the provisions of the easement equally as the owners who voluntarily granted the easement originally.

**Private land conserved, but not in perpetuity:** The system of private conservation in the USA has developed to favour protecting areas in perpetuity, a requirement for most of the incentives and advantages offered under the current system of federal and state tax benefits for conservation. However,

less-binding and time-bound conservation agreements are also used. Though not PPAs *per se*, these are important to consider as they may become PPAs if the owners change the conditions to address the 'perpetuity' condition. Conservation groups and government agencies enter into management agreements and/or leases for conservation management with private landowners. While they are temporary, they offer some landowners a way to protect or manage their land for conservation without conveying a permanent interest in the land. Though short-term, they are intended to be repeated for multiple terms, or at least that is the intent of the Congress or state legislatures that authorize the programmes. Viewed in this way, they may satisfy the IUCN definition: '...to achieve the long-term conservation...'. In addition to the time frame (perpetual vs. term), the other major distinction is that they are a partnership between the conservation organization and the landowner, and usually can be changed when ownership changes.

One example of defined-term landowner agreements is the Conservation Reserve Program (CRP) under the Farm Bill. This programme pays private landowners to take marginal lands out of production to protect sensitive areas such as riparian zones and wetlands, and provide wildlife habitat. Contracts are typically for 10 to 15 years. Last year there were over 10 million ha in the CRP, particularly in the Midwest, the agricultural belt where permanent conservation cannot compete with pressure for agricultural production. Programmes such as this are highly vulnerable to change. For example, in 2007 farmers cashed in on rising prices for commodities, removed land from the CRP and returned to cultivation an area the size of the states of Rhode Island and Delaware combined (Streitfeld, 2008).

## Public incentives and support for voluntary land conservation

All of the methods for protecting land described above require a voluntary act on the part of the landowner. Thus they are, in some sense, antithetical to top-down, universal schemes of land use regulation, for which they have become a substitute in some areas of the USA. To induce a landowner to convey an easement, and relinquish the associated rights in land, a vast body of tax preferences and easement purchase programmes have arisen at federal and state levels.

**Easement donation and tax incentives:** A conservation easement may be donated. In this case, the valuable restrictions on land use that the easement imposes are given with no recompense. Under laws codified in 1976, such a donation gives rise to many tax advantages, some of which are discussed below. These tax advantages are granted only under a variety of conditions (Government Printing Office, 2005a). Not all easements qualifying under these categories would meet the IUCN definition of a protected area because they are not all directed at nature conservation.

**Income tax deductions and credits:** Income taxes in the USA are imposed at various governmental levels; the highest collective tax rate is approximately 40 per cent. The donation of a qualified conservation easement creates a corresponding

charitable income tax deduction, which may lead to tax savings of hundreds of thousands or even millions of dollars. An estimated US\$ 3.6 billion revenue was foregone through the federal income tax deductions provided to individual conservation easement donors from 2003-2008, a figure that would be larger if it included corporate donations (Colinvaux, 2012).

**Property and estate taxes:** Since a conservation easement generally removes the potential for development of a property, it seems reasonable to lower the assessed value of the land for property tax purposes. Over one-third of states have enacted such laws, in some cases quite advantageous financially to the landowner. In some cases, private properties are managed for conservation over the long term, without any formal designation. A conservation easement on such lands would meet the IUCN definition of a protected area.

**Easement purchase:** An alternative to easement donation is easement purchase. With the high cost of land and the consequent high value of easements, such easements are generally funded by government, but in some cases through private donations or through a combination of government and private funding. The American Farmland Trust estimates that approximately US\$ 2.3 billion has been spent to acquire easements over 445,000 ha nationwide.

**Reporting and defending:** The purchase price is not the only cost of negotiating and securing conservation easements. As McLaughlin (2012) notes: 'Astounding amounts of governmental and judicial resources are ... being expended to ensure that the easements are not overvalued, that they satisfy the elaborate conservation purposes and other threshold requirements, and that the donations are properly substantiated.' Perpetuity is a long time, and concern is high about future legal challenges to the entire system of land trusts. The Land Trust Alliance has set up a 'Conservation Defense Center,' including a clearinghouse for information on how to defend against legal challenges, an attorney network, and a legal defence fund. Perhaps most significant, they have set up a charitable risk pool insurance scheme, called Terrafirma RRG LLC. This is the first time in history that an environmental organization has created its own insurance company.

### The problem with conceptual boxes

While government can hold a conservation easement, other rights and ownership are retained by the private landowner, raising the question of whether these geographic spaces should be considered *private* protected areas. Should easements held by a government agency on private land be considered a government protected area, or a PPA? The answer is important quantitatively, with more than 5 million ha at play.

A useful operating guideline might be to follow the majority interest in the land. An easement may limit a landowner's management options, but the landowner remains the controlling interested party. Therefore privately owned land

with an easement held by a government agency would be considered a PPA. The fact that the easement exists limits the private landowner's choices to those that are in furtherance of a conservation purpose and the easement is simply the forcing mechanism by which that private owner's conservation management is achieved. Land held by a government agency in the public trust and encumbered by a private organization would still be counted as a government protected area.

### What we know about the extent of PPAs in the USA

Because of their private status, owners of PPAs are not required to report spatial data to any national authority. Many states maintain spatial data on PPAs and easements, but until recently there were no national databases to record them. That began to change with the development of the Protected Areas Database of the U.S. (PAD-US) in 2009 (note: there are two versions of the PAD-US, one maintained by the US Geological Survey, a federal agency, and another by the Conservation Biology Institute, an NGO), the National Conservation Easement Database established more recently and the census of state and local land trusts conducted every five years by the Land Trust Alliance.

To date, the PAD-US (Conservation Biology Institute) records 1,817,116 ha of 'private conservation land', indicating only that the data is clearly incomplete (Kai Foster Henifin, personal communication). The National Conservation Easement Database currently contains records on 29,729 easements nationwide. Unfortunately, the Census does not break out data for national land trusts. The Census' category 'conserved' includes lands conveyed to government agencies in which a land trust played a role. Often the role is one of negotiator or intermediary buyer, giving the government partner time to secure funding and finalize an acquisition. Though private actors played a role, these would not be considered PPAs. The largest of the national land trusts, The Nature Conservancy, currently holds a total of over 2 million ha: 899,092 ha in fee and a further 1.15 million ha in conservation easements.

The PAD-US (United States Geological Survey) is the official inventory of protected open space in the USA. With almost 2.9 million ha in thousands of holdings; spatial data in PAD-US include public lands held in trust by national, state, and some local governments, and by some NGOs. Currently, the GAP-US (USGS) contains data on approximately 6.7 million ha of areas that may meet an IUCN definition of a protected area (USGS, 2012). Unfortunately, there is not sufficient information to assess the degree of protection of the land (GAP code). Therefore, at this time we can only say that the extent of PPAs may be somewhere between 2 and 6.7 million ha.

# References

- Adams, V.M. and Moon, K. (2013). 'Security and equity of conservation covenants: Contradictions of private protected area policies in Australia'. *Land Use Policy* 30: 114-119.
- American Bird Conservancy. (2013). 'The Latin American Bird Reserve Network'. [www.abcbirds.org/conservationissues/birding/reserve\\_guide.pdf](http://www.abcbirds.org/conservationissues/birding/reserve_guide.pdf)
- Asociación Conservación de la Naturaleza. (2008). *Voluntad de Conservar: Experiencias seleccionadas de conservación por la Sociedad civil en Iberoamérica*. San José, Costa Rica: Asociación Conservación de la Naturaleza.
- Astorga, A., and Nuñez-Avila, N. (2012). *Definición de Criterios de Incorporación y Permanencia para Áreas Privadas Protegidas y Comunitarias*. Consultoría realizada para GEF-SIRAP y ASI Conserva Chile A.G. Santiago, Chile.
- Australian Government (2013). 'NRS Land Purchase Project – MERI Plan template'. <http://www.environment.gov.au/system/files/pages/46ff7210-376f-4402-9883-7a6f74b89fb5/files/landpurchasemeriplan.doc>
- Ayala, L. (2010). *RPPN Mata Atlântica. Empresas aliadas da natureza*. The Nature Conservancy SOS Mata Atlântica Conservação Internacional. São Paulo, Brazil.
- Beck, M.W., Marsh, T.D., Reisewitz, S.E. and Bortman, M.L. (2004). 'New tools for marine conservation: the leasing and ownership of submerged lands'. *Conservation Biology* 18: 1214-1223.
- Bernstein, J. and Mitchell, B.A. (2005). 'Land trusts, private reserves and conservation easements in the United States'. *Parks* 15: 48-60.
- Bertzky, B., Corrigan, C., Kemsey, J., Kenney, S., Ravillious, C., Besançon, C. and Burgess, N. (2012). *Protected Planet Report 2012: Tracking progress towards global targets for protected areas*. Gland, Switzerland and Cambridge, UK: IUCN and UNEP-WCMC. [http://www.unep-wcmc.org/ppr2012\\_903.html](http://www.unep-wcmc.org/ppr2012_903.html)
- Bezaury-Creel, J.E., Fco, J., Torres R.F., Ochoa-Ochoa L.M. and Castro-Campos, M. (2011). Áreas naturales protegidas y otros espacios destinados a la conservación, restauración y uso sustentable de la biodiversidad en México. The Nature Conservancy-México. México D.F. Formato mapa.
- Bezaury-Creel, J.E., Ochoa Ochoa, L.M., Fco, J. and Torres-Origel, R.F. (2012). *Base de Datos Geográfica de las Reservas de Conservación Privadas y Comunitarias en México - Versión 2.1 Diciembre 31, 2012*. The Nature Conservancy. 2 Capas ArcGIS 9.2 + 1 Capa Google Earth KMZ + 1 Archivo de Metadatos en texto. Unpublished (AP\_Privadas\_Sociales\_ccl\_93)
- Bishop, K., Dudley, N., Phillips, A. and Stolton, S. (2004). *Speaking a Common Language*. Gland, Switzerland and Cardiff, UK: IUCN and University of Cardiff.
- Blomley, T., Roe, D., Nelson, F. and Flintan, F. (2013). 'Land grabbing: is conservation part of the problem or the solution?' *IIED Briefing* September 2012, London, UK: IIED. [pubs.iied.org/17166IIED](http://pubs.iied.org/17166IIED)
- Borrini-Feyerabend, G., Dudley, N., Sandwith, T., Stevens, S., Kothari, A., Lassen, B., Berghofer, A., Balasinorwala, T., Budhatoki, P. and Bhatt, S. (2008). *Implementing the CBD Programme of Work on Protected Areas, Governance as key for effective and equitable protected area systems*. Briefing note 8, February 2008.
- Borrini-Feyerabend, G., Dudley, N., Jaeger, T., Lassen, B., Pathak Broome, N., Phillips, A. and Sandwith, T. (2013). *Governance of Protected Areas: From understanding to action*. Best Practice Protected Area Guidelines Series No. 20, Gland, Switzerland: IUCN.
- Bottema, M. and Bush, S. (2012). 'The durability of private sector-led marine conservation: A case study of two entrepreneurial marine protected areas in Indonesia'. *Ocean & Coastal Management*, 61:38-48.
- Bradby, K. (2013.) 'Gondwana Link – 1000 kilometres of hope'. In: J. Fitzsimons, I. Pulsford and G. Wescott (eds.) *Linking Australia's Landscapes: Lessons and Opportunities from Large-scale Conservation Networks* ). pp 25-35., Melbourne, Australia: CSIRO Publishing.
- Brandenburg Wilderness Foundation (2014). [www.stiftung-nlb.de/](http://www.stiftung-nlb.de/)
- Brendle, U. (2006). 'Naturschutz im Spannungsfeld zwischen staatlicher Aufgabe und bürgerschaftlichem Engagement'. *Natur und Landschaft* 81(1): 39-42. [Trans. Tobias Garstecki. 'Nature conservation between State responsibility and Civil Society commitment'.]
- Brewer, R. (2003). *Conservancy: The Land Trust Movement in America*. Dartmouth College.
- Buchemi de Oliveira, B., Pereira-Paglia, A., Fonseca, M. and Guimarães, E. (2010). *RPPN Mata Atlântica. RPPN e Biodiversidade: o Papel das Reservas Particulares na proteção da biodiversidade da Mata Atlântica*. Conservação Internacional, Fundação SOS Mata Atlântica and The Nature Conservancy (TNC). Belo Horizonte.
- Cadman, M., Petersen, C., Driver, A., Sekhran, N., Maze, K. and Munzhedzi, S. (2010). *Biodiversity for Development: South Africa's landscape approach to conserving biodiversity and promoting ecosystem resilience*. Pretoria: South African National Biodiversity Institute.

- Canadian Council on Ecological Areas (CCEA) (2008). *Canadian Guidebook for the Application of IUCN Protected Areas Categories*. Ottawa, Ontario, Canada.
- Carter, E., Adams, W.M. and Hutton, J. (2008). 'Private protected areas: management regimes, tenure arrangements and protected area categorization in East Africa.' *Oryx* 42: 177-186.
- Castro, R. and Borges, M.E. (2004). RPPN: *Conservação em Terras Privadas - desafios para a sustentabilidade*. Edições CNRPPN. Planaltina do Paraná (in Portuguese).
- CBD (2004). *Programme of Work on Protected Areas (UNEP/CBD/COP/7/21)*. Montreal, Canada: Secretariat of the Convention on Biological Diversity.
- Central Government of the People's Republic of China (2008). 'The State Council's decision on promoting the collective forest tenure reform'. [www.gov.cn/jrzq/200807/14/content\\_1044403.htm](http://www.gov.cn/jrzq/200807/14/content_1044403.htm). Accessed April, 2014.
- Chacón, C.M. (ed.) (2008). *Voluntad de Conservar : Experiencias seleccionadas de conservación por la Sociedad civil en Iberoamérica*. The Nature Conservancy and Fundación Biodiversidad.
- Chang, K. (2010). *2010 National Land Trust Census Report*. Washington, DC: Land Trust Alliance.
- Chen, W. (2013). 'Laohegou: a reform and opening-up of protected area'. *China News Week*, 18 March, 2013: 46-48.
- Child, M.F., Peel, M.J.S., Smit, I.P.J. and Sutherland, W.J. (2013). 'Quantifying the effects of diverse private protected area management systems on ecosystem properties in a savannah biome, South Africa'. *Oryx* 47: 29-40.
- Chilean Plants. (2014). <http://chileanplants.rbge.org.uk/en/index.php/conservation/> Accessed 10 April, 2014.
- Cifuentes, M., Izurieta, A., and Faria, H.H. (2000). *Medición de la Efectividad del Manejo de Areas Protegidas*. Turrialba, Costa Rica: WWF; IUCN; GTZ.
- City Press (2013). [www.citypress.co.za/politics/sa-land-private-hands-survey/](http://www.citypress.co.za/politics/sa-land-private-hands-survey/) Accessed 9 April, 2014.
- CNRPPN – Confederação Nacional de RPPNs. (2014). [www.rppnbrasil.org.br/](http://www.rppnbrasil.org.br/). Accessed 20 September 2014.
- CNUC – Cadastro Nacional de Unidades de Conservação. (2013). [www.mma.gov.br/areas-protegidas/cadastro-nacional-de-ucs](http://www.mma.gov.br/areas-protegidas/cadastro-nacional-de-ucs). Accessed 5 September 2013.
- Colinvaux, R. (2012). 'The Conservation Easement Tax Expenditure': In 'Search of Conservation Value'. *Columbia Journal of Environmental Law* 37 (1).
- Costa, C.M.R. (2006). *Potencial para a implantação de Políticas de Incentivo às RPPNs*. Belo Horizonte, Brazil: Fundação SOS Mata Atlântica; The Nature Conservancy.
- Cousins, J.A., Sadler, J. P. and Evans, J. (2008). 'Exploring the role of private wildlife ranching as a conservation tool in South Africa: Stakeholder perspectives'. *Science and Society* 13 (2): 43.
- Cowell, S. and Williams, C. (2006). 'Conservation through buyer diversity: a key role for not-for-profit land-holding organizations in Australia'. *Ecological Management and Restoration* 7: 5-20.
- Coveney, J. (1993). 'Planning for areas adjacent to national parks in Victoria'. *Urban Policy & Research* 11 (4): 208-216.
- Crofts, R. and Phillips, A. (2013). 'Putting Nature on the Map: Applying the IUCN Protected Areas Management Categories in the UK', *PARKS* 20.1, Gland, Switzerland: IUCN.
- Crosthwaite, J., Fitzsimons, J., Stanley, J. and Greacen, J. (2013). 'Networking the networks: coordinating Conservation Management Networks in Victoria'. In J. Fitzsimons, I. Pulsford and G. Wescott (eds.). *Linking Australia's Landscapes: Lessons and Opportunities from Large-scale Conservation Networks*, pp 209-220. Melbourne Australia: CSIRO Publishing.
- Crouzeilles, R., Vale, M.M., Cerqueira, R. and Grelle, C.E.V. (2012). 'Increasing strict protection through protected areas on Brazilian private lands'. *Environmental Conservation* 40: 209-210.
- Culmsee, H. and Kathke, S. (2012). *Protokoll - AG 2: Monitoring – Wunsch und Wirklichkeit*. Osnabrück and Erfurt: Nationales Netzwerk Natur und Naturstiftung. [Trans. Tobias Garstecki. *Protocol – Working Group 2: Monitoring – wishes and reality*] [www.netzwerk-nationales-naturerbe.de/123artikel33669\\_2093.html](http://www.netzwerk-nationales-naturerbe.de/123artikel33669_2093.html). Accessed on 14 September 2013
- Cumming, T. (2013). *Review of fiscal incentives for biodiversity and ecosystem services*. [Report produced for ProEcoServ project, August 2013.] Pretoria: South African National Biodiversity Institute.
- Day, J., Dudley, N., Hockings, M., Holmes, G., Laffoley, D., Stolton, S., and Wells, S. (2012). *Guidelines for applying the IUCN Protected Area Management Categories to Marine Protected Areas*. Gland, Switzerland: IUCN.
- de Groot, J. and Bush, S.R. (2010). 'The potential for dive tourism led entrepreneurial marine protected areas in Curacao'. *Marine Policy* 34:1051-1059.

- de la Maza-Elvira, R.G. and de la Maza-Elvira, J. (2005). *Historia de las Áreas Naturales Protegidas de México*. Programa de Agua Medio Ambiente y Sociedad. Documento de Trabajo Núm. 5. El Colegio de México, Fundación Gonzalo Río Arronte, I.A.P., Universidad Nacional Autónoma de México. México D.F. 34 pp.
- Disselhoff, T. (2013). 'Die Land Trust-Bewegung in den USA'. In: F. Brickwedde, R. Stock and K. Geißinger (eds.) *Netzwerk Naturerbe – ein National Trust für Deutschland?*, S. 22–25. Osnabrück: DBU. [Trans. Tobias Garstecki. 'The Land Trust Movement in the USA'. In: F. Brickwedde, R. Stock and K. Geißinger (eds.) *The Network Natural Heritage – a National Trust for Germany?*, pp.13–21. Osnabrück: DBU, 2012]. [www.dbu.de/643publikation1221.html](http://www.dbu.de/643publikation1221.html). Accessed on 14 September 2013
- Do-won, L. (2004). *Korea's traditional ecological knowledge*, Seoul, Sa Yieonseubukseu (in Korean).
- Driver A., Sink, K.J., Nel, J.N., Holness, S., Van Niekerk, L., Daniels, F., Jonas, Z., Majiedt, P.A., Harris, L. and Maze, K. (2012). *National Biodiversity Assessment 2011: An assessment of South Africa's biodiversity and ecosystems. Synthesis Report*. Pretoria: South African National Biodiversity Institute and Department of Environmental Affairs.
- DSEWPC (2012). 'Tax concessions for landowners who enter into conservation covenants'. Available: [www.environment.gov.au/node/13916](http://www.environment.gov.au/node/13916). Accessed on 14 July 2014.
- Dudley, N. (ed.) (2008). *Guidelines for Applying Protected Area Management Categories*. Gland, Switzerland: IUCN. x + 86pp. WITH Stolton, S., Shadie, P. and Dudley, N. (2013). *IUCN WCPA Best Practice Guidance on Recognising Protected Areas and Assigning Management Categories and Governance Types, Best Practice Protected Area Guidelines Series No. 21*. Gland, Switzerland: IUCN
- EBCF – Empresa Brasileira de Conservação de Florestas (2013). *Reserva Particular de Desenvolvimento Sustentável*. [website]. [www.ebcf.com.br/atividades-ebcf/criacao-e-gestao-de-rpds/](http://www.ebcf.com.br/atividades-ebcf/criacao-e-gestao-de-rpds/). Accessed 5 September 2013.
- Elliott, J., King, D.M., Gibbons, H. and Leménager, T. (in prep.). 'Greater Than the Sum of Their Parts': Exploring the Environmental Complementarity of Different Types of Protected Areas in Kenya. FOCALLES. Paris, France: Agence Française de Développement (AFD).
- Environment Canada (2011). 'Backgrounder: Natural Areas Conservation Program'. <http://www.ec.gc.ca/default.asp?lang=En&n=FEF1141D-1&news=FF339FA8-CB6C-421E-8686-FAA79A544125>
- Environmental Law Institute. (2003). *Legal tools and incentives for private lands conservation in Latin America: Building models for success*, Washington, DC, USA: Environmental Law Institute.
- Ervin, J. (2003). *Rapid Assessment and Prioritization of Protected Area Management (RAPAM) Methodology*. Gland, Switzerland: WWF.
- Ewing, K. (2008). 'Conservation covenants and community conservation groups: Improving the protection of private lands'. *New Zealand Journal of Environmental Law* 12: 315-337.
- Fairhead, J., Leach, M. and Scoones I. (2012). 'Green Grabbing: a new appropriation of nature?', *Journal of Peasant Studies* 39:2, 237-261.
- Fernández, M. and Castilla, J.C. (2005). Marine Conservation in Chile: Historical Perspective, Lessons, and Challenges. *Conservation Biology* 19 (6): 1752-1762.
- Figgis, P. (2004). *Conservation on Private Lands: the Australian Experience*, pp i-31. Gland, Switzerland and Cambridge, UK: IUCN.
- Figgis, P., Fitzsimons, J. and Irving, J. (eds). (2012). *Innovation for 21<sup>st</sup> Century Conservation*. Australian Committee for IUCN, Sydney.
- Fishburn, I.S., Boyer, A.G., Kareiva, P., Gaston, K. and Armsworth, P.R. (2013). 'Changing spatial patterns of conservation investment by a major land trust'. *Biological Conservation* 161: 223-229.
- Fisher, J.R.B. and Dills, B. (2012). 'Do Private Conservation Activities Match Science-Based Conservation Priorities?' *PLoS ONE* 7:e46429.
- Fitzsimons, J.A. (2006). 'Private Protected Areas? Assessing the suitability for incorporating conservation agreements over private land into the National Reserve System: A case study of Victoria'. *Environmental and Planning Law Journal* 23, 365-385.
- Fitzsimons, J. and Carr, B. (2007). *Evaluation of the Effectiveness of Conservation Covenanting Programs in Delivering Biodiversity Conservation Outcomes*. [Report for the Australian Government's Department of Environment and Water Resources.] Melbourne, Australia: Bush Heritage Australia.
- Fitzsimons, J. and Looker, M. (2012). 'Innovative approaches to land acquisition and conservation management: the case of Fish River Station, Northern Territory'. In: P. Figgis, J. Fitzsimons, and J. Irving (eds.) *Innovation for 21<sup>st</sup> Century Conservation*, pp. 78-85. Sydney: Australian Committee for IUCN.
- Fitzsimons, J. and Wescott, G. (2001). 'The role and contribution of private land in Victoria to biodiversity conservation and the protected area system'. *Australian Journal of Environmental Management* 8, 142-157.

- Fitzsimons, J. and Wescott, G. (2005). 'History and attributes of selected Australian multi-tenure reserve networks'. *Australian Geographer* 36: 75-93.
- Fitzsimons, J.A. and Wescott, G. (2008). 'Ecosystem conservation in multi-tenure reserve networks: the contribution of land outside publicly protected areas'. *Pacific Conservation Biology* 14: 250-262.
- Fitzsimons, J., Pulsford, I. and Wescott, G. (eds.) (2013). *Linking Australia's Landscapes: Lessons and Opportunities from Large-scale Conservation Networks*. Melbourne, Australia: CSIRO Publishing.
- Fonseca, G. (1994). 'Situação atual: áreas de conservação de caráter privado – modelos alternativos e incentivos'. In: *Workshop Áreas de Conservação de Caráter Privado: modelos alternativos de incentivo*. pp. 20-22. Rio de Janeiro: Instituto Iguazu de Pesquisa e Preservação Ambiental.
- Fonseca, M., Lamas, I., Pinto, L.P., Guimarães, E. and Hirota, M. (2006). 'Programa de incentivo a las reservas particulares del patrimonio natural para los biomas brasileños y la importancia de las reservas para la protección y conservación de la biodiversidad'. In: *Congreso Interamericano de Conservación en Tierras Privadas*. pp 204-206. Cartagena de Indias: The Nature Conservancy et.al.
- Galindo-Leal, C. and de Gusmão Câmara I. (eds.) (2003). *The Atlantic Forest of South America: Biodiversity status, threats and outlook*. Washington DC: Island Press.
- Gallo, J.A., Pasquini, L., Reyers, B. and Cowling, R.M. (2009). 'The role of private conservation areas in biodiversity representation and target achievement within the little Karoo region, South Africa'. *Biological Conservation* 142: 446-454.
- Gazenbeek, A. (2013). 'Der National Trust in England und Netzwerke von Naturschutzflächeneigentümern in den Benelux-Staaten'. In: F. Brickwedde, R. Stock and K. Geißinger (eds.) *Netzwerk Naturerbe – ein National Trust für Deutschland?*, S. 33-42. Osnabrück: DBU. [Trans. Tobias Garstecki. 'The National Trust in England and Networks of Protected Area Owners in the Benelux States'. In: F. Brickwedde, R. Stock and K. Geißinger (eds.) *The Network Natural Heritage – a National Trust for Germany?*, pp.33-42. Osnabrück: DBU, 2012]. [www.dbu.de/643publikation1221.html](http://www.dbu.de/643publikation1221.html). Accessed on 14 September 2013
- Gibbons, H. and Kaelo, D. (2013). *Assessing the Environmental Complementarity of Different Types of Protected Areas in Kenya - A Case Study of the Maasai Mara Landscape*. Report to Agence Francais de Developpement (AFD).
- Gondwana Collection (2008). *Management and Development Plan for the Gondwana Cañon Park. 2008-2013*. Gondwana Collection. Windhoek.
- Gondwana Collection (2013). *Management and Development Plan for the Gondwana Namib Park. 2013-2018*. Gondwana Collection. Windhoek.
- Gorte, R.W., Vincent, C.H., Hanson, L.A. and Rosenblum, M.R. (2012). *Federal land ownership: overview and data*. Congressional Research Service. 7-5700.
- Government of British Columbia (2004). 'News Release: \$8 Million to Create BC Trust for Public Lands, Ministry of Sustainable Resource Management Ministry of Water, Land and Air Protection. [www2.news.gov.bc.ca/archive/2001-2005/2004srm0036-000815.htm](http://www2.news.gov.bc.ca/archive/2001-2005/2004srm0036-000815.htm)
- Government of Canada (2006). *Canadian Protected Areas Status Report 2000-2005*, Ottawa, Ontario, Canada. Accessed on 14 July 2014.
- Government of South Africa (2010). *National Protected Area Expansion Strategy for South Africa 2008*. Department of Environmental Affairs, Pretoria.
- Government Printing Office (2005a). 'Code of Federal Regulations, 26CFR1.170 et seq.' [www.law.cornell.edu/uscode/html/uscode26/usc\\_sec\\_26\\_00000170----000-.html](http://www.law.cornell.edu/uscode/html/uscode26/usc_sec_26_00000170----000-.html) Accessed on 14 July 2014.
- Government Printing Office (2005b). 'Internal Revenue Code, Sec. 2031(c)'. [www.law.cornell.edu/uscode/text/26/2031](http://www.law.cornell.edu/uscode/text/26/2031) Accessed on 14 July 2014.
- Graham, J., Amos, B. and Plumtre, T. (2003). *Governance principles for protected areas in the 21<sup>st</sup> century, a discussion paper*, Ottawa: Institute on Governance in collaboration with Parks Canada and Canadian International Development Agency.
- Groves, C.R., Kutner, L. S., Stoms, D.M., Murray, M.P., Scott, J.M., Schafale, M., Weakley, A.S. and Pressey, R.L. (2000). 'Owning up to our Responsibilities: Who Owns Lands Important for Biodiversity?', in B.A.Stein, L.S. Kutner and J.S. Adams (eds.), *Precious Heritage: The Status of Biodiversity in the United States*, pp. 275-300. Oxford: Oxford University Press.
- Hanley, N., Banerjee, S., Lennox, G.D. and Armsworth, P.R. (2012). 'How should we incentivize private landowners to "produce" more biodiversity?' *Oxford Review of Economic Policy* 28: 93-113.
- Hannah, L. (2006). 'Governance of Private Protected Areas in Canada: Advancing the Public Interest?'. PhD Dissertation. Victoria, British Columbia, Canada: University of Victoria.
- Historical Foundation (2014). *The Canadian Encyclopedia (including the Encyclopedia of Music in Canada)*, [www.thecanadianencyclopedia.com/articles/crown-land](http://www.thecanadianencyclopedia.com/articles/crown-land) Accessed on 14 July 2014.
- HMRC (2014). <http://www.hmrc.gov.uk/individuals/giving/basics.htm>

- Hockings, M, Stolton, S., Leverington, F., Dudley, N. and Corrau, J. (2006). *Evaluating Effectiveness: A framework for assessing management effectiveness of protected areas*. 2<sup>nd</sup> Edition. Gland, Switzerland and Brisbane, Australia: IUCN WCPA and University of Queensland.
- Hodge, I.D. and Adams, W.M. (2012). 'Neoliberalisation, rural land trusts and institutional blending'. *Geoforum* 43: 472-482.
- Holmes, G. (2013a). 'What role do private protected areas have in conserving global biodiversity?' Sustainability Research Institute. University of Leeds. [www.see.leeds.ac.uk/fileadmin/Documents/research/sri/workingpapers/SRIPs-46.pdf](http://www.see.leeds.ac.uk/fileadmin/Documents/research/sri/workingpapers/SRIPs-46.pdf) Accessed on 14 July 2014.
- Holmes, G. (2013b). 'Protected areas and land grabbing in southern Chile'. [povertyandconservation.info/sites/default/files/Holmes%20-%20Private%20protected%20areas%20and%20land%20grabbing%20in%20Southern%20Chile\\_0.pdf](http://povertyandconservation.info/sites/default/files/Holmes%20-%20Private%20protected%20areas%20and%20land%20grabbing%20in%20Southern%20Chile_0.pdf) Accessed on 14 July 2014.
- Huang, F., Li, X., Zhou, F. and Deng, F. (2002). Primary study on fauna and flora resources at Wanheshan egret forest in Fangchenggang City of Guangxi Province. *Guangxi Forestry Sciences* 31(1): 29-31.
- INEGI – Instituto Nacional de Estadística y Geografía (2009a). *Estados Unidos Mexicanos. Censo Agropecuario 2007, IX Censo Ejidal. Superficie total de ejidos y comunidades Agrarias según distribución interna de la tierra por entidad federativa*. Aguascalientes, Ags. [www3.inegi.org.mx/sistemas/tabuladosbasicos/LeerArchivo.aspx?ct=2810&c=15687&s=est&f=1](http://www3.inegi.org.mx/sistemas/tabuladosbasicos/LeerArchivo.aspx?ct=2810&c=15687&s=est&f=1) Accessed 6 September 2013.
- INEGI – Instituto Nacional de Estadística y Geografía (2009b). *Estados Unidos Mexicanos. Censo Agropecuario 2007, IX Censo Ejidal. Superficie parcelada según uso agrícola y riego por entidad federativa*. Aguascalientes, Ags. [www3.inegi.org.mx/sistemas/tabuladosbasicos/LeerArchivo.aspx?ct=2812&c=15687&s=est&f=1](http://www3.inegi.org.mx/sistemas/tabuladosbasicos/LeerArchivo.aspx?ct=2812&c=15687&s=est&f=1) <http://www3.inegi.org.mx/sistemas/tabuladosbasicos/LeerArchivo.aspx?ct=2810&c=15687&s=est&f=1> Accessed 6 September 2013.
- INEGI – Instituto Nacional de Estadística y Geografía (2012). *Censo Agropecuario 2007. El recurso de la tierra en las unidades de producción*. Instituto Nacional de Estadística y Geografía, Universidad de Guadalajara. México. vii + 47 pp.
- IUCN NCUK (2012). *Putting nature on the map – identifying protected areas in the UK: A handbook to help identify protected areas in the UK and assign the IUCN management categories and governance types to them*. IUCN National Committee for the United Kingdom.
- Johst, A. and Unselt, C. (2012). 'Die Sicherung des Nationalen Naturerbes'. In: M. Succow, L. Jeschke, and H.D. Knapp (eds.) *Naturschutz in Deutschland*, pp. 255-262. Berlin: Ch. Links. [Trans. Tobias Garstecki. 'Securing the National Natural Heritage'. In: M. Succow, L. Jeschke and H.D. Knapp (eds.) *Nature Conservation in Germany*, pp. 255-262. Berlin: Ch. Links., 2012].
- Kamal, S., Grodzińska-Jurzcak, M. and Brown, G. (2014). 'Conservation on private land: A review of global strategies with a proposed classification system'. *Journal of Environmental Planning and Management*. <http://dx.doi.org/10.1080/09640568.2013.875463>.
- Kiesecker, J.M., Comendant, T., Grandmason, T., Gray, E., Hall, C., Hilsenbeck, R., Kareiva, P., Lozier, L., Naehu, P., Rissman, A., Shaw, M.R. and Zankel, M. (2007). 'Conservation Easements in Context: A Quantitative Analysis of their Use by the Nature Conservancy'. *Frontiers in Ecology and the Environment* 5: 125-130.
- King, D.M., Lemenager, T. and King, A. (2013). *Exploring Environmental Complementarity of Protected Areas (State, Community and Private) in the Ewaso Ecosystem – Case Study*. Report to Agence Francais de Developpement (AFD).
- Knight, A.T., Cowling, R. M., Difford, M. and Campbell, B.M. (2010). 'Mapping human and social dimensions of conservation opportunity for the scheduling of conservation action on private land'. *Conservation Biology* 24: 1348-1358.
- KPAF (2013). *Korean Protected Areas in WDPA*, Korea Protected Areas Forum, Seoul. Presentation at the 1<sup>st</sup> Asian World Parks Congress. [asia-parks.org/pdf/wg3/APC\\_WG6-19\\_Sung-gon%20Kim.pdf](http://asia-parks.org/pdf/wg3/APC_WG6-19_Sung-gon%20Kim.pdf) Accessed 14 June 2014.
- Kreuter, U., Peel, M. and Warner, E. (2010). 'Wildlife Conservation and Community-Based Natural Resource Management in Southern Africa's Private Nature Reserves', *Society and Natural Resources*, 23: 507-524.
- KWCA (2014). 'About KWCA'. [kwcakenya.com/page/about](http://kwcakenya.com/page/about). Accessed 14 June 2014.
- Langholz, J.A. and Kerley, G.I.H. (2006). *Combining conservation and development on private lands: An assessment of ecotourism-based private game reserves in the Eastern Cape*. Centre for African Conservation Ecology. Report No. 56.
- Langholz, J.A. and Krug, W. (2004). New forms of biodiversity governance: Non-state actors and the private protected area action plan. *Journal of International Wildlife Law and Policy* 7: 9-29.
- Langholz, J.A. and Lassoie, J.P. (2001). 'Perils and promise of privately owned protected areas'. *BioScience* 51: 1079-1085.
- Langholz, J., Lassoie, J. and Schelhas, J. (2000). 'Incentives for biological conservation: Costa Rica's private wildlife refuge program'. *Conservation Biology* 14: 1735-1743.

- sLausche, B. (2011). *Guidelines for protected area legislation*. Gland, Switzerland: IUCN. Xxvi + 370 pp.
- Li, S., He, X., Feng, J. and Mao, C. (2010). 'Conservation agreement program: a new conservation model incorporating the strengths of government-led and community-based initiatives'. In: D. Yang (ed.) *Annual Report on Environment and Development of China*, pp 174-180. Beijing: Social Science and References Press.
- Liao, Y and Zhou, X. (2007). 'Discussion on private management and operation of natural protected areas'. *Guangdong Forestry and Technology* 23(3): 90-93.
- Lindsey, P. (2011). *An analysis of game meat production and wildlife-based land uses on freehold land in Namibia: Links with food security*. Harare: TRAFFIC, East/Southern Africa.
- Liu, G., Wan, J., Zhang, H. and Cai, L. (2008). 'Eco-compensation policies and mechanisms in China'. *Review of European Community & International Environmental Law* 17(2): 234-242.
- LoBue, C. and Udelhoven, J. (2013). 'Private ownership of underwater lands in Great South Bay, New York: A case study in degradation, restoration and protection'. *Marine Policy* 41: 103-109.
- Lopes de Melo, A. and Silva da Motta, P.C. (N.d). *Biodiversidade, serviços ambientais e reservas particulares do patrimônio natural (RPPN) na Mata Atlântica*.
- Mascia, M.B., Pailler, S., Krithivasan, R., Roshchanka, V., Burns, D., Mlotha, M.J., Murray, D.R. and Peng, N. (2014). 'Protected area downgrading, downsizing, and degazettement (PADDD) in Africa, Asia, and Latin America and the Caribbean, 1900–2010'. *Biological Conservation* 169: 355–361.
- McLaughlin, N. (2012). 'Extinguishing and Amending Tax-Deductible Conservation Easements: Protecting the Federal Investment After Carpenter, Simmons, and Kaufman'. *Florida Tax Review*. Vol. 13(5).
- Mesquita, C.A.B. (2008). 'Cuando lo privado se vuelve público: conservación de la diversidad biológica en tierras privadas en Brasil. In: Asociación Conservación de la Naturaleza'. *Voluntad de Conservar: experiencias seleccionadas de conservación por la sociedad civil en Iberoamérica*. pp. 34-45. San José, Costa Rica: Asociación Conservación de la Naturaleza.
- Ministry of Environment Protection (2001). 'Decision on national awards to standouts on environment protection'. *China Environment Daily*, 9 February 2001. [www.envir.gov.cn/info/2001/2/29789.htm](http://www.envir.gov.cn/info/2001/2/29789.htm) Accessed 14 June 2014.
- Ministry of Environment Protection (2005). 'Regulation on the management of nature reserves, People's Republic of China'. [www.gov.cn/ziliao/flfg/2005-09/27/content\\_70636.htm](http://www.gov.cn/ziliao/flfg/2005-09/27/content_70636.htm) Accessed 14 June 2014.
- Mitchell, B. (ed.) (2005). 'Private Protected Areas', *PARKS* 15:2, Gland, Switzerland: IUCN.
- MMA. (2011). 'Sistematización y recopilación de información directa de dos bases de datos pertenecientes a estudios sobre las iniciativas de conservación privadas'. Santiago, Chile: Ministerio del Medio Ambiente.
- Monteferri, B. and Coll, D. (2009). *Private conservation in Amazonian countries*. Peruvian Society for Environmental Law.
- Morris, A.W. and Rissman, A.R. (2009). 'Public access to information on private land conservation: tracking conservation easements'. *Wisconsin Law Review* Nov-Dec 2009: 1237-1282.
- Morsello, C. (2001). *Áreas protegidas públicas e privadas: seleção e manejo*. São Paulo, Brasil: Annablume.
- NABU-Stiftung Nationale Naturerbe (2013). *Wie wir Paradies retten. Jahresberichte der NABU-Stiftung Nationale Naturerbe*. [Trans. Tobias Garstecki. How We Save Paradises. Annual Reports] <http://naturerbe.nabu.de/stiftung/jahresberichte/index.html> Accessed 14 September 2013.
- Nature Conservancy Council (1989). *Guidelines for selection of biological SSSIs*, Peterborough, UK.
- Nature Conservancy of Canada (2014). 'News Story: Natural Areas Conservation Program: The largest commitment by any Canadian government', [www.natureconservancy.ca/en/what-we-do/conservation-program/](http://www.natureconservancy.ca/en/what-we-do/conservation-program/) Accessed 14 September 2013.
- Naughton-Treves, L. and Sanderson, S.E. (1995). 'Property, politics and wildlife conservation'. *World Development* 23: 1265-1275.
- NRMCC (2005). *Directions for the National Reserve System: A partnership approach*. Canberra, Australia: Natural Resources Management Ministerial Council.
- NRMCC (2009). *Australia's Strategy for the National Reserve System 2009–2030*. Canberra, Australia: Natural Resources Management Ministerial Council.
- Nuñez-Avila, M., Corcuera, E., Farias, A., Pliscoff, P., Palma, J., Barrientos, M. and Sepulveda, C. (2013). *Diagnóstico y Caracterización de Iniciativas de Conservación Privada en Chile*. [para proyecto MMA/GEF-PNUD 'Creación de un Sistema Nacional de Integral de Áreas Protegidas para Chile: Estructura Financiera y Operacional']. Santiago, Chile. Fundación Senda Darwin and ASI Conserva Chile A.G.
- Ochoa-Ochoa, L., Urbina-Cardona, J.N., Vázquez, L.-B., Flores-Villela, O. and Bezaury-Creel, J. (2009). 'The Effects of Governmental Protected Areas and Social Initiatives for Land Protection on the Conservation of Mexican Amphibians'. *PLoS ONE* 4(9): e6878. doi:10.1371/journal.pone.0006878



- Pádua, M.T.J. (2006) 'Vitimando as reservas particulares'. (10 February 2006). [www.oeco.org.br/maria-tereza-jorge-padua/16267-oeco\\_15658](http://www.oeco.org.br/maria-tereza-jorge-padua/16267-oeco_15658). Accessed 28 November 2013.
- Papayannis, T. and Mallarach, J.M. (eds.) (2009). *The Sacred Dimension of Protected Areas*. Gland, Switzerland: IUCN.
- Pasquini, L., Fitzsimons, J.A., Cowell, S., Brandon, K. and Wescott, G. (2011). 'The establishment of large private nature reserves by conservation NGOs: key factors for successful implementation'. *Oryx* 45: 373-380.
- Pearse, R. (2012). 'Henbury Station – an industry perspective on financing conservation for carbon and biodiversity markets'. In P. Figgis, J. Fitzsimons and J. Irving (eds): *Innovation for 21<sup>st</sup> Century Conservation*. pp. 172-179. Sydney: Australian Committee for IUCN.
- Peck, J. and Tickell, A. (2002). 'Neoliberalizing space'. *Antipode* 34, 380-404.
- Pellin, A. (2010). 'Avaliação dos aspectos relacionados à criação e manejo de Reservas Particulares do Patrimônio Natural no Estado do Mato Grosso do Sul, Brasil'. PhD thesis. São Paulo: Universidade de São Paulo.
- Pellin, A. and Ranieri, V.E.L. (2009). 'Motivações para o estabelecimento de RPPNs e análise dos incentivos para sua criação e gestão no Mato Grosso do Sul'. *Natureza & Conservação*. 7: 72-81.
- Rabie, A. and Burgers, C. (1997). *The Mountain Catchment Areas Act and its implementation*. SA Public Law vol.12(1).
- Rambaldi, D.M., Fernandes, R.V. and Schimidt, M.A.R. (2005). 'Private protected areas and their key role in the conservation of the Atlantic Forest biodiversity hotspot, Brazil'. *PARKS* 15.2: 30-38.
- Ramírez de Arellano, P. (2006). *Planificación Sistemática para la Conservación de la Ecoregión de Matorral Chileno: Definición de Sitios Prioritarios y Estrategias para su Validación y Conservación*. Informe preparado para The Nature Conservancy, Chile.
- Ranieri, V.E.L. (2004). 'Reservas Legais: critérios para localização e aspectos de gestão'. PhD thesis. São Paulo: Universidade de São Paulo.
- Reyes, J.A., Gómez, J.P., Muis, R.O., Zavala, R., Ríos, G.A. and Villalobos O. (2012). *Atlas de Propiedad Social y Servicios Ambientales en México*. 157 pp. México: Instituto Interamericano de Cooperación para la Agricultura. Cooperación Técnica Registro Agrario Nacional - Instituto Interamericano de Cooperación para la Agricultura.
- Rissman, A.R. (2013). 'Rethinking property rights: comparative analysis of conservation easements for wildlife conservation'. *Environmental Conservation* doi:10.1017/S0376892913000015
- Rissman, A.R. and Sayre, N.F. (2012). 'Conservation outcomes and social relations: A comparative study of private ranchland conservation easements'. *Society and Natural Resources* 25: 523-538.
- Rodrigues, K. (2006). 'Burocracia emperra criação das Reservas Particulares do Patrimônio Natural'. [website] (2006). [www.rppncatarinense.org.br/hp/noticias.asp?p\\_codmnu=&p\\_codnot=31](http://www.rppncatarinense.org.br/hp/noticias.asp?p_codmnu=&p_codnot=31). Accessed 27 September 2013.
- Saavedra, B., Simonetti, J.A. and Redford, K.H. (2011). 'Private conservation: the example that the Wildlife Conservation Society builds from Tierra del Fuego'. In E. Figueroa B. (ed.) *Biodiversity Conservation in the Americas: Lessons and Policy*. Santiago, Chile: FEN-Universidad de Chile. Besegra Ltd.
- Sabaté, X., Basora, X., O'Neill, C., and Mitchell, B. (2013). *Caring together for nature. Manual on land stewardship as a tool to promote social involvement with the natural environment in Europe*. LandLife documents. First edition 2013.
- Savage, J., Osborne, P. and Hudson, M. (2013). 'Abundance and diversity of marine flora and fauna of protected and unprotected reefs of the Koh Rong Archipelago, Cambodia'. *Cambodian Journal of Natural History*. 2013 (2): 83-94.
- SCBD (2010). 'Decisions adopted by the Conference of the Parties to the Convention On Biological Diversity at its Tenth Meeting, Nagoya, Japan, 18-29 October 2010', Montreal, Canada: Secretariat to the Convention On Biological Diversity. [www.cbd.int/decisions/cop/?m=cop-10](http://www.cbd.int/decisions/cop/?m=cop-10) Accessed 27 June 2014.
- Scherfose, V. (2006). 'Gründerwerb als Mittel der dauerhaften Flächensicherung für Naturschutzzwecke'. In: Stiftung Naturschutzfonds Brandenburg (2006): *Strategische Ansätze des Naturschutzes - Umsetzung durch die Stiftung NaturSchutzFonds Brandenburg*, pp. 13-17. [Trans. Tobias Garstecki. *Land purchase as a means to permanently secure areas for nature conservation*].
- SECOFI - Secretaría de Comercio y Fomento Industrial (1993). *Ley de Inversión Extranjera*. Diario Oficial de la Federación 27/12/1993, last reform DOF 09/04/2012. México.
- Secretaría de Medio Ambiente y Recursos Naturales (1988). *Ley General del Equilibrio Ecológico y la Protección al Ambiente*. Diario Oficial de la Federación 28/01/1988, last reform DOF 04/06/2012. México. <http://www.diputados.gob.mx/LeyesBiblio/pdf/148.pdf> Accessed 09/09/2013. Accessed 27 September 2013.
- SEMARNAT - Secretaría de Medio Ambiente y Recursos Naturales (1988). *Ley General del Equilibrio Ecológico y la Protección al Ambiente*. Diario Oficial de la Federación 28/01/1988 (last reform DOF 04/06/2012). México. [www.diputados.gob.mx/LeyesBiblio/pdf/148.pdf](http://www.diputados.gob.mx/LeyesBiblio/pdf/148.pdf) Accessed 9 September 2013.

- Sepúlveda, C., Villaroel, P., Moreira, A. and Garcia, D. (1998). *Catastro de Iniciativas Privadas en Conservación de la biodiversidad Implementadas en Chile*. Documento de Trabajo N°49. Santiago, Chile: CIPMA.
- Shen, H. (1997). 'The means of environmental economy'. *Economy Research* 10: 54-61.
- Shen, X., Lu, Z., Li, S. and Chen, N. (2012). 'Tibetan sacred sites: understanding the traditional management system and its role in modern conservation'. *Ecology and Society* 17(2): 13.
- Silva, J.I.A.O. (2013). 'Conservation of natural resources in the semiarid region and development: the case of private preservation areas'. *Ambiente & Sociedade* 16: 77-96.
- SRA - Secretaría de la Reforma Agraria (1992). *Ley Agraria*. Diario Oficial de la Federación 26/02/1992, last reform DOF 09/04/2012. México.
- State Forestry Administration (2007). 'China Forestry Development Report'. [www.gov.cn/gzdt/2007-10/23/content\\_784200.htm](http://www.gov.cn/gzdt/2007-10/23/content_784200.htm) Accessed 9 September 2013.
- Stolton, S. and Dudley, N. (2007). *Company reserves. Integrating biological reserves owned and managed by commercial companies into the global protected areas network – a review of options*. Gland, Switzerland: WWF.
- Stolton, S., Hockings, M., Dudley, N., MacKinnon, K. and Whitten, T. (2003). *Reporting Progress in Protected Areas: A Site-Level Management Effectiveness Tracking Tool*. Gland, Switzerland: World Bank/WWF Alliance for Forest Conservation and Sustainable Use.
- Stolton, S., Shadie, P. and Dudley, N. (2013). *IUCN WCPA Best Practice Guidance on Recognising Protected Areas and Assigning Management Categories and Governance Types*, Best Practice Protected Area Guidelines Series No. 21, Gland, Switzerland: IUCN.
- Stratos Ltd (2012). *Evaluation of the Natural Areas Conservation Program – Final Report*. Ottawa, Ontario, Canada.
- Streitfeld, D. (2008). 'As prices rise, farmers spurn conservation program'. *New York Times*, 9 April 2008.
- Succow, M. (2013). 'Werdende Wildnis in Deutschland – Argumente, Potenziale, Umsetzung'. In: F. Brickwedde, R. Stock and K. Geißinger (eds.) *Netzwerk Naturerbe – ein National Trust für Deutschland?*, pp. 13-21. Osnabrück: DBU. [Trans. Tobias Garstecki. 'Wilderness in Germany – Arguments, Potentials, Implementation'. In: F. Brickwedde, R. Stock and K. Geißinger (eds.) *The Network Natural Heritage – a National Trust for Germany?*, pp.13-21. Osnabrück: DBU, 2012]. [www.dbu.de/643publikation1221.html](http://www.dbu.de/643publikation1221.html). Accessed on 14 September 2013.
- Sydee, J. and Beder, S. (2006). 'The right way to go? Earth Sanctuaries and market-based conservation'. *Capitalism Nature Socialism*, 17: 83-98.
- Tacón, A., Montenegro, I., Pineda, G. and Corcuera, E. (2012). *Diseño y Aplicación de una Herramienta Piloto de Evaluación de Efectividad de Manejo en Áreas Protegidas Privadas y de Pueblos Originarios*. Revista RedParques, FAO. Agosto 2012. <http://revistaparques.org/2012-2/articulos/disenyo-y-aplicacion-piloto-de-una-herramienta-para-la-evaluacion-de-la-efectividad-de-manejo-en-areas-protegidas-privadas-y-de-pueblos-originaarios-en-chile/>
- Tacón, A., Sepúlveda, C., Alarcón, L. and Seeberg, C. (2004). *Manual de Ordenamiento Predial para la Conservación de la Biodiversidad en Áreas Protegidas Privadas*. Santiago, Chile: CIPMA.
- Tang, X. (1995). Chang Zhongming established a protected area. *China Nature* 6: 1.
- Teixeira, E.C. and Souza, L.M. (2006). 'Pantanal: las reservas particulares y la conservación de la naturaleza'. In: *Congreso Interamericano de Conservación en Tierras Privadas*, pp. 111-113. Cartagena de Indias: The Nature Conservancy et al.
- TNC (2012). *Practitioner's Field Guide for Marine Conservation Agreements: Integrating Rights-based Incentive Agreements into Ocean and Coastal Conservation Efforts*. Final V2. 120 pp. Narragansett, Rhode Island: The Nature Conservancy.
- TNC (2013). [www.mundotnc.org/donde-trabajamos/americas/chile/lugares/index.htm](http://www.mundotnc.org/donde-trabajamos/americas/chile/lugares/index.htm). Accessed 26 October 2013.
- Trust for Nature (2013). *Trust for Nature's Statewide Conservation Plan for Private Land in Victoria*. Melbourne: Trust for Nature.
- UNEP-WCMC (2014a). [beta.unep-wcmc.org/](http://beta.unep-wcmc.org/). Accessed 9 April 2014.
- UNEP-WCMC (2014b). *Data Standards for the World Database on Protected Areas*. Cambridge, UK: UNEP-WCMC.
- Unsel, C. (2012). 'Die NABU-Stiftung Nationales Naturerbe'. In: M. Succow, L. Jeschke and H.D. Knapp (eds.) *Naturschutz in Deutschland*, pp. 271-276. Berlin: Ch. Links. [Trans. Tobias Garstecki. 'The NABU-Stiftung Nationales Naturerbe'. In: M. Succow, L. Jeschke and H.D. Knapp (eds.) *Nature Conservation in Germany*, pp.271-276. Berlin: Ch. Links., 2012].
- US Geological Survey, Gap Analysis Program (GAP) (2012). 'Protected Areas Database of the United States (PADUS), version 1.3 Combined Feature Class'. November 2012.
- Verschuuren, B., Wild, R., McNeely, J. and Oviedo, G. (eds) (2010). *Sacred Natural Sites: Conserving Nature and Culture*, London: Earthscan.

- Vieira, M.C.W. (2004). 'Quem são os proprietários das RPPN da Mata Atlântica'. In: C.A.B Mesquita and M.C.V. Vieira, *RPPN: Reservas Particulares do Patrimônio Natural da Mata Atlântica*. pp. 17-22. São Paulo: Conselho Nacional da Reserva da Biosfera da Mata Atlântica.
- Von Hase, A., Rouget, M. and Cowling, R.M. (2010). 'Evaluating private land conservation in the Cape Lowlands, South Africa'. *Conservation Biology* 24: 1182-1189.
- Wallace, G.N., Theobald, D.M., Ernst, T. and King, K. (2008). 'Assessing the ecological and social benefits of private land conservation in Colorado'. *Conservation Biology* 22: 284-296.
- Wang, J., Yan, J., Lu, X. and Wang D. (1994). 'Primary study on the Chinese environmental tax policy under market economy'. *Processes of Environmental Sciences* 2(2): 5-11.
- Wang, Y., Luo, J. and Cui, G. (2006). 'Analysis of present characteristics of small nature reserves in China: taking some counties in Zhejiang, Jiangxi and Fujian as examples'. *Jiangxi Forestry Technology* 3: 47-50.
- Watson, R., Fitzgerald, K.H. and Gitahi, N. (2010). *Expanding options for habitat conservation outside protected areas in Kenya: The use of environmental easements*. African Wildlife Foundation Technical Papers, Number 2.
- WWF.The Nature Conservancy (TNC) (N.d). *Best practices for private lands conservation in Latin America*.
- Xie, Y. (2012). *Promoting a legislation for protected areas and protecting China's ecological security baseline*. [www.baohudi.org/](http://www.baohudi.org/)
- Yang, B., Busch, J., Zhang, L., Ran, J., Gu, X., Zhang, W., Du, B. and Mittermeier, R. (2013). 'Eco-compensation for giant panda habitat'. *Science*, 339: 521.
- Yang, F. (2007). 'The research about community conserved area and community engagement for conservation'. *Territory & Natural Resources Study* 4: 53-54.
- Yuan, X., Liu, Y., Zhang, L., Li, J. and Li, J. (2010). 'Construction scheme and management pattern of small nature reserves in Beijing'. *Journal of Beijing Forestry University (Social Sciences)* 9(1): 59-64.
- Zhang, L. (2011). 'A group of soldiers protecting egrets in Wanheshan'. *People's Website*, 9 August 2011. [bf.people.com.cn/GB/15368046.html](http://bf.people.com.cn/GB/15368046.html). Accessed 9 April 2014.
- Zhang, L., Ma, L. and Feng, L. (2006). 'New challenges facing traditional nature reserves: Asian elephant (*Elephas maximus*) conservation in China'. *Integrative Zoology* 1(4): 179-187.
- Zheng, P. (1994). 'Research on the establishment of small nature reserves'. *Environment and Development* 9(3): 289-293.
- Zimmermann, I., Humavindu, M. and Nakamhela, U. (2012). *The Ecological, Social and Economic Implications of Private Game Parks & Private Nature Reserves in Namibia*. Windhoek: NAM-Place Project, Ministry of Environment and Tourism.

## Appendix 1: Potential PPA data from country reviews

As discussed on page 12 this data would need to be assessed against the PPA definition and guidance given in this publication before confirmed as PPAs according to the IUCN definition.

Table 18: Possible number and area of PPA estate from the 17 country reviews by PPA Futures

Country	Possible PPAs reported in country reviews		Notes
<b>Australia</b>	Number	c. 5,000	All terrestrial, see country review for more details.
	Area	c. 8.9 million ha	
<b>Brazil</b>	Number	1,100	74% by number are owned by individuals, 23% by legal entities (either NGO or businesses) and 2.7% undefined. More details can be found in the full country review.
	Area	703,740 ha	
<b>Canada</b>	Number	516	126,240 ha terrestrial, 570 ha marine or coastal environment, see country review for more details.
	Area	126,810 ha	
<b>Chile</b>	Number	308	An overwhelming number (77%) of the initiatives belong to small and medium landowners; 53% were private owners (this includes individuals, family inheritances and indigenous private owners).
	Area	1.6 million ha	
<b>China</b>	Number	6	
	Area	13,122 ha	
<b>Colombia</b>	Number	327	Data as of April 2014 from the National Registry of Protected Areas (RUNAP) collected from members of the Sistema Nacional de Áreas Protegidas (SINAP). See: <a href="http://runap.parquesnacionales.gov.co/">runap.parquesnacionales.gov.co/</a> for more details.
	Area	60,869 ha	
<b>Finland</b>	Number	> 10,000	
	Area	> 290,000 ha	
<b>Germany</b>	Number	> 762	Estimated from various databases. Excludes protected areas owned by the DBU Naturerbe GmbH, which is not private. There are some coastal but no marine PPAs in Germany.
	Area	> 90,000 ha	
<b>Japan</b>	Number	?	No data as yet.
	Area	?	
<b>Kenya</b>	Number	140	Figures for Kenya include community and private Conservancies, many may not fit the definition of a protected area (and thus a PPA) (see country review).
	Area	> 6 million ha	
<b>Mexico</b>	Number	692	
	Area	487,289 ha	
<b>Namibia</b>	Number	> 160	Many of the private reserves noted here are not likely to meet the IUCN definition of a protected area and thus are not PPAs.
	Area	> 2 million ha	
<b>South Africa</b>	Number	>200	Includes agreed areas and areas under negotiation.
	Area	> 1.7 million ha	
<b>Republic of Korea</b>	Number	> 10	
	Area	> 38 ha	
<b>Spain</b>	Number	>1336	The figures here are very speculative as they include land stewardship agreements (National LS Inventory, 2010) as well as PPAs. For example this figure includes the AFN Foundations 174,108 ha of conservation lands, 41.2% of which is owned land and 58.8% managed.
	Area	309,735 ha	
<b>UK</b>	Number	4,413	The UK is currently undertaking a project to assess all potential protected areas against the IUCN definition, this figure thus represents a work in progress. Data has been aggregated from NGO databases and there may be some double counting as some PPAs are managed jointly by more than one NGO.
	Area	404,535 ha	
<b>USA</b>	Number	?	See country review for a discussion of the various databases which record a wide range of differing data on potential PPA coverage in the USA.
	Area	> 6.7 million ha	

## Appendix 2: Additional information on PPAs provided through a query from the Secretariat of the Convention on Biological Diversity

To supplement the country reviews commissioned as part of this exercise the Secretariat of the Convention on Biological Diversity was kindly willing to send out a query to all of its CBD PoWPA national focal points. Thirteen countries responded and the information they provided is summarized below. This list is provided to have a complete record of all information that was gathered for this Project – **it does not represent anything other than a list of the edited responses from those countries that responded to the CBD PoWPA query.**

**Bangladesh:** The new (2012) Bangladesh Wildlife (Conservation and Security) Act invites application for PPAs to be declared as protected under Section 23. To date no one has applied.

**Botswana:** There are currently 119 areas described as ‘game farms’ or PPAs in Botswana covering approximately 950,000 ha.

**Costa Rica:** Costa Rica reports 213 PPAs covering 82,045 ha. There is a national PPA association with more information available at [www.reservasprivadascr.org/ver3/](http://www.reservasprivadascr.org/ver3/). The country would be interested in reporting globally on these PPAs.

**Croatia:** There are no officially recognized PPAs in Croatia. However private landowners are an integral part of Croatian PAs and all protected areas are managed by governmental, county or municipality institutions through national legislation.

**Cuba:** In Cuba legislation includes the possibility of PPAs but to date none have been formed. There are two protected areas managed by a Cuban NGO, Fundación Antonio Núñez Jiménez de la Naturaleza y el Hombre (FANJNH): [www.fanj.org/](http://www.fanj.org/)

**Honduras:** Honduras reports the existence of a national PPA network, the Honduran Network of Private Nature Reserves (REHNAP). REHNAP consists of about 75 members and about 82 PPAs covering approximately 64,000 ha including pine-oak forest, dry forest and tropical rainforest. These areas must adhere to national regulations. The Honduran network is part of the Mesoamerican Network of Private Nature Reserves as well as the Latin American Alliance of Voluntary Conservation Institutions.

Adoption of the New Forest Act in 2007 led to new guidelines for working with protected areas including the incorporation of PPAs. The Forestry Law, Protected Areas and Wildlife No. 98-2007 and specifically Article 66, allows certification of PPAs that meet the required standards.

There is now a framework of policies, strategies, procedures, methodologies and opportunities for direct and indirect benefit to members. Honduras would be interested in reporting internationally on its PPAs.

**Lithuania:** Lithuania does not have PPAs.

**Myanmar:** Myanmar does not have PPAs.

**New Zealand:** A large proportion (just over 32 per cent) of New Zealand’s land area is legally protected for conservation purposes, either as public conservation land (8.43 million ha) or through conservation initiatives on private land (221,473 ha). The area of public conservation land has increased by 4.56 per cent between 2004 and October 2007. Private land under legal protection has increased by just over 51 per cent between 2004 and 2006.

Private land is protected mostly through covenants held by the Queen Elizabeth the Second National Trust (QEII Trust) which is a statutory organization, independent from government, established in 1977. The QEII Trust was established at the request of New Zealand farmers to protect open space on private land for the benefit and enjoyment of the present and future generations of New Zealanders.

A covenant is generally requested by the landowner and registered against the title of the land in perpetuity. Each registered covenant is monitored every two years to ensure the land is managed in accordance with the covenant document. More than 95 per cent of covenant owners meet or exceed covenanting requirements with a resulting increase in biodiversity and sustainability of land and resources. The QEII Trust generally contributes to the cost of fencing, surveying, and registration of the title, often with the help of local or regional councils or conservation groups. As a result of increases in the area protected by PPAs, many of New Zealand’s rare and threatened ecosystem types now have protection. Some of New Zealand’s most endangered species are also protected in PPAs. More information can be found in: [www.mfe.govt.nz/publications/ser/enz07-dec07/chapter-12.pdf](http://www.mfe.govt.nz/publications/ser/enz07-dec07/chapter-12.pdf)

**Palau:** Palau has a process whereby state governments may nominate private property to become part of the Protected Areas Network. However, to date, sites (marine and terrestrial) that have been included in PAN have consisted of publicly owned areas only.

**Slovakia:** There are two PPAs in Slovakia, registered in the State List of Protected Areas – both of them were established by the NGO, Lesoochrannarske zoskupenie VLK (Forest Protection Association WOLF), as nature reserves (NR). Together the two PPAs cover c. 52 ha of forest.

**Slovenia:** There is no national reporting concerning private protected areas. However there are some initiatives and activities by private landowners in this field, especially NGOs. Birdlife Slovenia, for example, has purchased or gained some land with nature conservation value in the past (two reserves 65 ha and 61 ha respectively). Through project activities (in both cases using the EU instrument LIFE) and cooperation with our Ministry of Agriculture and the Environment the first nature reserve is already part of the state protected area network. The second nature reserve will become part of the state protected area network in the near future. Birdlife Slovenia is actively involved in the management of both these protected areas, as a landowner and as an NGO for bird conservation.

**Tuvalu:** In Tuvalu, so far, there are at least nine protected areas which the local government (Kaupule) manage. To date only one protected area has been legally formalized while nine are owed by local government (Kaupules). There are no PPAs per se.

**United Arab Emirates:** Currently, the UAE national legislation system does not acknowledge PPAs.

**Sue Stolton** (sue@equilibriumresearch.com) has worked for the last 25 years on environment and conservation related projects – in the belief that we need to address the urgent crises facing our environment to ensure social equity and sustainable development. Sue works mainly on issues relating to protected areas. Areas of interest include management of protected areas, issues related to understanding the wider values and benefits that protected areas can provide and the development and use of the IUCN protected area management categories. Sue established Equilibrium Research in partnership with Nigel Dudley in 1991. Sue is a member two of IUCN's Commissions: WCPA and CEESP.



**Kent H. Redford** (redfordkh@gmail.com) is Principal at Archipelago Consulting (archipelagoconsulting.com) established in 2012 and based in Portland, Maine, USA. Prior to that he spent 14 years at the Wildlife Conservation Society (WCS) in New York where he led the WCS Institute that worked on strategic planning, program development and horizon scanning. Previously he spent five years as head of Science and Stewardship in The Nature Conservancy's Latin American Division. He started his career with a decade on the faculty at University of Florida where he co-founded the Program for Studies in Tropical Conservation and the Tropical Conservation and Development Programs. He received his Ph.D. in Biology from Harvard University and has written numerous articles and books on national parks, local peoples, conservation, and wildlife. In 2013 he convened a meeting bringing together conservation biologists and synthetic biologists to discuss the future of nature in an increasingly synthetic world.



**Nigel Dudley** (nigel@equilibriumresearch.com) is Industry Fellow, School of Geography, Planning and Environmental Management at the University of Queensland, Vice Chair for ecosystem services for the IUCN World Commission on Protected Areas and works as a consultant with Equilibrium Research in the UK. With Sue Stolton, he edits the journal PARKS. His work focuses principally on integration of protected areas into wider environmental management strategies. Nigel lives in Bristol and Wales in the UK and has worked in over 70 countries around the world. Work on governance in protected areas flows naturally from a long-term interest in protected area definitions and management approaches, and the interface between conservation strategies and local communities.





**INTERNATIONAL UNION  
FOR CONSERVATION OF NATURE**

WORLD HEADQUARTERS  
Rue Mauverney 28  
1196, Gland, Switzerland  
Tel: +41 22 999 0000  
Fax: +41 22 999 0002  
[www.iucn.org](http://www.iucn.org)

