



Developing Commercial Markets for the Environmental Services of Forests: Opportunities and Challenges



the
katoomba
group

Forest Ecosystem Services

Carbon Sequestration

**Micro
Climate
Regulation**

**Biodiversity
Conservation**

**Ecotourism
Recreation
Spiritual
Values**

**Watershed
Protection**

**Land
Rehabilitation**

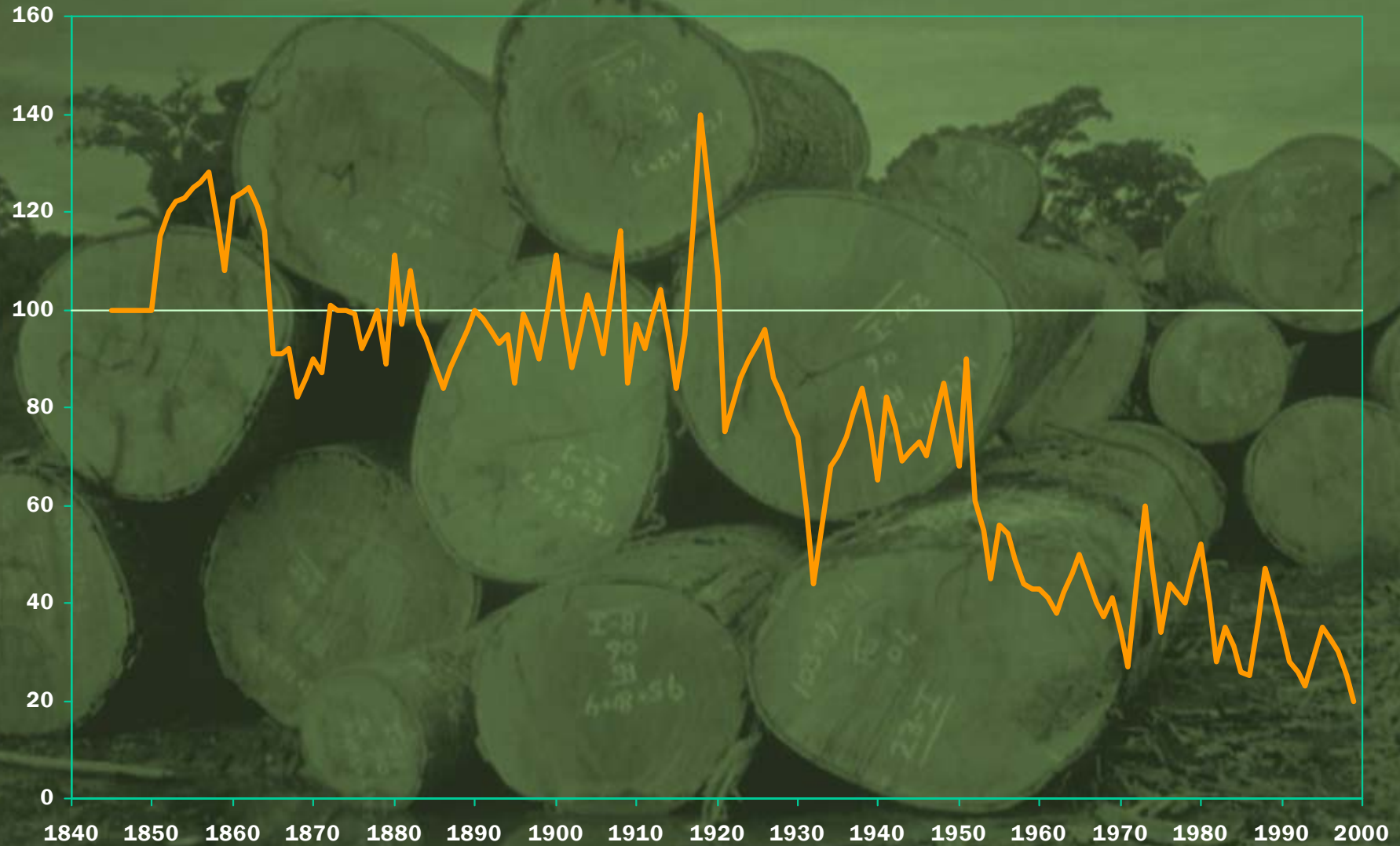
**Soil Fertility
Maintenance**

Current Reality

- 
- A large stack of cut logs is piled up in a forest setting. The logs are stacked in a way that shows their circular ends, many of which have white markings or stencils. The background is a dense green forest under a blue sky with some clouds. The ground in the foreground is dirt and wood chips.
- ◆ **Cut timber only real value**
 - ◆ **Liquidation value of forests is high, creating strong economic incentive for conversion**
 - ◆ **Financial markets reward short-term over long-term returns**

Falling to Earth

***The Economist* industrial commodity-price index, in real* \$ terms**



*** Adjusted by US GDP deflator**


Forest Trends Mission



To maintain and restore forest ecosystems by promoting incentives that diversify the trade in the forest sector from dominance in wood products to a broader range of services and products.

Accelerate the evolution of economic systems in which:

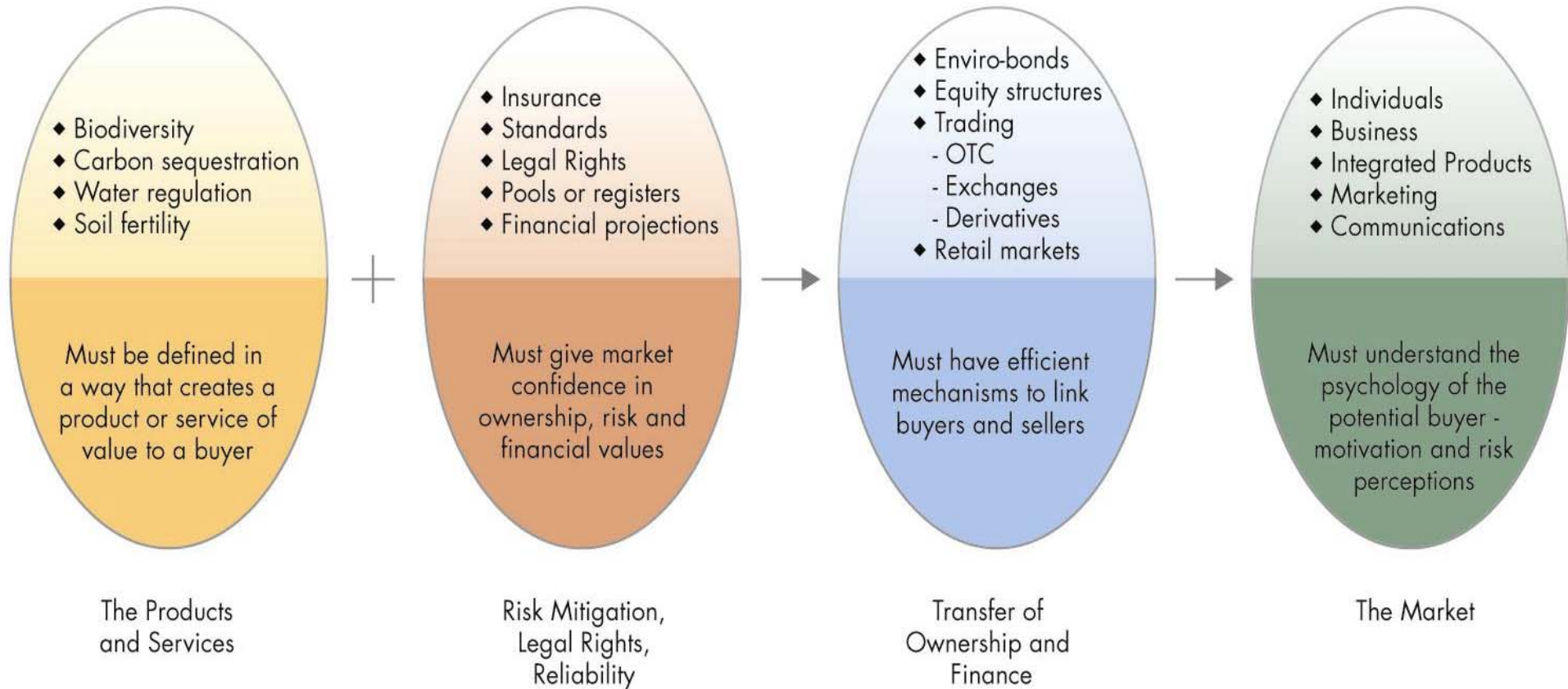
- ✓ **Commerce sustains forest ecosystem services (i.e. biodiversity, watershed protection)**
- ✓ **Equitable share of the benefits generated from forest based commerce is returned to local communities.**



A “collection of dedicated international entrepreneurs and scientists who’ve provided the intellectual capital supporting some of the boldest new-economy experiments.”

– *The New Economy of Nature: the Quest to Make Conservation Profitable*, Gretchen Daily and Katherine Ellison, 2002.

Elements for a successful development of markets for environmental services



Changjin Sun
RCEEE, China

John Forgach
A2R, Ltd., Brazil

David Brand
Hancock Natural Resources Group

Phil Cottle
PartnerRE: Agricultural Services

Ken Chomitz
The World Bank Group

Patrick Anderson
Greenpeace International

Wolfgang Ortloff
Swiss Re

Linda Coady
Weyerhaeuser

Mario Monzoni
Friends of the Earth, Brazil

Jim Brumm
Mitsubishi International Corporation

Kirsteen Morrison
**Henderson Investors Singapore
Limited**

Eugene Linden
Time Magazine

Luis Gamez
**Ministry of the Environment
Costa Rica**

Aurelio Ramos
**Von Humbolt Biological Research
Institute, Colombia**

Rina Rosales
ICRAF, Philippines

Ewoud Goudswaard
ASN Bank, Netherlands

Marian de los Angeles
CIFOR, Indonesia

Josh Bishop
IUCN, Switzerland

Louis Boorstin
International Finance Corp.

Carlos Muñoz Piña
SEMARNAT, Mexico

Gretchen Daily
Stanford University

Antônio Bueno
**Futures and Exchange
Market, Brazil**

Michael Totten
Conservation International

Success Stories — Carbon Sequestration

◆ **Bolivia**

- **Buying back logging concessions in biologically rich areas**
- **American Electric Power, Pacific Corp., BP America, The Nature Conservancy, Noel Kempff National Park**
- **\$9.5 million**

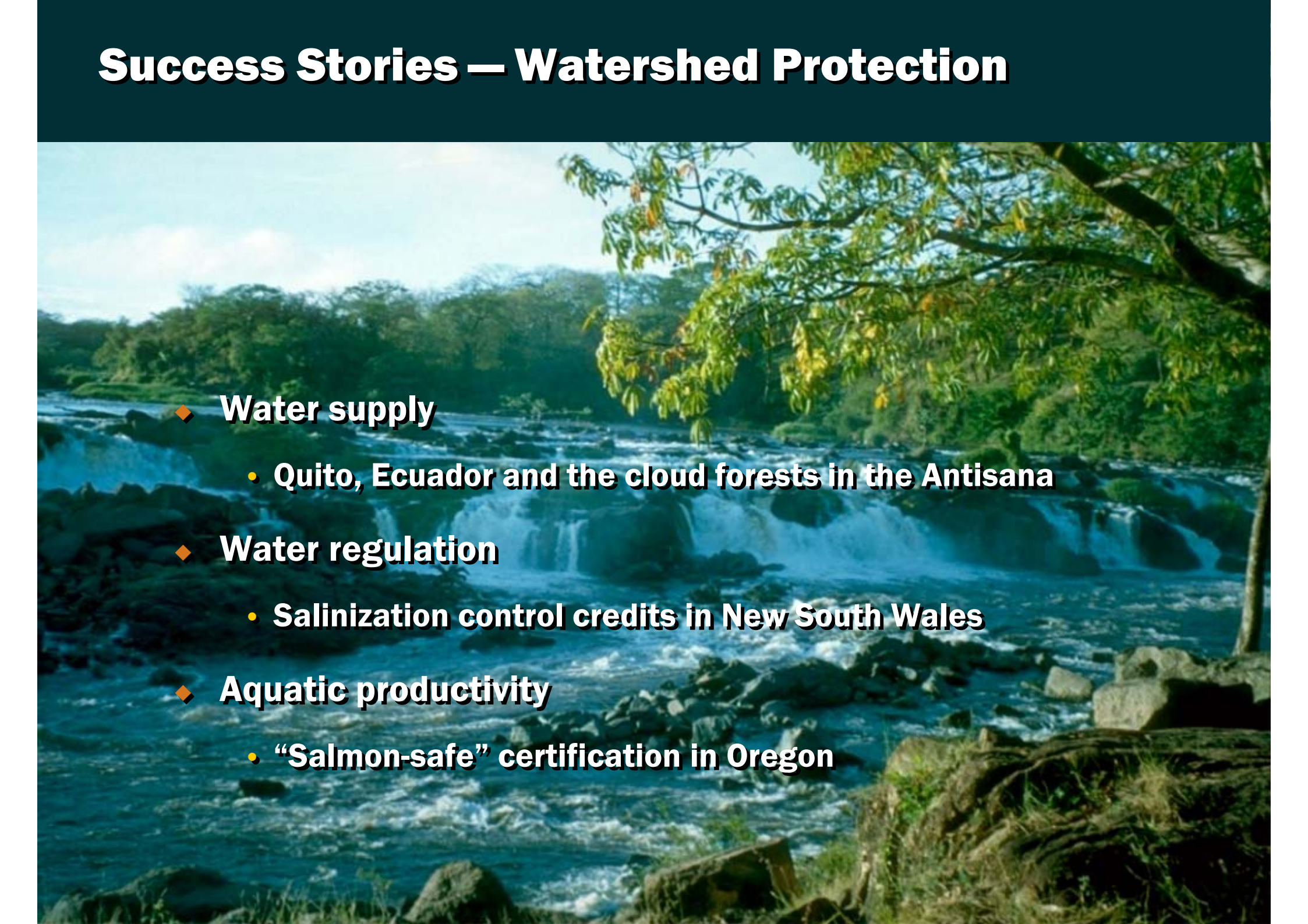
◆ **Brazil**

- **Restoring tropical forests in Mato Grosso State**
- **Peugeot, Pro-Natura, Ministry of Agriculture, Community of Juruena**

◆ **Australia, NSW**

- **Afforestation on pasturelands**
- **State forests of NSW - Pacific Power, Delta Power**

Success Stories — Watershed Protection

- 
- ◆ **Water supply**
 - **Quito, Ecuador and the cloud forests in the Antisana**
 - ◆ **Water regulation**
 - **Salinization control credits in New South Wales**
 - ◆ **Aquatic productivity**
 - **“Salmon-safe” certification in Oregon**

Success Stories — Biodiversity

- ◆ **Brazil**
 - **Tradable development rights**
- ◆ **U.S.A.**
 - **Conservation easements**
- ◆ **Global**
 - **Forest certification**

The Challenge

Markets around forest services are:

- ◆ **Limited in scope**
- ◆ **Emergent in nature**
- ◆ **Small in scale**

The Challenge

- ◆ **Expand the menu of services with real markets**
- ◆ **Extend the coverage to all places**

The Challenge

Flip the economic equation

- ◆ **Environmental services of forests more valuable than conventional products**

The Challenge

Every market will have a different structure — need to custom design

- ◆ **Carbon in atmosphere — global**
- ◆ **Salinity — every catchment a different profile**
- ◆ **Biodiversity — even more complex**



A unique Global Network to identify potential partners and investment opportunities within emerging markets for biodiversity, carbon and water management

A unique source of deal flow, risk analysis and market intelligence for the Global Forest Ecosystem Fund



THE WORK AHEAD

**Developing commercial
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