



2017年(第26回) ブループラネット賞
受賞者記念講演会

2017 Blue Planet Prize
Commemorative Lectures

グレッチェン・C・デイリー教授
講演スライド集

「 Harmonizing People and Nature 」

Professor Gretchen C. Daily
Slides for the Lecture

“ Harmonizing People and Nature ”

Harmonizing People & Nature

Gretchen C. Daily
Stanford University



A Recent History

3

A Recent History

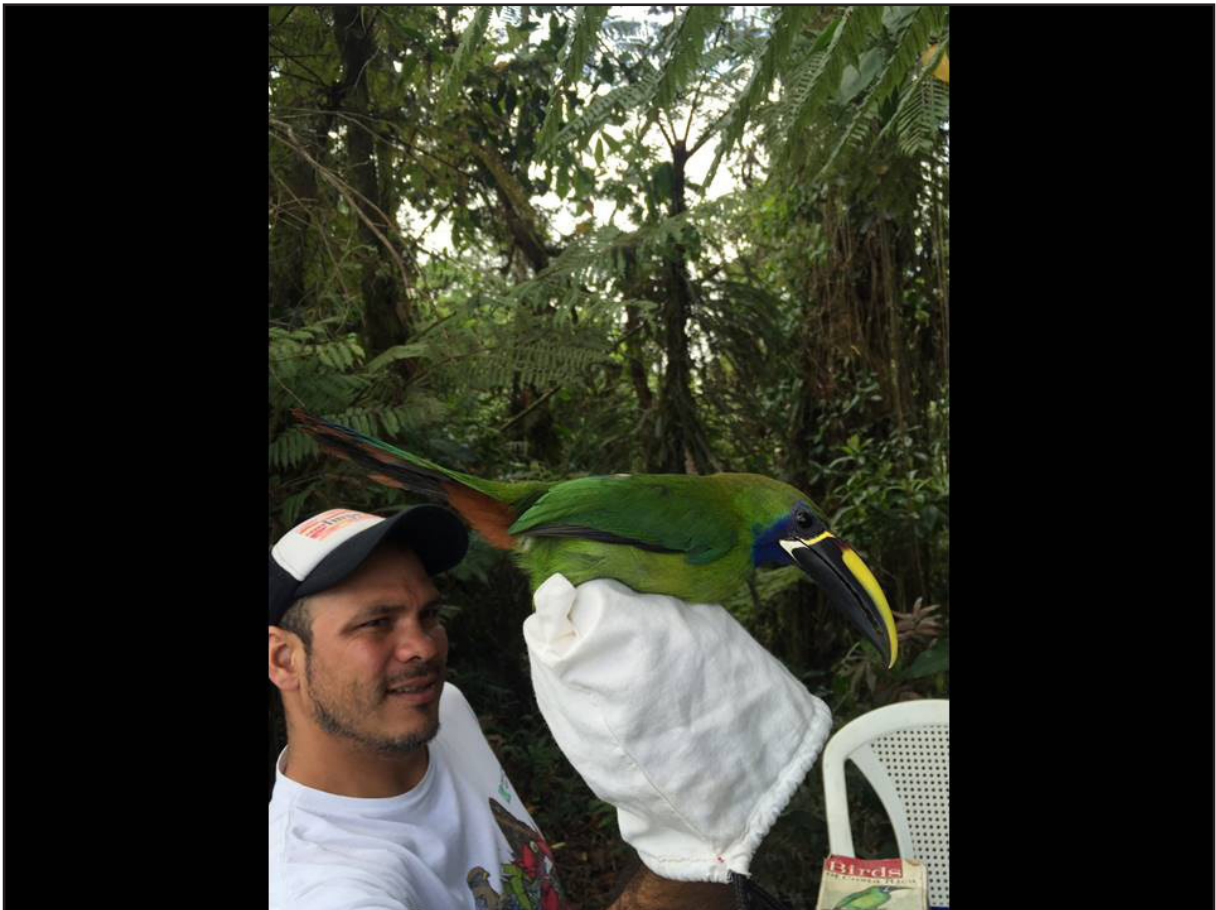
1991 – knowledge foundation



4

Harmonizing people & nature?

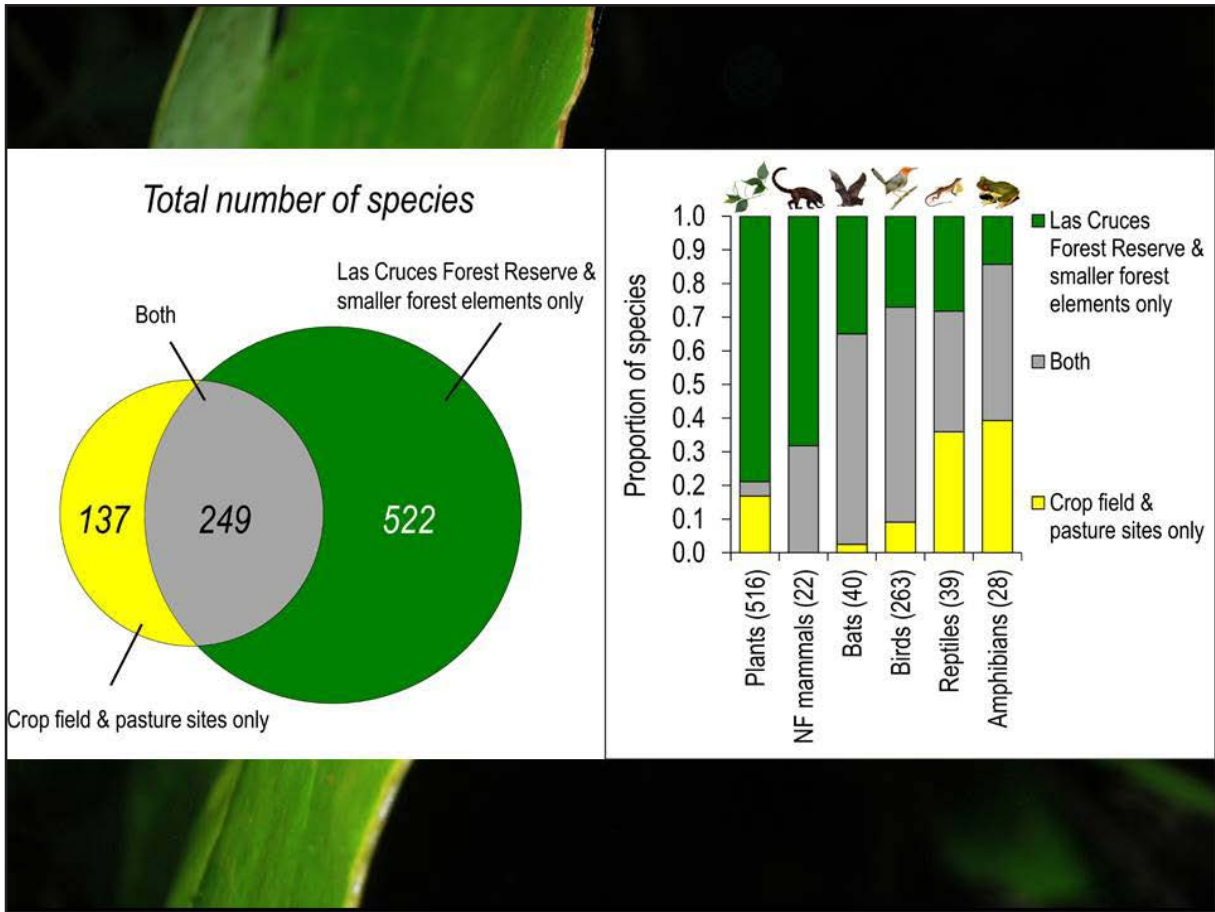




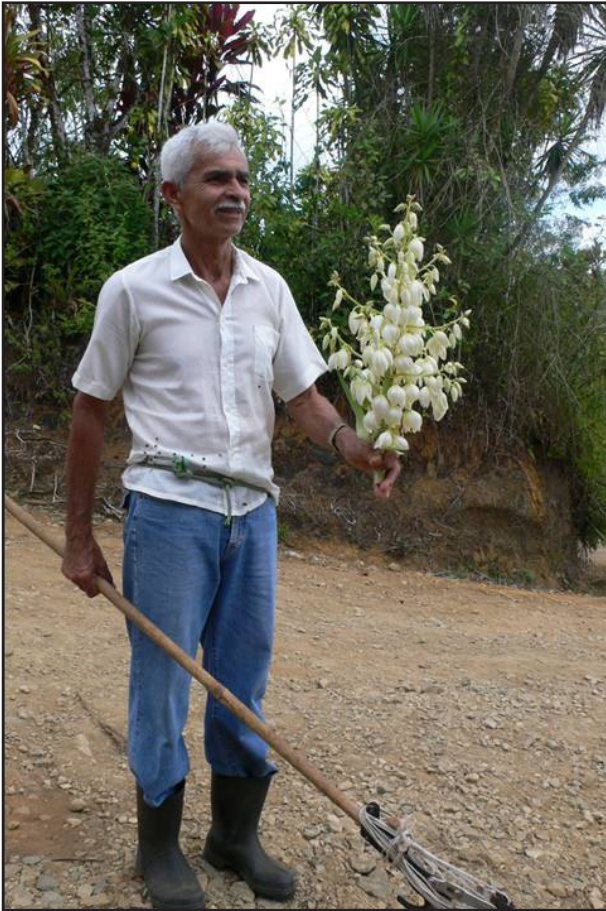










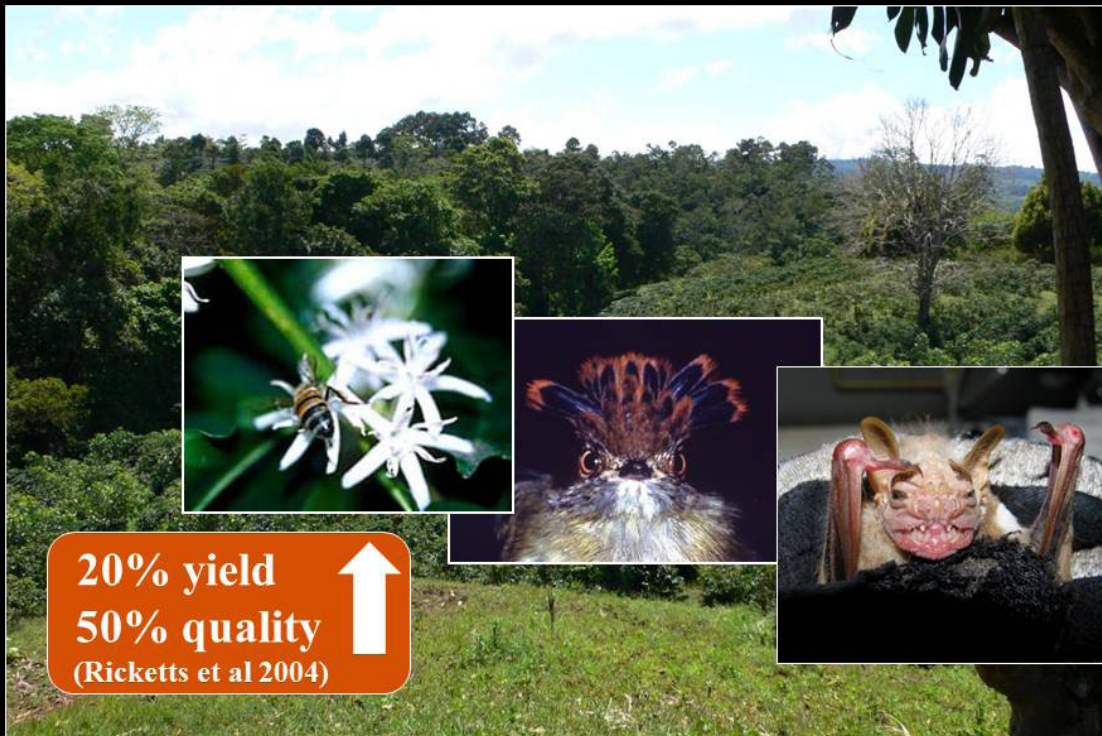




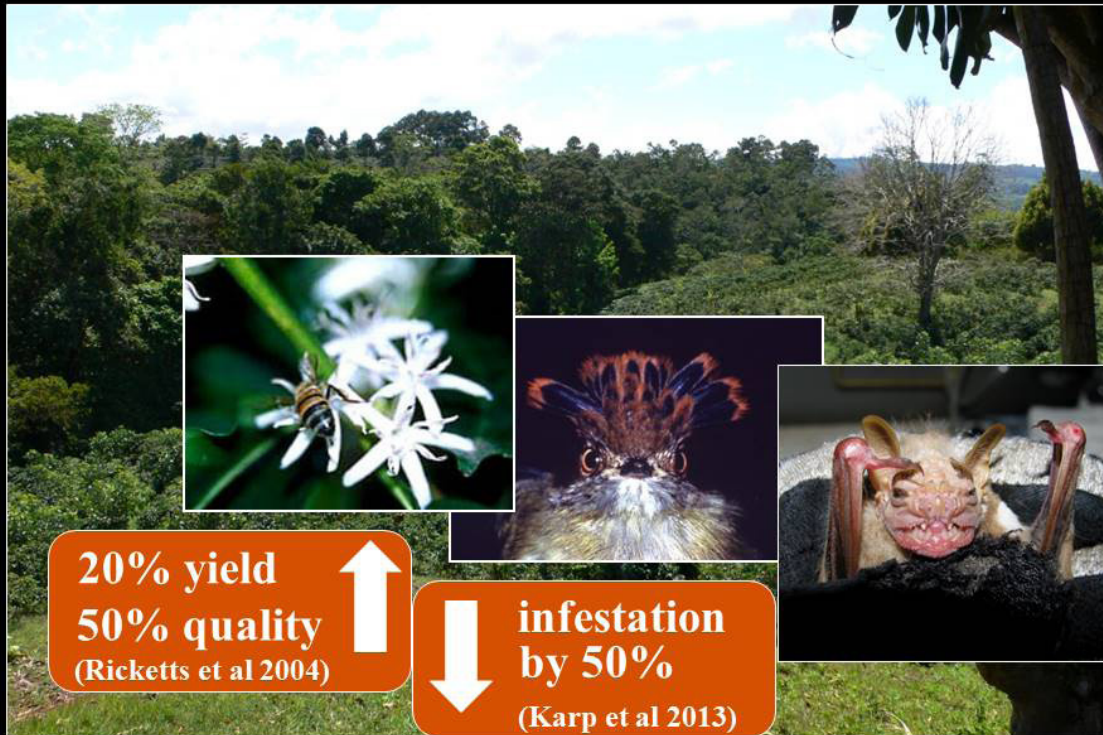
Why protect rainforest?



Why protect rainforest?



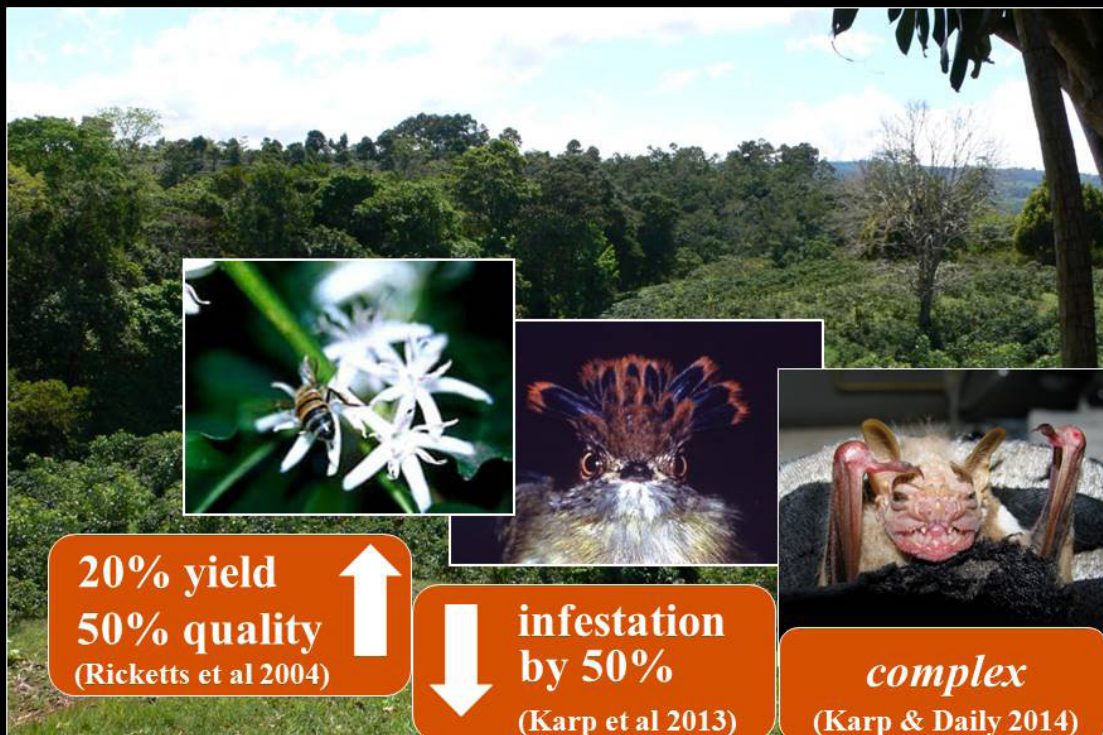
Why protect rainforest?



20% yield
50% quality ↑
(Ricketts et al 2004)

↓ **infestation**
by 50%
(Karp et al 2013)

Why protect rainforest?



20% yield
50% quality ↑
(Ricketts et al 2004)

↓ **infestation**
by 50%
(Karp et al 2013)

complex
(Karp & Daily 2014)

Why protect rainforest?

1000s of Studies
Over Past Decade

20% yield
50% quality
(Ricketts et al 2004)



infestation
by 50%
(Karp et al 2013)

complex

(Karp & Daily 2014)

Why protect rainforest?

From Studies to
Policy and Governance?

20% yield
50% quality
(Ricketts et al 2004)



infestation
by 50%
(Karp et al 2013)

complex

(Karp & Daily 2014)

A Recent History

1991 – knowledge foundation

1996 – real-world, pioneering cases



29

A Recent History

1991 – knowledge foundation

1996 – real-world, pioneering cases



30

A Recent History

1991 – knowledge foundation

1996 – real-world, pioneering cases

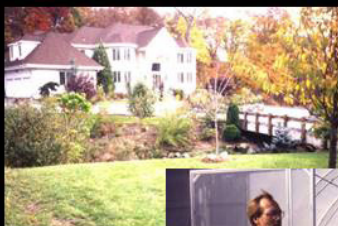


31

A Recent History

1991 – knowledge foundation

1996 – real-world, pioneering cases



WATER



\$\$



32

A Recent History

1991 – knowledge foundation

1996 – real-world, pioneering cases

2006 – systematizing a universal approach

33

A Recent History

1991 – knowledge foundation

1996 – real-world, pioneering cases

2006 – systematizing a universal approach

natural
capital

PROJECT

34

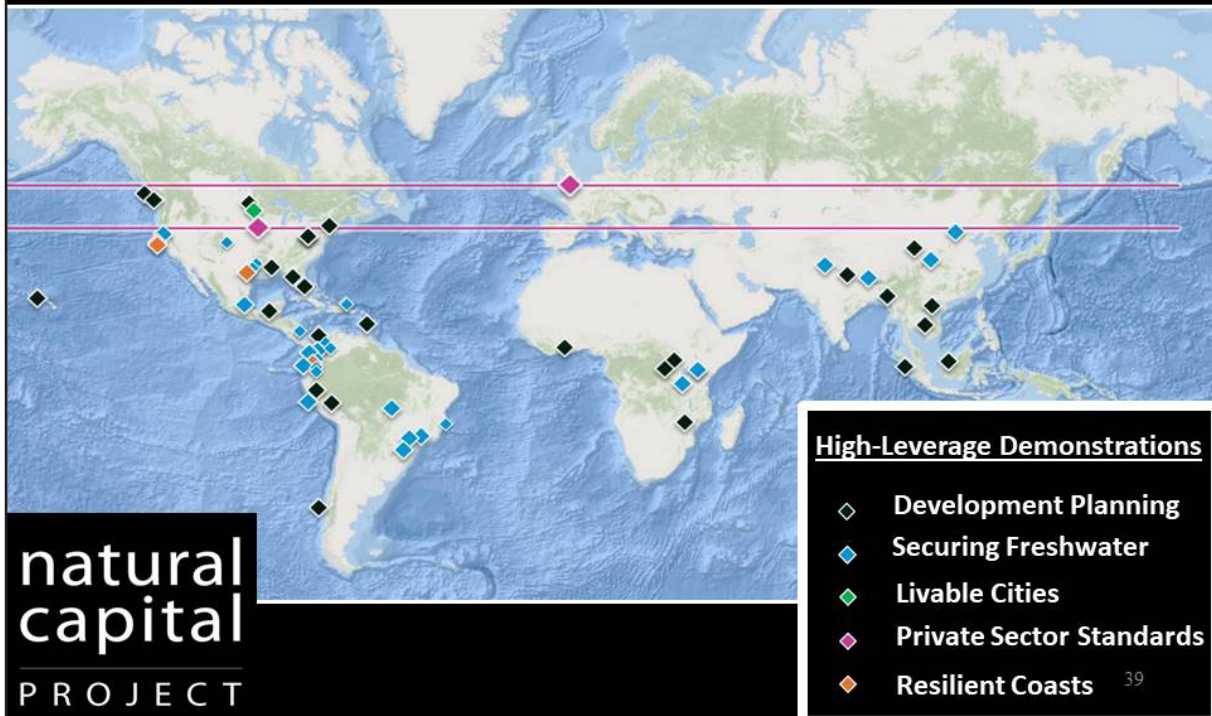




A Recent History

- 1991 – knowledge foundation
- 1996 – real-world, pioneering cases
- 2006 – systematizing a universal approach
- 2016 – mainstreaming & scaling

Mainstreaming the Values of Nature



A Recent History

1991 – knowledge foundation

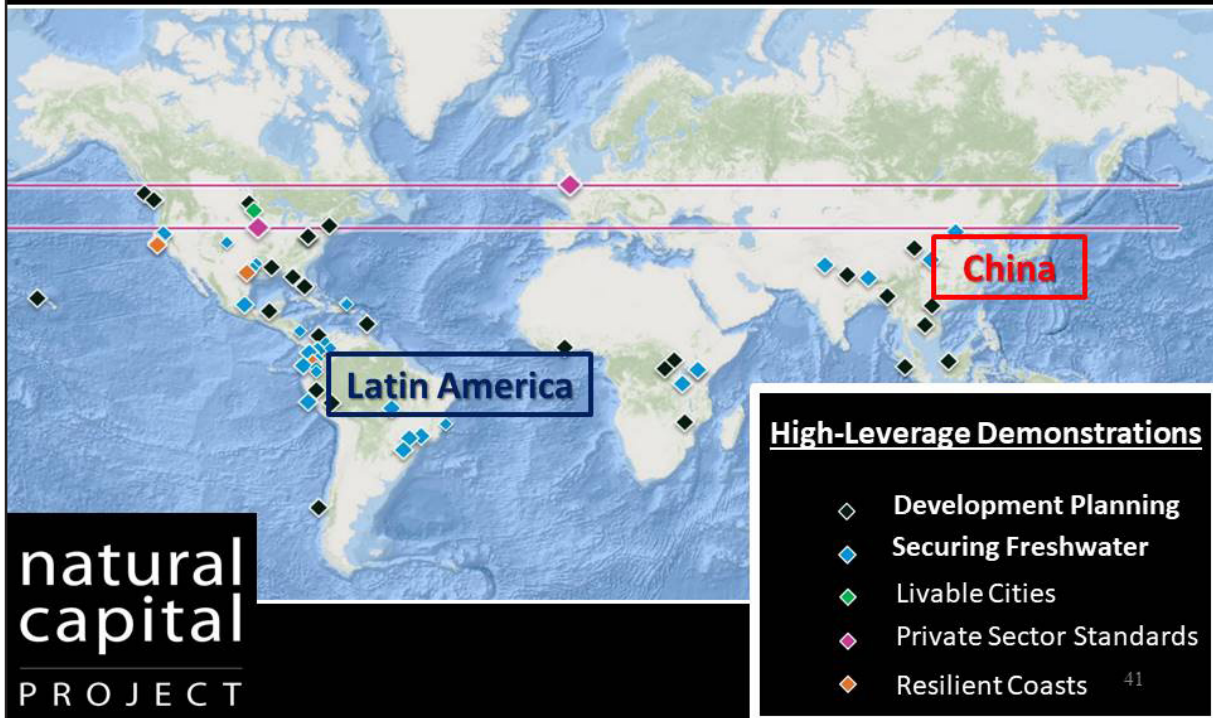
1996 – real-world, pioneering cases

2006 – systematizing a universal approach

2016 – mainstreaming & scaling



Scaling in Latin America



Water Security for Cities



Water Security for Cities



Targeting Investments

Which activities?



44

Targeting Investments

Which activities?



Where in the watershed?

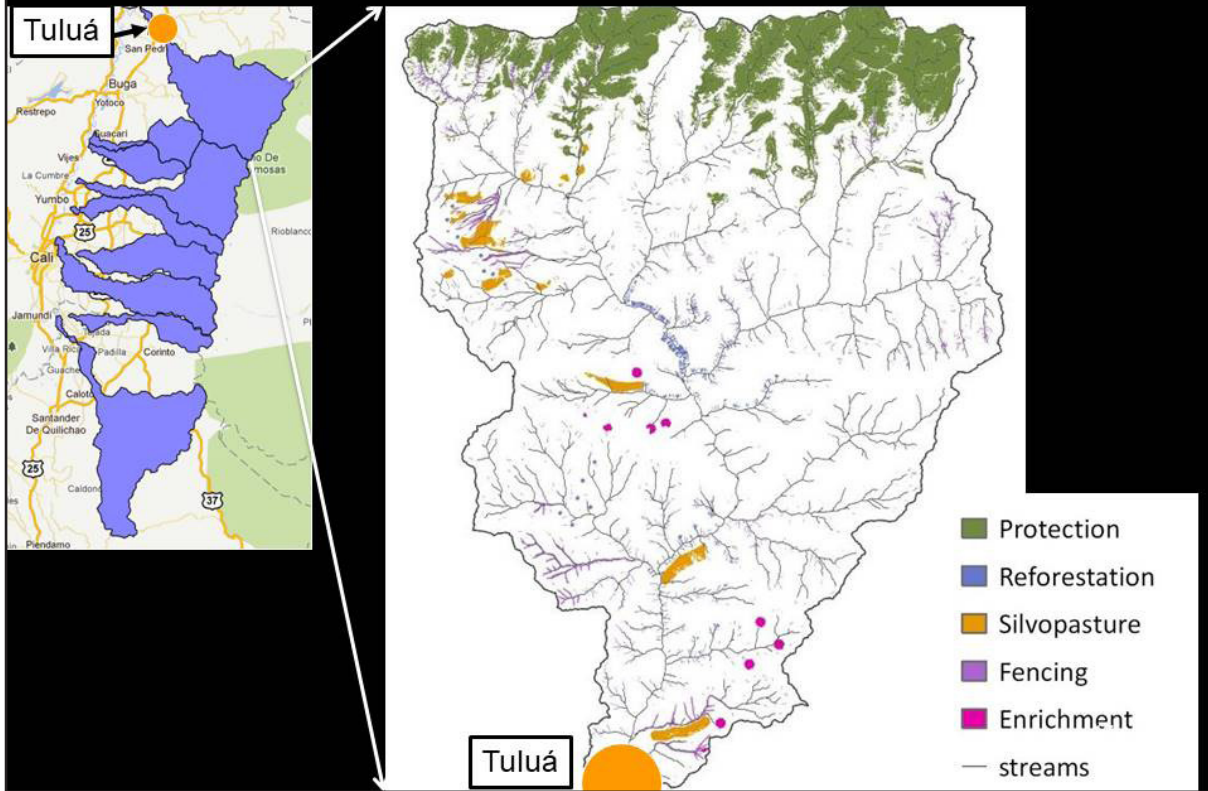


Investment Portfolio

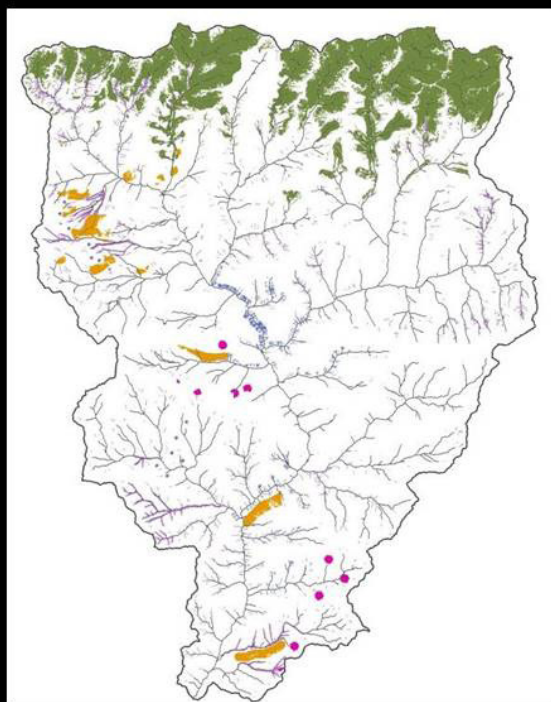


Cauca Valley
Colombia

Investment Portfolio

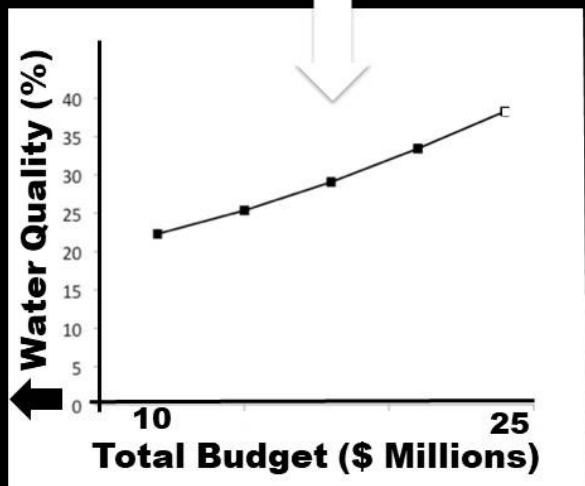


What is the ROI?



InVEST

integrated valuation of environmental services and tradeoffs



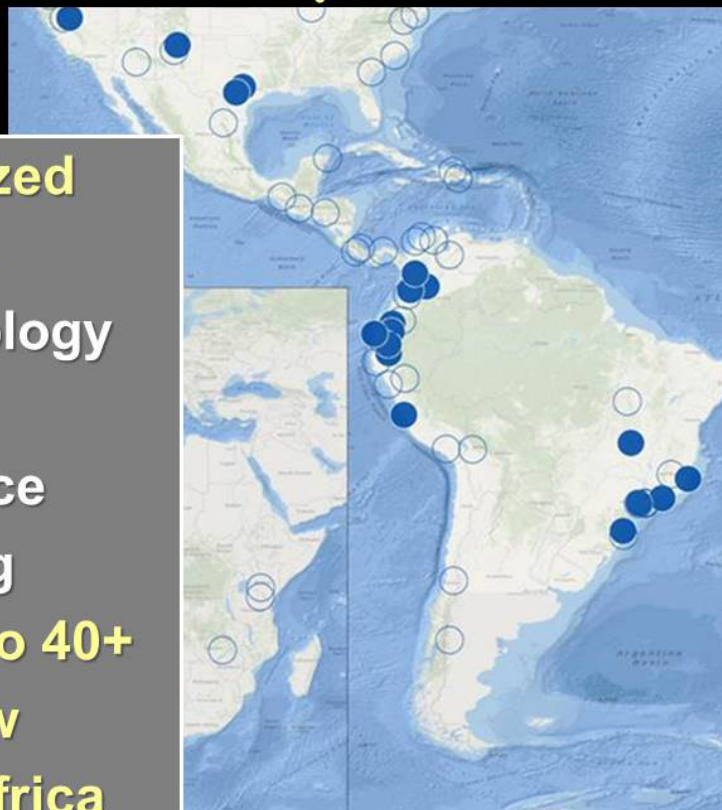
Water Security for Cities

A standardized approach

- Eco-hydrology
- Financing
- Governance
- Monitoring

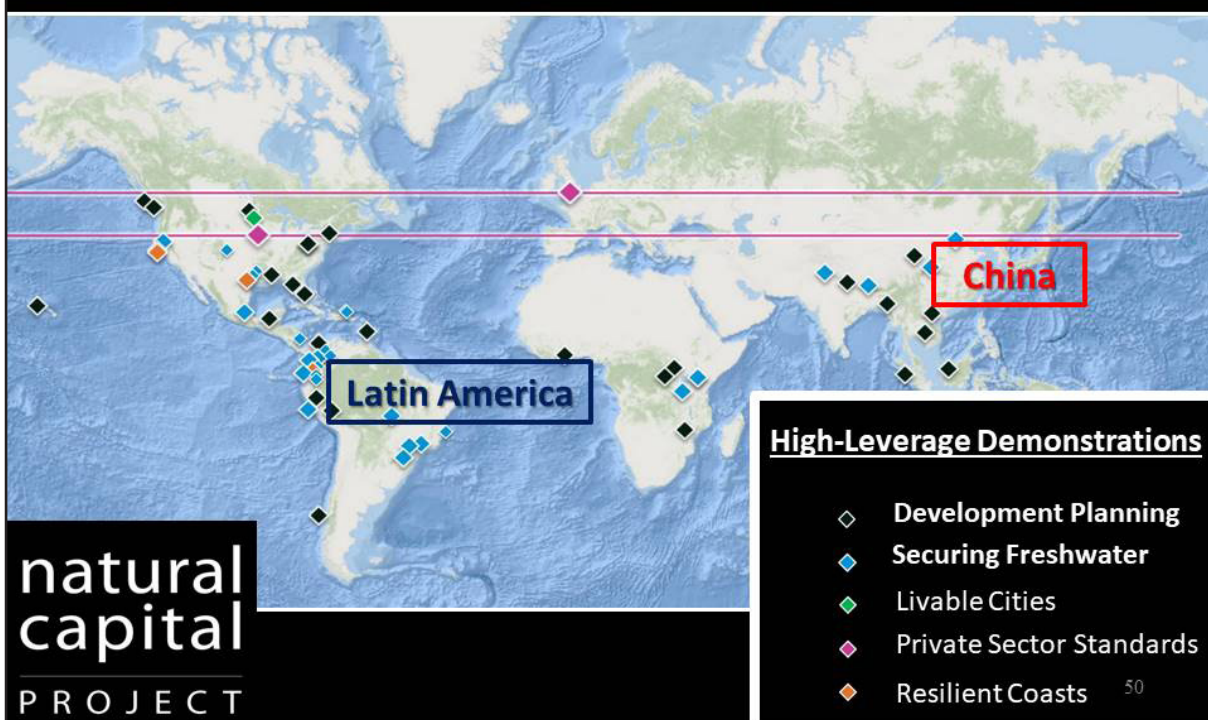
Scaling up to 40+ funds now

Testing in Africa



49

Scaling in China



Development & Security in China



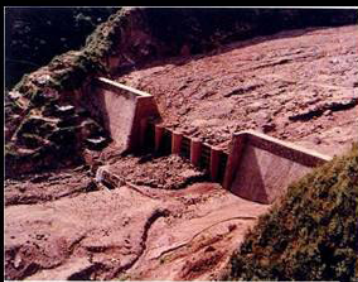
China's Dream:
The Ecological Civilization
of the 21st Century

Clear waters and lush mountains are
gold and silver.
We will not trade them for gold or silver.

Development & Security in China



China's Dream:
The Ecological Civilization
of the 21st Century



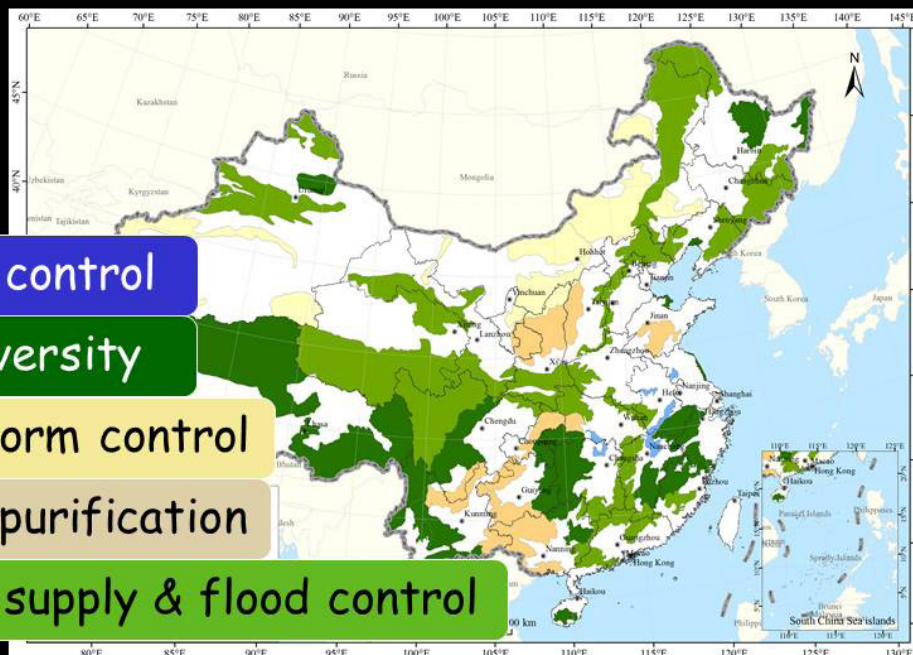
Development & Security in China



China's Dream:
The Ecological Civilization
of the 21st Century

1. Where and how much to protect?
2. How to secure nature and livelihoods?
3. How to move beyond GDP?

China's Ecosystem Function Conservation Areas



200 M people being paid to restore natural capital



natural
capital
PROJECT

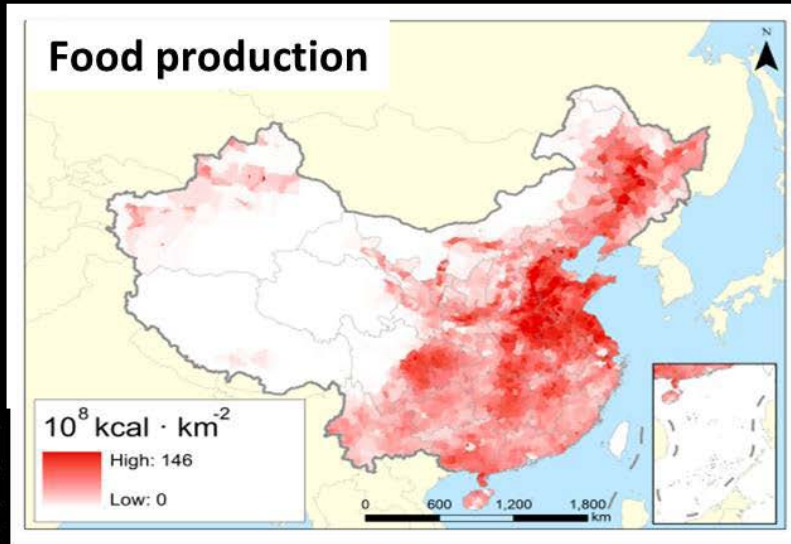
55



(Zheng et al. 2013 PNAS)

Mainstreaming the Values of Nature

SYSTEM OF NATURAL CAPITAL ACCOUNTS

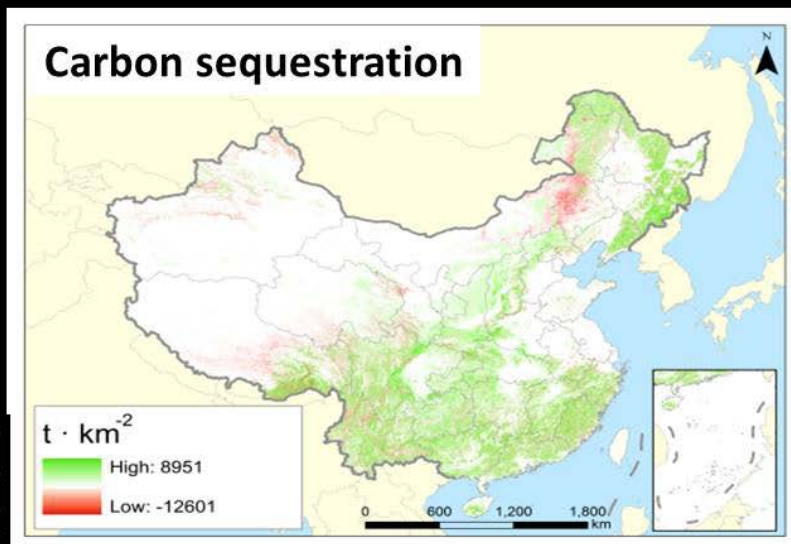


natural
capital
PROJECT

57

Mainstreaming the Values of Nature

SYSTEM OF NATURAL CAPITAL ACCOUNTS

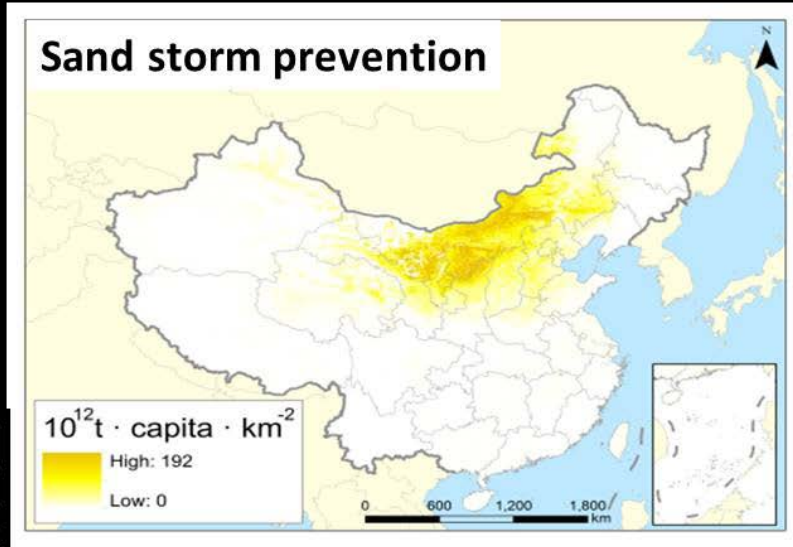


natural
capital
PROJECT

58

Mainstreaming the Values of Nature

SYSTEM OF NATURAL CAPITAL ACCOUNTS

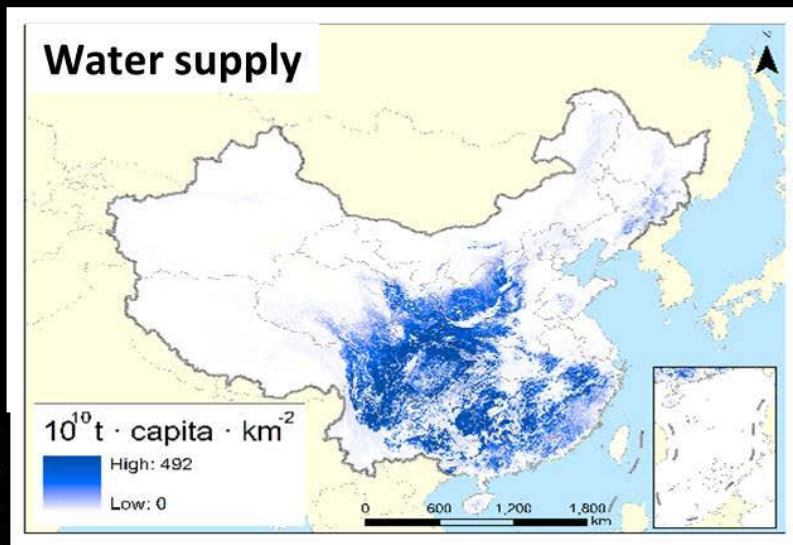


natural
capital
PROJECT

59

Mainstreaming the Values of Nature

SYSTEM OF NATURAL CAPITAL ACCOUNTS

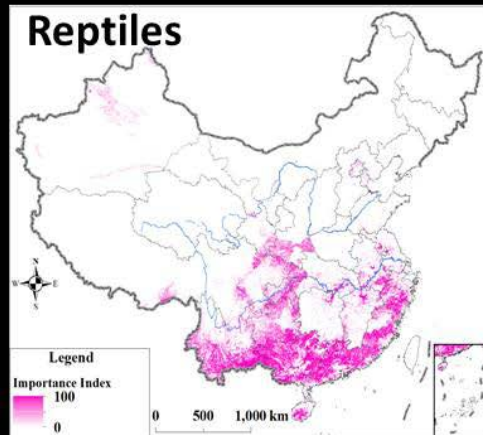
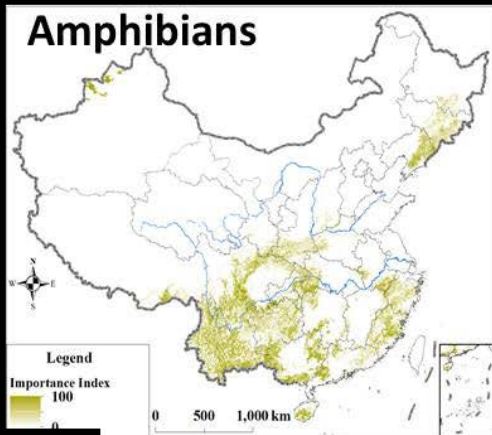


natural
capital
PROJECT

60

Mainstreaming the Values of Nature

SYSTEM OF NATURAL CAPITAL ACCOUNTS



natural
capital
PROJECT

61

Mainstreaming the Values of Nature

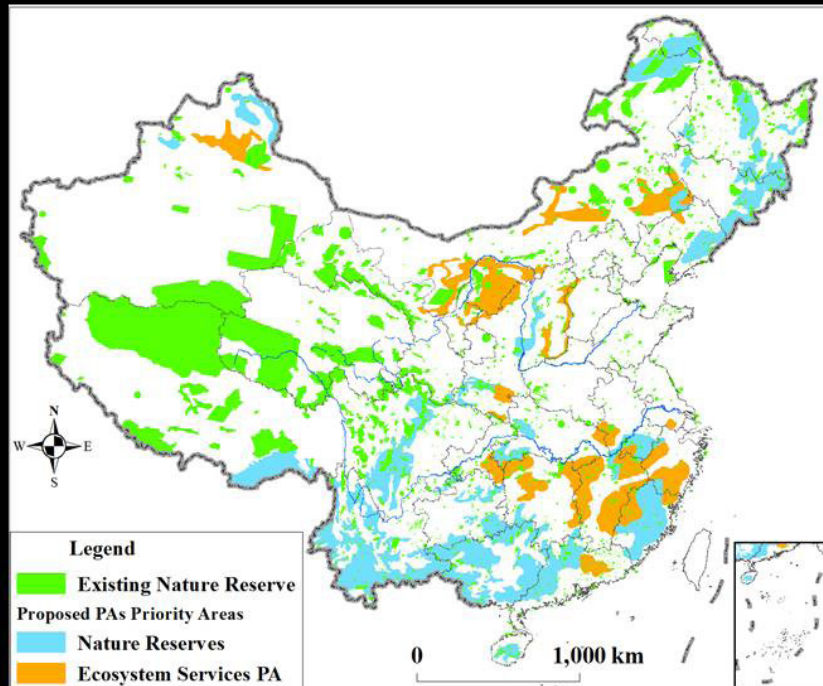


MASSIVE
INVESTMENT
INTO A SYSTEM
OF
GREEN FINANCE

natural
capital
PROJECT

62

New National Park System



(Xu et al. 2017 PNAS)

Beyond GDP

MIS- MEASURING OUR LIVES



Why the GDP Doesn't Add Up

Joseph E. Stiglitz,
Amartya Sen,
and Jean-Paul Fitoussi

THE REPORT BY THE COMMISSION ON THE MEASUREMENT
OF ECONOMIC PERFORMANCE AND SOCIAL PROGRESS

64

Gross Ecosystem Product



GEP – the total value of ecosystem goods and services supplied annually

- China State Council, March 2014

A Recent History

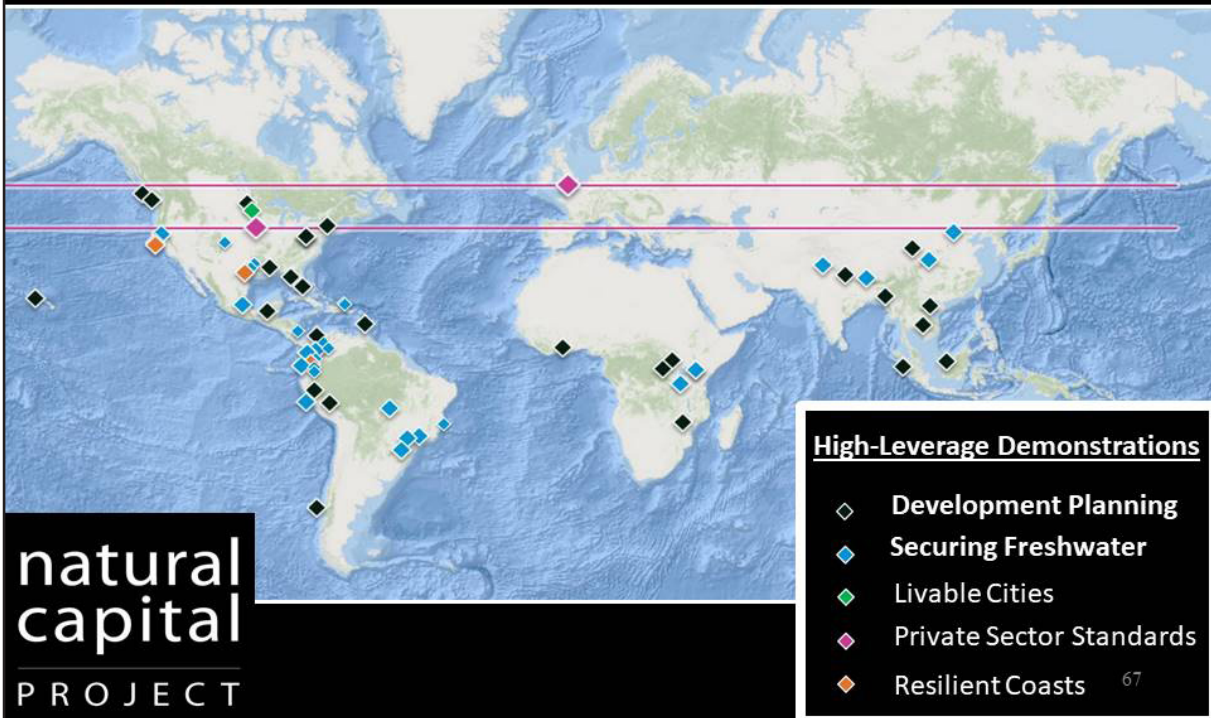
1991 – knowledge foundation

1996 – real-world, pioneering cases

2006 – systematizing a universal approach

2016 – mainstreaming & scaling

Global Demonstration Strategy



Scaling Capacity & Impact



Natural
Data

Capital
Science

Platform
Tools

Revolution Unfolding

1991 – knowledge foundation

1996 – real-world, pioneering cases

2006 – systematizing a universal approach

2016 – mainstreaming & scaling

? 2026 – transformation to green growth

69



