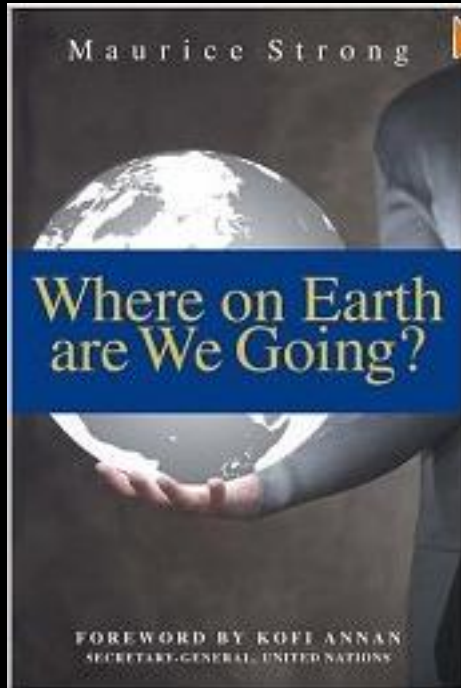


the **re**generation:  
ecosystem **risk**  
to  
ecosystem **innovation**

SPC Spring Meeting  
March 21, 2013  
San Francisco

Anthony Watanabe

7 billion and counting



Mass urbanization



Rising middle class



Changing climate





**CUESA**

the **CENTER** for **URBAN EDUCATION**  
about **SUSTAINABLE AGRICULTURE**

proud sponsor of the  
**FERRY PLAZA FARMERS MARKET**

**SATURDAYS** 8am - 2pm ▫ **TUESDAYS** 10am - 2pm ▫ **THURSDAYS** 3pm - 7pm

**ANDING SYSTEMS**

ns healthy ecosystems. Sustainable farmers by do has an impact on the larger environment t. They avoid practices that disrupt reseen, often disastrous, consequences for life ranching, and fishing protect water, earth, animals, people, insects, and microorganisms tems for survival.

fe pla farm mar

fer pla farme mar

fer pla farme mar

SA

AGRICULTURE

60% of global ecosystems have been degraded in the last 50 years...



“What is the business case for regeneration?”

# why this is important

Regeneration is important because we are losing our rich biodiversity. Not only is biodiversity at the core of the quality of life we enjoy in the West, and central to the quality of life sought by the developing world, but its loss comes at a price.

USD\$2-\$5 trillion



cost of annual biodiversity loss

# And for business there are increasing ecosystem risks

Business knows how to manage risk.

But many are just beginning to understand ecosystem risks.

Estimates peg the total value of ecosystem services at USD\$100 trillion\* per year.

Gross World Product for 2011 was USD\$79.3 trillion.



\*adjusted from "The value of the world's ecosystem services and natural capital", Robert Constanza, *Nature*, 1977.

# Global Risks 2013

## Eighth Edition



Of the 50 risks analyzed...

- Water supply crises (3.85)
- Mismanaged urbanization (3.69)
- Land and waterway use mismanagement (3.61)
- Food shortage crises (3.60)
- Irremediable pollution (3.35)

*Likelihood to occur in the next 10 years (scale of 1-5)*

...fully **10%** could be addressed through regenerative design





## DEVELOPMENT

zero energy housing  
climate positive development



## FOOD

grassland restoration through holistic mgmt  
waterless agriculture

# ecosystem opportunities for business



## WASTE

sustainable packaging\*  
a world without packaging waste



## WATER

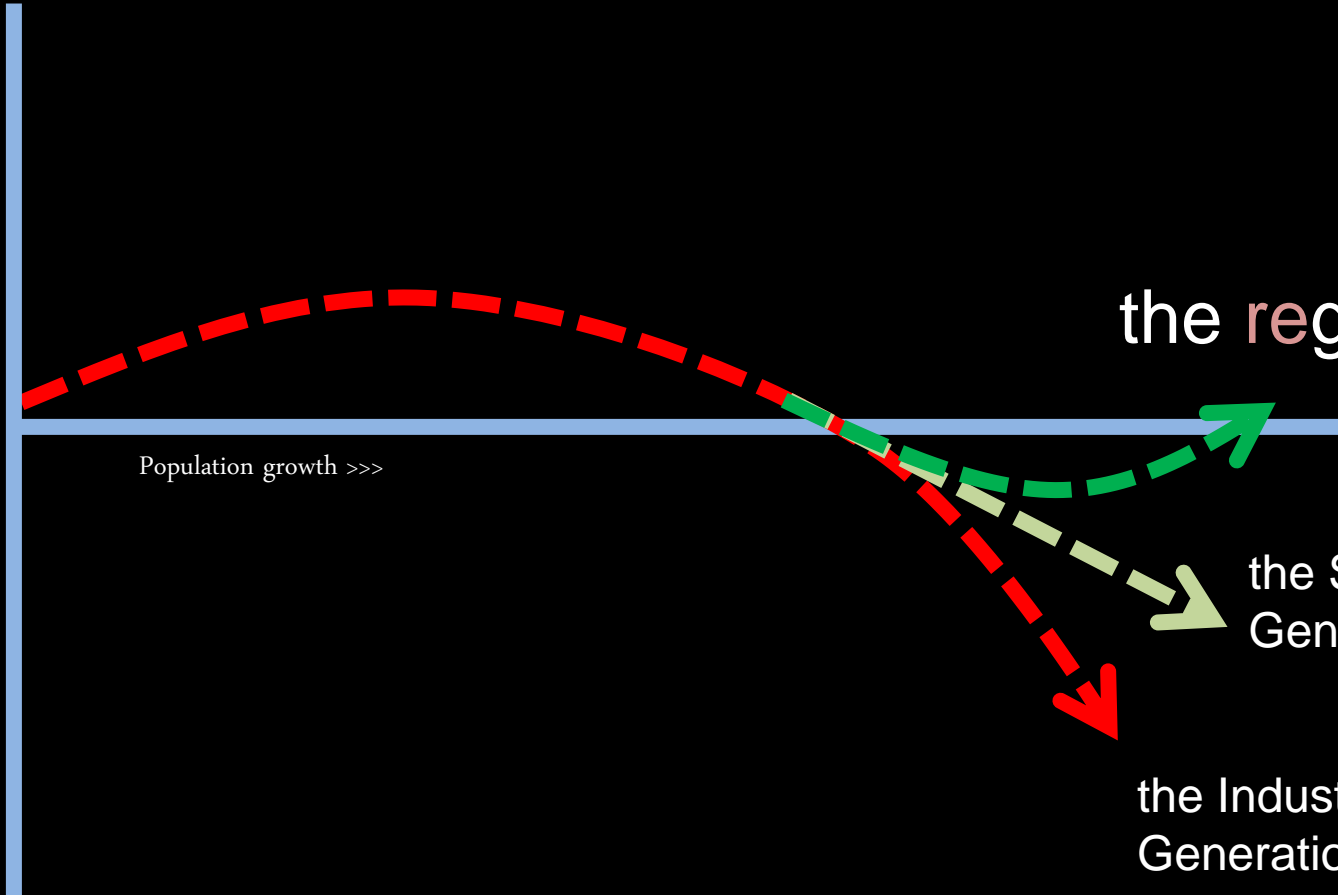
wetland restoration for residual water treatment  
effluent cleaner than source water

*\*according to the definition of the Sustainable Packaging Coalition (SPC)*





+  
Earth's Carrying Capacity  
-



Population growth >>>

the **re**generation

the Sustainability  
Generation

the Industrial  
Generation



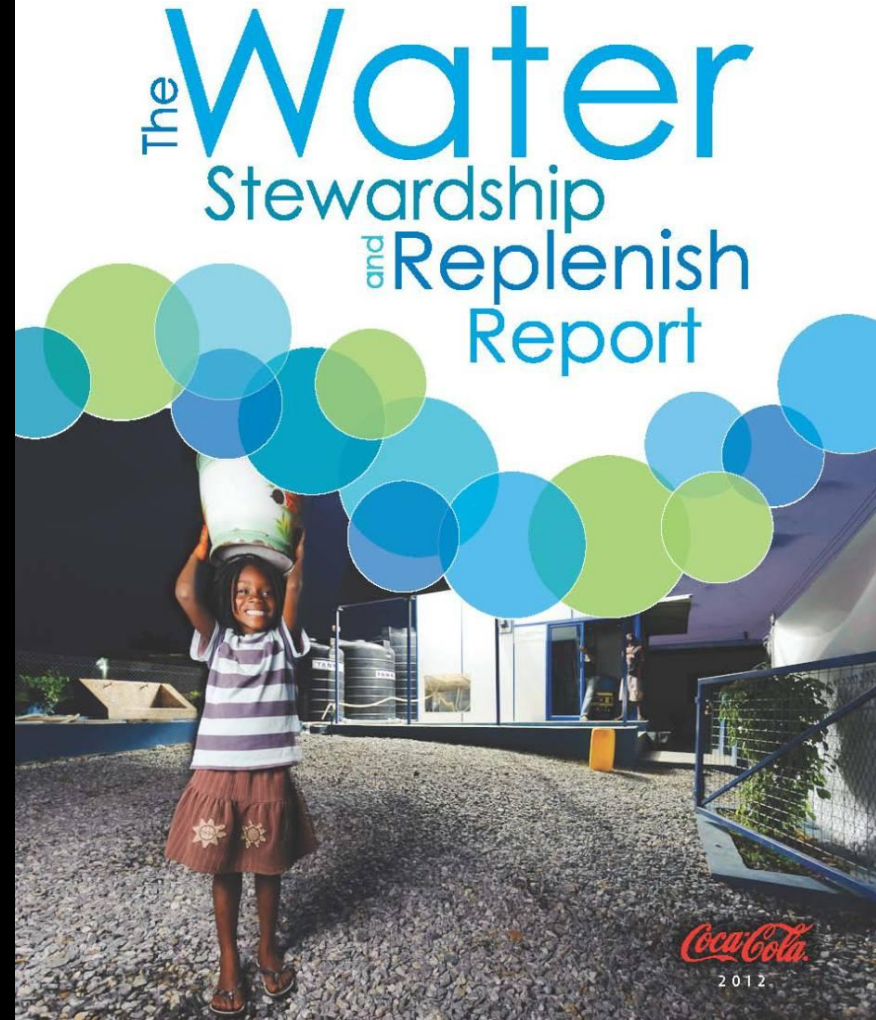
### Commitments to...

- maintain or enhance the ecosystem services provided by timberlands
- measure ecosystem services
- report on 18 biodiversity indicators, starting in 2013

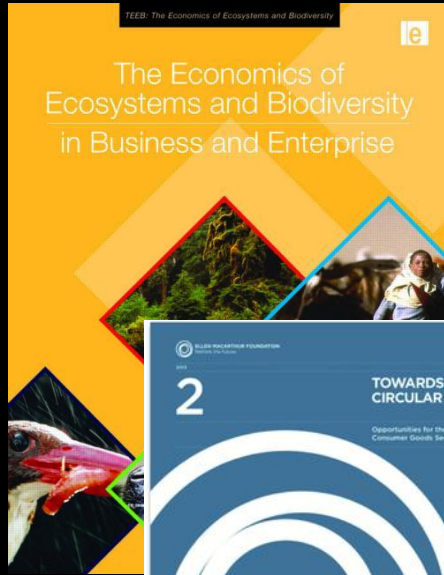
- owns or manages 8.22 million hectares of forest land
- 2011 sales were US\$ 6 billion
- employs 12,800 people in 11 countries
- headquarters in Federal Way, Washington.

Is this regenerative design?

- **Reduce** the Company's water use ratio while growing product volume, with a target to improve water efficiency by 20 percent by 2012 (using a 2004 baseline).
- **Recycle** the water used by the Company in its manufacturing processes and return it back to the environment at a level that supports aquatic life
- **Replenish** or offset the water used in the Company's finished beverages through participation in locally relevant projects to support communities and nature



# The Web of REgeneration



The circular economy...

by moving much more biological material through the anaerobic digestion or composting process and back into the soil, will reduce the need for replenishment with additional nutrients.

This is the principle of regeneration at work.



# Supporting factors for regenerative design...

Is there a business  
case for  
regeneration?

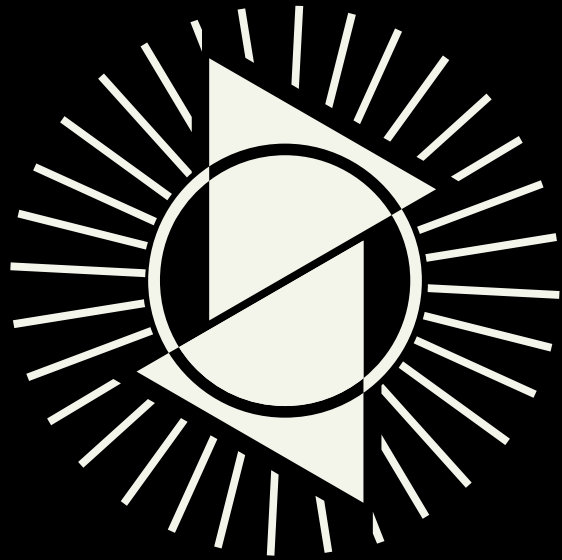
Science

Evidence  
based policy

Risk  
reduction

Business  
continuity

Other?



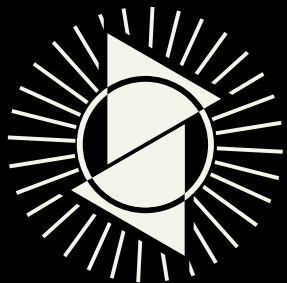
# THE REGENERATION TOUR

...ar  
the  
yea



relop  
ring a 1-





# Proposed itinerary

THE **RE**GENERATION  
TOUR

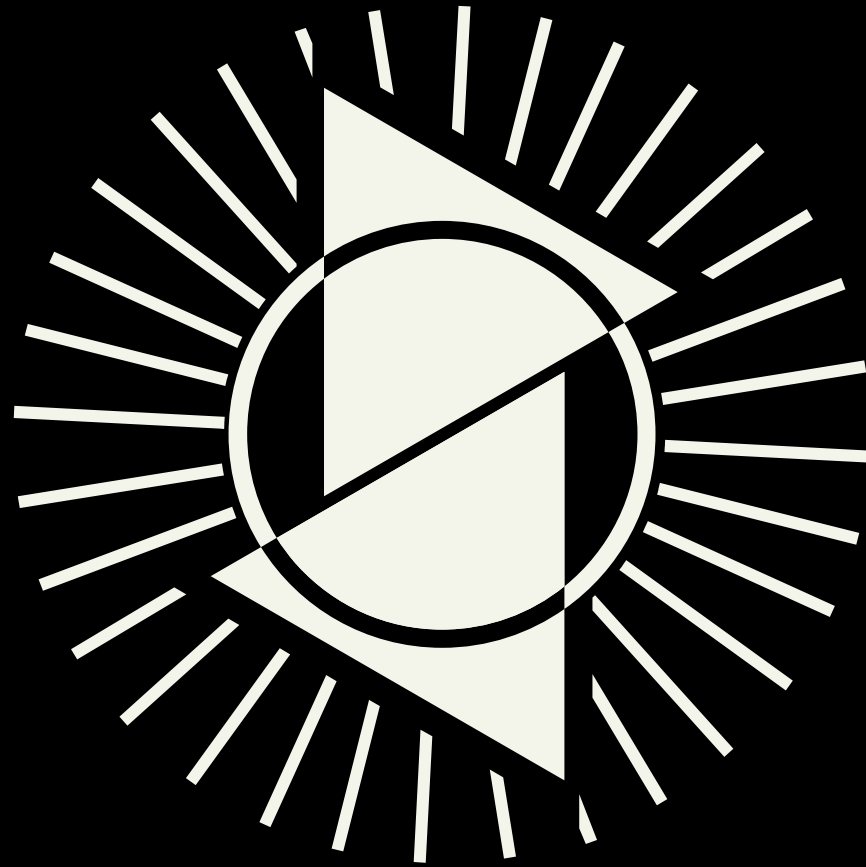


China  
(Sept-Oct)

Southeast  
Asia  
(Nov-Feb)

New  
Zealand  
(Mar-April)

Latin  
America  
(May-July)



[www.the-regeneration.com](http://www.the-regeneration.com)