Risk, Insurance and Sustainability

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What is Sustainability

Definition 1

• “The capacity to maintain a certain process or state indefinitely”

Unsustainable means “not able to be maintained at the current rate or level” and, using resources at a rate that places future generations in peril

Definition 2

• “Development which meets the needs of the present without compromising the ability of future generations to meet their own needs”
Why Focus on Triple Bottom Line?

Daly’s Triangle

- Health, wealth, leisure, mobility, freedom, knowledge
- Without functioning social systems, people cannot develop
- Without functioning economic systems, societies cannot advance
- Without functioning natural systems, everything collapses
Sustainable Business Strategies

“Simply put, no business will survive unless it takes into consideration the community in which it operates, delivers consistent value to customers, maintains the highest standards of governance and ethics, and mitigates its overall impact on the environment.”

James Strong, Chairman
Insurance Australia Group
How do the following (unsustainable) trends affect the insurance industry?

• Population Growth
• Growing Energy Demand
• Consequences of Climate Change Due to Carbon Emissions
• Financial Pressures (i.e. Growing National and Personal Debt)
• Linear System of Resource Use
• Workforce Pressures
How Insurers Make/Lose Money

Note: Diagram ignores capital gains, policyholder dividends, and income tax.
World Energy Demand By Fuel Source

Source: HWWI, ifo, IfW, December 2007 (f: forecast)
Global Fossil Carbon Emissions

- Total
- Petroleum
- Coal
- Natural Gas
- Cement Production

Million Metric Tons of Carbon / Year

1800 1850 1900 1950 2000
Global Temperature and Carbon Dioxide

- Temperature in degrees F
- Global Temperature
- Carbon Dioxide
- CO2 in parts per million

Adapted from www.climatescience.gov
Billion Dollar Weather/Climate Disasters
1980 - November 2011
NOAA/NESDIS/NCDC

- Number of events per year that exceed a cost of 1 billion dollars in damages
- Actual damage amounts at the time of event
- Damage amounts adjusted to 2011 using the Consumer Price Index (CPI)

NCDC; Property Claim Services (PCS)
NATURAL DISASTERS IN THE UNITED STATES, 1980–2011
(Number of events, Annual totals 1980–2010 vs. first six months 2011)

First Six Months 2011
98 Events

Source: © 2012 Munich Re. NatCatSERVICE.
Average thunderstorm losses have increased fivefold since 1980.

2011 Total $25.8 bn

Source: © 2012 Munich Re. NatCatSERVICE.
Annual Losses under U.S. Crop-hail Insurance in the United States
U.S. Wildfire Intensity has Doubled Since 1960
U.S. Catastrophe Losses are Growing Faster than Premiums, Population, & GDP
Increasing Frequency and Severity of Natural Disasters and the Effect on U.S.

Climate Change

Increase in Frequency and Severity of Natural Disasters

Insurers Withdrawal Homeowner Policies in High-Risk Areas

Substantial Rate Increases Among Private Insurers

Affects Agents, Consumers, Regulators, and Insurers

KATIE
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Illinois State University
FOR IMMEDIATE RELEASE

INSURANCE REGULATORS ADOPT CLIMATE CHANGE RISK DISCLOSURE
Requires Reporting of Risks, Responses

SAN DIEGO (March 17, 2009) - The National Association of Insurance Commissioners (NAIC) today adopted a mandatory requirement that insurance companies disclose to regulators the financial risks they face from climate change, as well as actions the companies are taking to respond to those risks.

"Climate change will have huge impacts on the insurance industry and we need better information on how insurers are responding to the challenge," said Pennsylvania Insurance Commissioner Joel Ario, who chairs the NAIC Climate Change and Global Warming Task Force. "As regulators, we are concerned about how climate change will impact the financial health of the insurance sector and the availability and affordability of insurance for consumers. This disclosure standard will give regulators the information we need to better understand these risks."

All insurance companies with annual premiums of $500 million or more will be required to complete an Insurer Climate Risk Disclosure Survey every year, with an initial reporting deadline of May 1, 2010. The surveys must be submitted in the state where the insurance company is domesticated.

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Three U.S. states to require insurer disclosure on climate

http://www.businessinsurance.com/article/20120202/NEWS04/120209976#crit=three

February 2, 2012 - 9:45am

FEATURED SOLUTION ARC: Solvency II compliance and business challenges for insurers

BOSTON (Reuters)—California, New York and Washington will require insurers to disclose how climate change may affect their businesses, effectively forcing most of the industry to address the issue, California’s insurance commissioner said on Wednesday.

The three states will require any insurers that do business in their states to make climate change disclosures on a form developed by the National Assn. of Insurance Commissioners.

"Between the three states, our hope is to survey all companies in the United States with premiums in excess of $500 million," California Insurance Commissioner Dave Jones said in an interview.

The NAIC first adopted the climate change survey in March 2009, although states were allowed to make it voluntary and insurers were only required to file in the state where they were primarily licensed.

Compliance has been limited, and Mr. Jones said he believed the three states were the only ones administering the survey this year.

A coalition of public interest groups, Ceres, said last September that just one in eight insurers had a formal policy to manage climate risk, even though most acknowledged the potential problems climate change posed.

"The current approach to disclosure by just a handful of states was providing just a patchwork of information," said
Energy and carbon emissions

- Energy policy and technology lead to a slow-down in the growth of CO2 emissions from energy use – but not fast enough to put the world on a safe carbon trajectory.

  - Global emissions growth decelerates from 1.9% p.a. in 1990-2010 to 1.2% p.a. for 2010-30; OECD emissions are lower in 2030 than 2010, but this decline is more than offset by the growth in non-OECD emissions.

  - More aggressive policies could see CO2 emissions from energy use starting to fall after 2020, with richer countries cutting emissions and developing countries more likely to reduce carbon intensity.

  - Globally, the greatest scope for emission reduction remains in power generation.

United States: 1950

Source: U.S. Census Bureau, International Data Base.
United States: 2010

Population (in millions)

Source: U.S. Census Bureau, International Data Base.
United States: 2050

Population (in millions)

Source: U.S. Census Bureau, International Data Base.
Increasing Obese and Overweight Americans

Effect of Age and Obesity: Injury, Type, Severity and Complexity

Gross Water Withdrawals
1900-2025 (est.)

While industrial and municipal demand for water increased dramatically in the 20th century, agriculture still takes the lion’s share.


http://www.sociologyonline.net/c6b739g.htm
Water Contamination from Agriculture (cont.)

• Impacts on insurance
  – Health concerns
    • Affect life insurance
    • Ability to work
  – Are you insuring an agriculture company that could be polluting a water source?
    • Reputational Risks

• Suggestions
  – Discounts for water treatment and pollution prevention programs
  – Hold polluters responsible
    • I.e. tickets, fines, etc.
Ex. What is NOT Sustainable

This linear system must be changed to one that is cyclical, and more efficient at every point.
MSW is Municipal Solid Waste (Trash)
America, the consumer:

- Americans use 5% of the world population
- 25% of all energy and fossil fuels
- 33% of all paper
- 20% of all metals
- 75% of toxic waste worldwide
Deforestation

• Impacts on insurance
  – Type and amount of trees affect a region’s susceptibility to fire
  – Reputational risks
    • Risk losing clients, employees, and other stakeholders
  – Potentially finding cures for diseases in the plants from that habitat

• Suggestions
  – CSR Day to support the preservation of endangered species
  – Reforestation programs
    • Receive carbon credit!
  – Buy land with bamboo to reduce carbon emissions (and can receive carbon credit)
Victoria's Secret mails out more than a million catalogs a day, and the cost of these catalogs isn’t sexy—they’re printed on paper made from some of the world’s last remaining Endangered Forests.

Victoria’s Secret isn’t so interested in full exposure when it comes to revealing where its catalogs come from. They are printed on paper from the Canadian Boreal, a forest wilderness larger than the Brazilian Amazon. And most of the paper that Victoria’s Secret uses comes directly from forests. Since ForestEthics launched its campaign, Victoria’s Secret has started printing 10% of its catalogs on a paper with high recycled content. This is exciting, and the company can do so much more.

The Canadian Boreal is a key buffer protecting us from global warming and is home to more than a million indigenous people, billions of North America’s migrating birds, as well as grizzly bears and threatened mountain caribou. It’s being cut down at a rate of two acres a minute, 24 hours a day, every day. Victoria’s Secret is not satisfied with just stripping the Boreal—it is also destroying forests in the Southern U.S., one of the most biologically diverse regions of our country and the unfortunate source for 15% of the world’s paper.

If Victoria's Secret were as dedicated to demanding environmentally-responsible paper from its suppliers like International Paper as it is to décolletage, it could make a significant contribution to turning around the environmentally-devastating paper industry.

Tell Leslie W. H. Haas, the CEO of Victoria’s Secret’s parent company, Limited Brands, that when it comes to our last remaining forests, less is not more. Insist that the company stop buying paper that comes from endangered forests, that it increase its use of recycled paper to 50%, and that it stop sending so many damn catalogs!

Get involved in ForestEthics’ campaign to revolutionize the catalog industry. Visit www.ForestEthics.org
THE GECKO IS GREEN.

Insurance junk mail is not.
National Debt Corrected for Inflation (2000 dollars)

Source: U.S. National Debt Clock
http://www.brillig.com/debt_clock/
Ratio of average top 1% household wealth to median wealth, 1962–2010
Income Disparity

Figure 1:
Income Gains at the Top Dwarf Those of Low- and Middle-Income Households

Percent Change in After-Tax Income Since 1979

- Top 1 percent
- Highest fifth
- Middle fifth
- Bottom fifth

+281%
+95%
+25%
+16%

Sources: CBPP calculations from Congressional Budget Office data.

cbpp.org

Lasting effects
More inequality seems to spell less sustained growth.
(years in growth spell)

Sources: Penn World Tables; and Wide World Inequality Database.
Note: Inequality is measured by the Gini coefficient, which ranges from zero, where all households have the same income, to 100, where one household has all the income. All spells lasted a minimum of five years. No incomplete spells are included. The data cover the period from 1950 to 2006. Countries in the sample include Belgium, Brazil, Cameroon, Colombia, Ecuador, El Salvador, Greece, Guatemala, Jamaica, Jordan, Pakistan, Panama, Singapore, Thailand, and Zambia.
Sustainability Risk Management and Human Capital

**Forces at work**
- Current business/economic environment
- Global Competition
- Rise in cost of doing business
  - Medical/retirement benefits
  - Energy costs

**Business response**
- “Do more with less”
- Increased economies of scale
- Increased specialization
- Reduced investment in workforce development

**What it all means for the employee**
- Value of employment with this firm outside of a paycheck is non-existent
- Change in psychological contract between employer and employee.
- Mental and physical exhaustion

**KATIE SCHOOL**
**OF INSURANCE AND FINANCIAL SERVICES**
**ILLINOIS STATE UNIVERSITY**
Implications for Businesses

Employee is adding less value

Decrease in productivity, efficiency, attitude, morale, customer service, creativity, talent, health.

Diminishing loyalty

Creates a moral hazard that can impact the firm through processes or customers.

Layoffs, pay and benefit cuts, downsizing, scaling up, outsourcing

Decrease in mental well-being of employees, change in corporate culture, reduced productivity in long term.
Implications for the Insurance Industry

<table>
<thead>
<tr>
<th>1. <strong>Cost of quality</strong> (Presenteeism)</th>
<th>2. <strong>Workers’ Compensation</strong></th>
<th>3. <strong>OSHA</strong></th>
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<tbody>
<tr>
<td>Poor claim service</td>
<td>Increase in frequency &amp; severity of claims</td>
<td>Safety Violations</td>
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<td>Underwriting decisions</td>
<td></td>
<td>Employers Liability</td>
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<td>Agents</td>
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The insurance industry as a business is not outside of the same pressures as businesses in any other industry. However, the impacts of unsustainable trends can create significant pressures on the industry’s profitability.
What is BUSINESS Sustainability?

**Triple Bottom Line**
- People
- Planet
- Profits

**Characteristics of Business Sustainability**
- Transparency
- Engagement of all stakeholders
- Social Responsibility
- Better Products and New Revenues
“Reconciling long-term with short-term goals, global expansion with local objectives, and workplace and community issues; all of which must be united, while not losing sight of the basic goals of profitable operations and increasing shareholder value”

-The Case For Integrating Sustainability and Risk Management, AON
Why should insurers care?

• **Downside Potential**
  • Insurers are standing downstream from the risks that are created by unsustainable practices
    – Climate
    – Environment
    – Human Capital
    – Investment
    – Legal risks

• **Upside potential**
  – New products and services
  – Potential to enhance reputation
  – Potential to attract new talent
New Business Opportunities
Sustainability Becoming Transparent and Required For Investors

Launched in 1999, the Dow Jones Sustainability Indexes are the first global indexes tracking the financial performance of the leading sustainability-driven companies worldwide. Based on the cooperation of Dow Jones Indexes, STOXX, and SAM they provide asset managers and objective benchmarks to manage sustainable portfolios.

Currently more than 70 DJSI licenses allow asset managers in 16 countries to manage a variety of financial products including active and passive funds, certificates and segregated accounts. These licensees presently manage over $1.2 trillion invested based on the DJSI.
ISO 14000-Competing in Global Environment

ISO 14001:2004 is a management tool enabling an organization of any size or type to:

1. identify and control the environmental impact of its activities, products or services, and to
2. improve its environmental performance continually, and to
3. implement a systematic approach to setting environmental objectives and targets, to achieving these and to demonstrating that they have been achieved.
“GREEN” Construction

• Whole-building sustainability in key areas of human and environmental health
  - sustainable site development
  - water savings
  - energy efficiency
  - materials selection
  - indoor environmental quality
GREEN CONSTRUCTION

• Green Features affecting Insurance
  – Vegetative Roof Systems
  – Alternative Energy Systems
    • Solar, Wind
    • Bio mass, Bio gas
    • Geo thermal
  – Alternative Water Systems
    • Gray water
    • Ground or storm water recycling
Green Roofing

What are risks and opportunities posed by green roofing systems?
Risks with New Technologies

New technologies are needed. But with new technologies come new risks which must be managed.

In Early 80s wind turbines went up in the West like these in Hawaii that were not made to withstand ocean weather.
New Products, New Branding, New Opportunities

Supporting socially responsible building
Better Green™ Coverage property endorsement for the Property Portfolio Protection (P3) policy

Aon Launches ‘Green Building Property Program’

GreenBuilding - Using energy efficiently

A Good Neighbor is a Green Neighbor

Travelers Joins the U.S. Green Building Council

Chubb Assembles Team to Focus on Green Energy Insurance Solutions
What Insurers Are Doing

• “Addressing Climate Change
  – “Green” Products
    • i.e. http://www.acegreen.com/products
  – More energy efficient operations
  – Investment strategies
  – Joining Climate Council
    http://www.sustainablelifemedia.com/content/story/climate/11012007
  – Discounts for “greening” activities
What Insurers Are Doing

• Micro-insurance
  – Insuring crops
  – Insuring poor people with disabilities
  – Insuring livestock
  – Insuring “breadwinner”
Katie School Student and Faculty Project: (Developing Crop Insurance in Ghana)

• Received ILO Grant to Study Potential of Developing Insurance for Crops in Ghana

• Katie School gathered and analyzed via actuarial students assisted by Ag. Business and actuarial, and COB faculty in developing crop insurance product in Ghana
New Course Fall 2012  
Sustainability, Risk Management and Insurance FIL 382

Course Objectives

1. Identify key economic and environmental risks facing businesses and explain the interconnections among these risks
2. Explain the common causes of risks stemming from “unsustainable” business, consumer, and government activities
3. Explain the benefits to businesses having sustainable business practices
4. Explain the relationship between sustainability, risk management, and insurance
5. Describe new risk management tools being developed to help address sustainability issues
CLIMATE SUMMIT

WHAT IF IT'S A BIG HOAX AND WE CREATE A BETTER WORLD FOR NOTHING?

- ENERGY INDEPENDENCE
- PRESERVE RAINFORESTS
- SUSTAINABILITY
- GREEN JOBS
- LIVABLE CITIES
- RENEWABLES
- CLEAN WATER, AIR
- HEALTHY CHILDREN
- ETC. ETC.
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Sustainability Blog
www.Sustainabilityriskmanagement.blogspot.com

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www.illinoisjones.blogspot.com