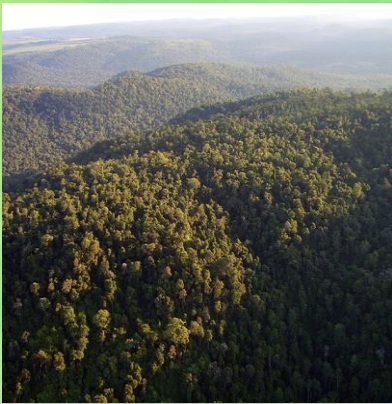


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Sustainability : Future Challenges, Future Opportunities



David J. Refkin

June 18, 2009

Beginning Steps: 1990's

- Earth Summit/Kyoto
- Identification of Key Issues
- Dioxin – ECF/TCF Debate
- ENGO Protests – BC and others
- Forestry Certification starts
 - Deinking mills – start up and crash
 - EDF Paper Task Force: Buying and Using Environmentally Preferable Paper



Actions – 2000's

- IPCC Report/Al Gore win Noble Prize
- Forest Certification Grows
- Paper Recovery Increases to 57%
- Climate Change – Carbon Footprints
- Collaboration vs. Confrontation
 - Recycled Content at 100% available.
 - Forest Prdcts. in developing world
 - Paper Working Group - EPAT



Future Issues – 2010 and beyond

- Sustainability
- Climate Change
- Forests...and Certification
- Resource Constrained World
- Fiber Availability,,or lack thereof
- Consumerism: Dead or Alive



The Future: Sustainability

- Financial Sustainability
 - The “model” is stressed.
- Social Responsibility moves to the forefront
 - Developing countries
 - Adaptation to a warmer climate
- Environmental Sustainability: a market differentiator
 - \$ CO₂ – buyer or seller?
 - Consumer habits change



The Future: Climate Change

- The trends are ominous
- June 16th White House Report:
 - “Rising Sea levels, sweltering temperatures, deeper droughts and heavier rainfalls *are already here and getting worse.*”
 - “Not opinions to be debated; they are facts to be dealt with.”
 - “Thresholds will be crossed leading to large changes in climate and ecosystems.”
 - “*It is not too late to act.*”
 - Time for denial is over.



The Future: Climate Change

- Adaptation: to a warmer, more variable climate.
 - Painful and expensive – barely on the radar
- Mitigation: a vast restructuring of the entire energy infrastructure and transportation in the US and beyond
 - Implications for every industry
- Price on Carbon will reshape the entire paper supply chain
 - Winners and losers – role of the CFO.



The Future – Forests..and Certification

- Economics drive more fiber to the tropics and plantations – stress point.
- But, COP 15 limits conversions and harvesting.
- GMO's?
 - Climate Change Impact on growth?
 - What is the “best” species to plant?
 - What is the core value – maximize sequestration? Follow the \$.



The Future: Forests ...and Certification

- Forest Certification matures to address:
 - Chain of Custody vs. Land Certification
 - Controlled/Procured Wood
 - Carbon issues – species, sequestration, soil disturbances, land conversion impacts.
- Must maintain the credibility of certification...why have we done all this hard work?



The Future – Resource Constrained World

- Extreme shortage of clean water.
- The demand for fiber – especially packaging related expands.
- Per Capita annual consumption:
 - US, W Europe, Japan – 120 kg
 - Asia, Latin America – 12 kg
 - The growing middle class in developing world wants to consume...like we do.
- Where will all the fiber come from?



The Future – Fiber Availability..or lack thereof

- Energy increasingly from wood
- Bark Beetle infestation limits cuts
- COP 15 – limitations in tropics
- Protect “frontier” forests.
- Carbon aspects of tree harvesting.
 - Droughts change growth rates.
 - Can we increase paper recovery rates – commitment?



The Future: Consumerism: Dead or Alive

- Consumer Saving Rates
- Non-Renewable Resource Usage
- Sustainable Consumption
- Future lower standard of living
- Evidence of “simpler” lifestyles emerging in Europe and Canada.
 - Legacy issues.



Final Thought:

- How do we measure the integrity of our environment? A value on Ecosystem services.
- “GNP measures neither our wit nor our courage, neither our wisdom nor our learning, neither our compassion nor our devotion to country. It measures everything, in short, except that which makes life worthwhile.”



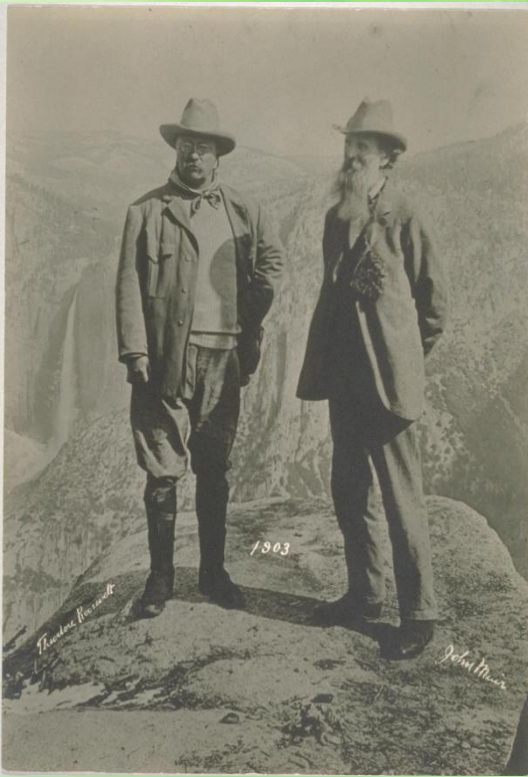
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- 1968
41 years ago.



- **Robert Kennedy**





The nation behaves well if it treats the Natural Resources as assets, which it must turn over to the next generation increased and not impaired in value.

Theodore Roosevelt, 1910.

