Industry Canada Industrie Canada

The Shifting Paradigm of Impact Assessment: The Emergence of Voluntary IA and Mitigation

Presentation to International Association for Impact Assessment

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Canada

Objectives

- **Provide overview of industry's many "sustainability" initiatives**
- **Outline emerging trend of industry self-regulation and stewardship**
- **Raise for discussion some public policy points**

Part I – Initiatives of the "Sasquatch Seven"

- Mining
- Oil and gas
- Electricity
- Forest products
- Chemicals
- Agriculture
- Transportation
  - Sasquatch seven are:
    - Based upon extraction of natural resources
    - Highly energy and materials intensive
    - Bigfoot, i.e. have large ecological footprints

Mining

- **Two association-led stewardship mobilizations exist in Canada**
  - **Towards sustainable mining (TSM)**
    - **Initiative of Mining Association of Canada (MAC)**
    - **MAC members adopt EMS and earn their social license to operate by demonstrating a commitment to sustainable development**
    - **MAC also participates in the North American Birds Conservation Initiative (NABCI)**
  - **Environmental excellence in exploration (E3)**
    - **Initiative of the Prospectors and Developers Association of Canada (PDAC)**
    - **A best practices standard**

Oil and Gas

- **Canadian Association of Petroleum Producers (CAPP)**
  - **Launched voluntary stewardship program in 1999**
  - **Now mandatory for all 153 CAPP members**
    - **Bronze cos (60%) commit to a vision & principles, collect and report core data**
    - **Silver cos (12%) implement EMS and conduct public consultations**
    - **Gold cos (14%) conduct regular internal audits of their EMS**
    - **Platinum cos (14%) undertake independent 3rd party audits**
- **Canadian Petroleum Products Institute (CPPI)**
  - **Supports a national regulatory framework for refinery emission reductions under CCME**
    - **Sector seeks prioritized (based on risk) performance-based regulations**

Electricity

- **Environmental commitment and responsibility (ECR) mobilizes electricity companies into stewardship (1997)**
  - **Participation is required of members of the Canadian Electricity Assocation (CEA)**
  - **EMS required**
  - **ECR reports annual progress with results verified by independent outside body**
    - **Public advisory panel assists**
- **CEA has first sector-specific MOU with DFO**
  - **Develops a national compliance framework based upon joint educational and training materials**
  - **Seeks to develop joint stewardship initiatives**

Forest Products

- Forest Products Association of Canada (FPAC) has its sustainable forest management (SFM) initiative
  - Certification to ISO 14001 nearly complete
  - Certification to CSA, SFI or FSC standard
    - By 2006 with 3rd party audits
    - Condition of FPAC membership
  - Public participates today in SFM planning
- Improvement in 1990's in waste utilization by
  - Making newsprint from recycled paper
  - Using mill residue to co-generate electricity
  - Making paper from mill residues
  - Creating new value-added products such as CSB
- Members "implementing arguably the most ambitious sustainability agenda ever undertaken in Canadian industry" and "expect a lot more" – FPAC 2003

Chemicals

- **"Responsible Care [launched 1985 by the Canadian Chemical Producers Association] is the most significant initiative undertaken by our membership in the thirty-seven year history of the CCPA"**
  - **Partnership to set and meet goals between chemicals industry, communities, government, other stakeholders**
    - **Responsible Care is the gold standard for association led mobilizations of stewardship**
  - **Provides for product stewardship from cradle (R&D) through manufacturing/distribution to grave (disposal)**
    - **provides for community advisory panels, reporting of results and third party verification**
  - **Responsible Care exports environmental stewardship**
    - **adopted now in 47 countries**

Agriculture

- **Agriculture policy framework (APF)**
  - **Example of a government led mobilization**
  - **Follows federal provincial agreement to cooperate in pursuit of specific outcomes**
    - **Reduced water contamination from nutrients, pathogens and pesticides**
    - **Reduced risk to soil health and of soil erosion**
    - **Reduced particulate emissions, odours & GHG**
    - **Better agriculture & biodiversity compatibility**
- **Environmental farm plans (EFP) becoming norm for farm operations**
  - **EMS by another name, spreading east to west**
  - **Primary drivers: supply chain pressure, APF**

Transportation

- **MOU between Canadian Vehicle Manufacturers Association (CVMA) EC and MOE (1992)**
  - **Targets substances (initially 65 then more added) for reduction or virtual elimination**
    - **through facilities-based P2 initiatives**
  - **Reports annually on initiatives and progress**
  - **Oversight is by signatories**
- **Auto parts manufacturers now are adopting EMS**
  - **APMA MOU with EC and IC**

Part II – What's Really Happening?

- **Public policy tools**
  - **Regulation (and its threat)**
  - **Voluntary action**
  - **Information disclosure**
  - **Economic instruments**

- **Private drivers**
  - **NGOs**
  - **Employees**
  - **Customers**
  - **Science**
  - **Director's liability**
  - **Communities**
  - **Banks & insurance companies**
  - **Shareholders**
  - **Industry champions**

Stewardship's Happening

- **Ethic of caring for the land, air and water, and sustaining natural processes on which life depends**
  - **Grounded in sense of personal responsibility**
  - **Impacts goals and behaviour**
- **Stewardship means fulfilling all legal duties**
  - **Stewardship also means becoming concerned with the attainment of legislative and policy ends**
    - **Kyoto's end of reducing GHG emissions**
    - **CEAA's end of mitigating project's impacts**
    - **CEPA 1999's end of preventing pollution**
    - **SARA's end of conserving species at risk**
    - **Fisheries Act's end of protecting fish and fish habitat**
  - **Stewardship results in voluntary action to cost-effectively reduce risk**

Self-regulation's Happening

- Industry associations are mobilizing members
- Companies are adopting environmental management systems (EMS), pollution prevention (P2) planning, life cycle assessment/management (LCA/LCM), design for environment (DfE), other sustainable development tools
- Mitigation of adverse environmental impacts of projects is integrated today into project design
- Corporate and industry association environmental reporting is improving
- Supply chain management is taking hold
- Best practice codes are proliferating

Are We There Yet?

- **We are nowhere close**
  - **For the whole world to have north America's standard of living, at today's levels of energy and materials intensity, we would need three planets**
- **But we've come a long way in a short time**
  - **As recently as the 70s society told industry, locate beside a river**
    - **Let it take your pollution away**
    - **And here's your grant to build the plant**

Will Regulation Get Us There?

Regulation extremely important in "early days"

- **Alone it can no longer do the job**
  - **Today's numerous small non-point sources mean more complex problems**
  - **Integrated with social considerations, concerns about global competitiveness**
- **Regulation instills idea: "if in legal compliance, end of matter" – cannot instill an ethic**
  - **Environmental stewardship ethic can take companies beyond compliance**
  - **Industry associations cultivate that ethic today**
- **Regulation still important but in background today**

Policy Mix Crucial

- **Ideal "mix" would**
  - **Use all available public policy tools (regulation, information disclosure, economic instruments and voluntary initiatives)**
  - **Lead to stewardship ethic becoming the norm**
  - **Engage all high impact sectors**
  - **Engage small and medium-sized enterprises**
  - **Give attention to all "sustainability" issues**
    - **Resource**
    - **Environment**
    - **Local communities**
    - **Society**
  - **Reward stewardship at its leading edge**

Key Challenges Lie Ahead

- **Must address global issues**
  - **Tropical deforestation**
  - **Ocean degradation**
  - **Biodiversity loss**
  - **Desertification**
  - **Climate change**
- **Civil society must grow into its new role**
- **Industry must be willing to share power**
- **SMEs must become engaged**
- **Must move from continuous improvement to Factor Four gains**

Role of Economic Departments

- Helping to sell voluntary initiatives and self-regulation by industry accompanied by civil society oversight
- Facilitating access of NGOs and academics to industry
- Helping to create a role for economic instruments
- Helping to ensure prices reflect full environmental costs
- Helping to address supply chain issues
- Helping to design rewards for leading-edge stewards
- Helping to engage small and medium-sized enterprises in environmental stewardship and governance frameworks
- Promoting corporate social responsibility (CSR) among companies selling in global markets
- Helping business identify opportunities to develop and adopt SD tools & technologies

In Conclusion

- **A shift has occurred**
  - **at issue today are not just projects but also the day-to-day operations of companies, their culture and "social license to operate"**
  - **the shift has been called JAZZ to denote "a world full of unscripted, voluntary initiatives that are decentralized and improvisational, like Jazz …[where] governments facilitate more than regulate, environmental and consumer groups are very active, and businesses see strategic advantage in doing the right thing" (Speth in Red Sky at Morning)**
- **Result some day will be self-regulation and stewardship by industry with civil society oversight**

Annex I - Abstract

Much of impact assessment (IA) is project oriented and required by legislation. However, more and more of IA in Canada today is sector oriented and has companies making entirely voluntary commitments. This presentation provides a brief overview of frameworks that mobilize industry into voluntarily mitigating adverse environmental effects and improving environmental performance. It looks at industry-led (responsible care, towards sustainable mining, etc.) and government-led mobilization frameworks, paying particular attention to the drivers of industry's engagement, the achievements of particular initiatives, and how some frameworks are evolving into regimes of self regulation and environmental stewardship. Its theme is: in Canada voluntary IA and mitigation has emerged to be of at least equal importance to legislation-based IA. Key issues in the path forward for voluntary environmental initiatives are also examined.

Annex II - Mining

- **GHG emissions**
  - **Metal mining sector's GHG emissions decreased 26% from 1990 – 2001, improving GHG intensity by 5.5%**
  - **Smelting and refining's GHG emissions decreased by 17%, improving GHG intensity by 19%**
  - **MAC members pledge 1% annual decrease in energy consumption per unit of output for period 1995-2005**
  - **In 2001 and 2002 MAC awarded gold champion reporting status by Voluntary Challenge & Registry**
- **Sulphur dioxide (SO2) emissions down 57%**
- **Reductions of toxic releases from base year**
  - **-54% arsenic**
    -72% cadmium
    -57% copper
    -76% nickel
    -88% hydrogen sulphide
    -87% zinc
    -79% lead
    -94% mercury

Annex II - Oil and Gas

- **Energy consumption per unit of production was reduced in oil sands by 45% from 1980-2000**
  - **In exploration, directional (horizontal) drilling and smaller seismic lines benefit wildlife**
  - **Flaring of solution gas down 38% 1996-2001**
- **At refineries, excluding criteria air contaminants,**
  - **NPRI releases were reduced 60% from 1993-2002**
  - **Sulphur in gasoline to be reduced 90% by 2005**
  - **VOC emissions decreased 44% 1998-2000**
  - **In 2002 materials to be recycled represent 92% of offsite transfers**
  - **CO_2 emissions in 2002 stable at 1990 levels despite significant expansion of production**
    - **CPPI members commit to improving energy intensity 1% a year over period 2000-2004**

Annex II - Electricity

- **While GHG emissions rose, electricity intensity of economy was down 12% between 1985-2000**
  - **Reflects improved efficiency of capital stock, energy efficiency programs of government and demand side management (DSM) by utilities**
  - **GHG rising because of demand (1.4% annually)**
- **SO_2 emissions per unit of net fossil generation fell 8.6% between 1997-2001**
- **Over same period, No_x emissions of fossil fuel plants fell (net) by 18%**
- **Utilities removing PCBs – to become PCB free**
- **Reduced releases of ARET toxic substances 46% from base year by 1997**

Annex II – Forest Products

- **Capital spending since 1990 has been $30 billion**
- **Since1990 GHG emissions are down 28%**
  - **Despite production increasing by one-third**
- **Water use is down 32% in pulp & paper mills**
  - **Virtual Elimination of dioxin and furan releases**
  - **Down are emissions of BOD (94%), organochlorides (90%), TSS (70%) and ARET toxics (69%)**
- **Paper today has 79% recycled materials content**
- **Canada has more third-party certified forests than any other country**
  - **Of our original forest area, > 91% remains forested**

Annex II -Chemicals

- From 1992-2001 emissions to water decreased 99.7% and emissions to air (excluding CO_2) decreased 43%
  - Meanwhile chemical production expanded 30% and emissions of toxic substances decreased 69%
- Emissions of GHG, measured in terms of Global Warming Potential, down 37% in 2002 from 1992
  - Per unit of production they were down 23%
- Total emissions of stratospheric ozone depleting substances decreased 57% from 1992-2002
- By 2007 members project to reduce emissions of NPRI substances by 72 % from 1992 levels

Annex II - Agriculture

- **Nitrogenous fertilizer use (t/km2 of arable land)**
  - **Canada = 3.9 USA = 6.3 OECD = 6.5**
- **Pesticide use (t/km2 of arable land)**
  - **Canada = 0.07 USA = 0.21 OECD = 0.25**
- **Seeded cropland under "no till" and "low till"**
  - **Unheard of practice until 1980s**
  - **But by 1991 equals 31% of seeded cropland**
  - **By 1996 equals 47%**
  - **Improves sinking of GHG with wildlife benefits**
- **Global picture is not encouraging**
  - **Ag uses > 50% of planet's habitable area and has largest environmental impact of any human activity**
    - **Wastes 60% of the water it uses each year**
    - **Destroys 100,000 square miles of species habitat annually**

Annex II - Transportation

- **CVMA's eighth progress report (2002)**
  - **Reports reductions of 76 substances**
  - **Grand total is 404,888 tonnes/year**
  - **Describes P2 initiatives**
- **By 2002 SUVs and other "light trucks" have captured 50% of the new vehicle market, up from 20% in 1975**
  - **This shift in consumer demand offsets all fuel efficiency gains otherwise made over period**
  - **In 2002 average new vehicle fuel economy was at its lowest level (24 mpg) in 20 years**

Annex III - Biodiversity Stewardship

- Biodiversity stewardship is new frontier
- Species at risk act (SARA)
  - Prohibits killing/harming a listed species at risk and destroying its residence or critical habitat
  - Any person can allege violation of a prohibition and demand an investigation
  - Offences are strict liability, allowing “due diligence” as defense
- SARA places stewardship ahead of regulation
  - Regulation relied upon as last resort
  - CEAA projects likely to affect a listed SARA species will have follow-up monitoring