

Fifty Ways to Lose Your Pollution:

Clean Air Conference, 2004

Dr. Richard Laster Hebrew University of Jerusalem
Laster and Gouldman Law Offices

Mr. Dan Livney, Laster and Gouldman Law Offices

“I can’t get used to these changing times. There was a time when air was clean and sex was dirty.” - George Burns

Beginning in the 1970’s, lawmakers around the world have continuously passed measures to reduce air pollution. A brief stroll down a simplified air pollution time line would start with dilution of air contaminants before they reach the ground, thereby lowering the concentrations to which the population is exposed. Different methods were deployed in order to achieve this, beginning with the use of tall stack technology. Additional types of dilution attempts to control source emission rate during the periods of high ground level concentrations include production curtailment, plant shutdown, fuel switching, netting, bubbles and set-offs.

Other approaches looked to newer technologies to control air pollution, for example electro-static precipitators, or scrubbers, whereby pollutants are removed, destroyed or transformed in a control device. Laws required polluters to use the Best Available Technology/Technique (BAT)¹, or Lowest Achievable Emissions Rate (LAER)² in order to keep up with the latest scientific pollution control developments.

The next method of air pollution reduction to evolve was the polluter pays approach, starting with emission charges³, the creation of a commodity market for air pollution rights⁴, a move into the international arena with the Kyoto Protocol⁵ and the Clean Development Mechanism designed there, and recently an economic charge on vehicles entering cities, such as that used in London today.⁶

The Measurement of Success

Each introduction of a newer legal method to reduce air pollution was greeted with initial enthusiasm by clean air advocates. Some reduced pollution, others did not. Either way, there was usually a hidden catch. Tall smokestacks merely spread the pollution over a wider area.⁷ Scrubbers today can achieve up to 99% removal of SO₂⁸, but we're still left with other pollutants and solid waste disposal. These legal mechanisms may have brought about stabilization of sulfur emissions in the CIS, Europe and the US over the past 20 years. But this stabilization process could also be the result of higher fuel costs and other factors, and emissions from mobile sources have not been stabilized. The US Clean Air Act, European Emission Standards, and other legal frameworks set air pollution standards for cars. But recent increases in emissions are linked to the rapid increases in emissions from China, where car sales have been rising by close to 80 percent a year and fuel supplies contain many times more sulfur than those sold in the United States or Europe.⁹ Add to this the limits to combustion engine efficiency¹⁰, a dwindling supply of oil (which increases the usage of fuels with higher sulfur content), and an ever-increasing world population, and we find the world heading towards increased air pollution and global warming. It is time to face the music- atmospheric pollution is a bigger lethal threat to the world than ever, and getting worse.

To quote the EPA, "Most of the air pollution abatement efforts taken to date are no more than a temporary solution. Today's abatement efforts do not address the roots of the problem such as inappropriate energy, transportation, and industrial systems. They are best viewed as a bridge to when renewable sources such as solar, wind, and water power or some newly discovered source would provide the bulk of the world's energy. Our focus should be on pollution prevention rather than pollution control."¹¹

Is There A Solution?

Taking a cue from the EPA quote above, we need to go to the root causes of air pollution and remove them in order to reach the goal of a healthier world with clean air in which to live. The principle of "sustainable development should be the organizing principle of all democratic societies and depending all other goals,

policies, and processes. It provides a framework for integrating economic, social and environmental concerns over time...it promotes good governance, healthy living, innovation, life-long learning and all forms of economic growth which secure the natural capital upon which we depend. It reinforces social harmony and seeks to secure each individual's prospects of leading a fulfilling life."

The principles of sustainable development have been given overwhelming international approval beginning in Rio in 1992, and recently in Johannesburg in 2002.¹² But these agreements are not binding, and on the ground their influence is limited. In the US, environment bureaus such as the Environmental Protection Agency react rather than initiate. The goals of our laws must change from trying to protect the environment to laws that encourage sustainable development.¹³

Translating Sustainable Development into Effective Legislation

In order to move lawmakers towards creating sustainable legislation, we must first learn what is not sustainable legislation. It is up to the scholars and leaders to "identify the perverse incentives in existing law that drive individuals and institutions to choose wasteful forms of economic development over sustainability creating a road map of the path to reform. Without a road map charting perverse incentives, reformers will not be able to start out on the road to sustainable development law. With a road map, citizens will be able to work together on the thousands of politically achievable, incremental changes that are necessary for transforming the system."¹⁴ We must change the accepted attitude of living for today, and stop assuming that tomorrow's technology will solve today's problems. This is not the legacy we want to leave future generations.

Defining Non-Sustainable Legislation

Sustainability does not allow greater amounts of pollutants to be expelled into the atmosphere, water, or land than can safely be absorbed. The usage of non-renewable resources is strongly restricted, and renewable resources are consumed no faster than their rate of regeneration. Human intervention in the environment must be in sync with the ability of relevant natural processes to react. Danger and unjustifiable risks to human health through human influence are to be avoided.

Any law that contravene these axioms is non- sustainable. A few examples include:

- Legislation which regards resources only from a functional standpoint, without regard to their aesthetic and natural balance effect on the environment.
- Legislation encouraging the use of private vehicles, or encouraging population growth.
- Legislation which encourages the use of new raw resources instead of efficient use and re-use of existing resources.
- Legislation which does not take into effect the polluter-pays principle, the precautionary principle, and the public trust doctrine.
- Legislation which limits liability for those who may cause damage to persons or the environment.

Looking beyond the environment to the world as a whole, non-sustainable development can be perceived as society entering deeper and deeper into a funnel of declining potential for quality of life. Per capita, the potential for living prosperous lives is systematically declining- it's like moving deeper and deeper into a funnel of declining resources".¹⁵

Seen from this perspective, legislation which promotes non-sustainability can be found in spheres beyond the environment, for instance in economics (laws promoting non-sustainable consumption and production patterns, non-sustainable economic structure, subsidies and incentives for non-sustainable development), social affairs (lack of adequate health, education, housing, security, equality), and administrative procedure (lack of freedom of information, lack of public involvement and transparency, unclear language, decisions by a single ministry/department without adequate cross-sectoral consideration of social and environmental issues).¹⁶

Are There Existing Legal Remedies?

Most democratic countries have laws that, due to their importance, are of superior status to other laws. This constitutional status is almost always afforded to the protection of basic human rights. Israel's Basic Law for Freedom and Human Dignity states that all persons are entitled to protection of their life, body and

dignity.¹⁷ An amendment of 1994 added "Fundamental human rights in Israel are founded upon recognition of the value of the human being, the sanctity of human life, and the principle that all persons are free;"¹⁸ Article 21 of the Indian Constitution states: 'No person shall be deprived of his life or personal liberty except according to procedure established by law.'

The Supreme Courts in these two countries have given divergent opinions as to whether the right to breathe clean air and to drink clean water are a part of the basic right to life and body. The Indian Supreme Court held that the right to life includes the right to enjoy unpolluted air and water.¹⁹ If anything endangers or impairs the quality of life in derogation of law, a citizen has a right to appeal to the Supreme Court under Article 32 of the Constitution. The Indian Supreme Court has also held the public trust doctrine to be inherent to Indian law, making the State the public's trustee over all natural resources, which are by nature meant for public use and enjoyment.²⁰ The Israeli Supreme Court recently gave a different opinion, declaring that the right to a reasonably healthy environment cannot be derived from the Basic Law of Freedom and Human Dignity. The judges held this to be too wide an interpretation. A constitutional right to a reasonably healthy environment will only exist if the Knesset passes an Environmental Basic Law.²¹

The EU made sustainable development a part of EU law. According to the European Parliament, "Changes to the preamble and Article 2 (B) of the EU Treaty strengthen the principle of sustainable development, so that it is now one of the EU's main objectives. Article 6 (3c) of the EC Treaty explicitly mentions the need to integrate protection of the environment in all Community sectoral policies."²² Other Articles incorporate the principles of precaution, prevention, polluter pays, and rectifying pollution at source.²³ Carrying out these principles will only be done on the EU level if the objectives may be better served this way. Otherwise, it will be left to the individual countries, as per the principle of subsidiarity.²⁴

Another legal tool worthy of examination is the Israeli Commissioner for Future Generations. The purpose of this government position is to examine proposed laws in light of their effect on future generations, and to make recommendations to the appropriate Knesset committee. The commissioner may delay a proposed law until a report on the law's ramifications on future generations may be prepared.²⁵

Conclusion

Present environmental protection laws, while immensely important in the fight for a safe environment, do not get to the root causes of the problem. Sustainability must be put at the forefront of the political agenda as a guideline by which decisions are made. If sustainability were given constitutional status, national laws could be held up to the light of sustainability. The courts would declare those not in sync with the principles of sustainability invalid. As we have shown, inroads to this have been made, chiefly in Europe.

Legislators need to develop criteria for anti- sustainable legislation. A sustainability watchdog acting as a representative of future generations, along the lines of the Israeli Commissioner for Future Generations, needs to constantly be looking over the legislators' shoulders. It is up to the legal and scientific community to work towards making sustainability the accepted norm, putting pressure on government, legislators, and the courts to integrate sustainability into law and to accord it constitutional status.

FOOTNOTES

¹ Best Available Techniques is defined in the EU Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control as "the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole: "

This definition implies that BAT not only covers the technology used but also the way in which the installation is operated, to ensure a high level of environmental protection as a whole. BAT takes into account the balance between the costs and environmental benefits.

See website of the Geoenvironmental Research Center, University of Cardiff:
<http://www.grc.cf.ac.uk/lrn/resources/ppc/bat.php>

² According to Douglas M. Skie, Chief of Air Programs Branch, EPA:
Review of the definition of LAER, as contained within 40 CFR 51.165(a)(1)(xiii), indicates that "lowest achievable emission rate" means, for any source, the more stringent rate of emissions based on the following:

"(A) The most stringent emissions limitation which is contained in the implementation plan of any State for such class or category of stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limitations are not achievable; or (B) The most stringent emissions limitation which is achieved in practice by such class or category of stationary sources. This limitation, when applied to a modification, means the lowest achievable emissions rate for the new or modified emissions units within (the) stationary source. In no event shall the application of the term permit a proposed new or modified stationary source to emit any pollutant in excess of the amount allowable under an applicable new source standard of performance."

See: http://www.epa.gov/ttn/nsr/naa1/n26_12.html

³ The Clean Air Act (CAA); 42 U.S.C. s/s 7401 et seq. (1970).

⁴ See the Acid Rain Program of the 1990 Clean Air Act.

⁵ Kyoto Protocol to the United Nations Framework Convention on Climate Change (December 10, 1997), available at <http://unfccc.int/resource/docs/convkp/kpeng.pdf> (last visited on June 22, 2004). While the Kyoto Protocol does promote sustainable development (Article 2, par. 1), its main focus is on emissions reductions and economic tradeoffs.

⁶ On February 17, 2003 a 5£ a day charge on vehicles entering central London was introduced. See <http://www.ifs.org.uk/consume/bn31.pdf> (last visited June 28, 2004).

⁷ In 1985 the US EPA limited the use of dispersion enhancement techniques from stacks which were built since December 31, 1970.

⁸ Rubin, E.S., Taylor, M.R., Yeh, S., and Hounshell, D.A.; Experience Curves For Environmental Technology and their Relationship to Government Actions, Joint EXTOOL-EXCETP 6 Workshop, EIEA, Paris, Jan. 22-24, 2003.

⁹ See Lefohna, Allen S., Husarb, Janja D., Husarb, Rudolf B.; Estimating Historical Anthropogenic Global Sulfur Emission Patterns for the Period 1850-1990, *Atmospheric Environment* 33 (1999) 3435-3444.
Bradsher, Keith, Sulfur: in gasoline, it's the 'lead of the future', *International Herald Tribune*, June 26-27, 2004, p. 13.

¹⁰ A four-cycle internal combustion engine can achieve at most 54% efficiency, while a diesel engine can reach 56%. Steam engines only perform at 32% efficiency. In reality, engines are considerably worse than this due to designs that prevent achievement of maximum efficiency. If one includes all devices that use energy, about 85% of energy in the US is lost due to inefficient usage. Figures from

http://library.thinkquest.org/26026/Environmental_Problems/air_pollution_-_solutions.html (last visited on June 28, 2004).

¹¹ <http://www.epa.gov/air/oaqps/eog/> (last visited on June 28, 2004).

¹² Declaration of the UN Conference on Environment and Development, Rio de Janeiro, 1992, [hereinafter Rio Declaration];
Report of the World Summit on Sustainable Development, Johannesburg South Africa, 2002 [hereinafter Johannesburg Report].

¹³ See Furtrell, J. William, The Transition to Sustainable Development Law, Ninth Annual Lloyd K. Garrison Lecture on Environmental Law, Pace Environmental Law Review 21 (2003).

¹⁴ Ibid at 187.

¹⁵ See Robèrt, K.-H. Den Naturliga Utmaningen. ("The Natural Challenge"; In Swedish, Translated to Japanese). Ekerlids Publisher, 1994.

Holmberg, J. and Robèrt, K.-H. 2000. Backcasting - a framework for strategic planning. Int. J. Sustain. Dev. World Ecol. Volume 7 (4) 2000, 291-308.

¹⁶ Indicators of Sustainable Development: Guidelines and Methodologies, UN Department of Economic and Social Affairs, Division for Sustainable Development,
<http://www.un.org/esa/sustdev/natlinfo/indicators/isdms2001/> (last visited on June 28, 2004).

¹⁷ Basic Law: Freedom and Human Dignity, 1992, Article 4.
http://www.knesset.gov.il/laws/special/eng/basic3_eng.htm (last visited on June 30, 2004).

¹⁸ Basic Law: Freedom and Human Dignity, 1992, Amendment of 1994, Sec. 1A.

¹⁹ Subhash Kumar v State of Bihar, WP 381/1988 (1991.01.09)

Article 32 of the Indian Constitution is designed for the enforcement of Fundamental Rights of a citizen by the Apex Court

See Futrell, J. William, Wake Up Call for India, The Environmental Forum, Mar.-Apr. 1997, at 48.
Divan, Shyam, Legislative Framework and Judicial Craftsmanship,
<http://www.india-seminar.com/2000/492/492%20s.%20divan.htm> (last visited on June 26, 2004)

²⁰ M.C. Mehta v. Kamal Nath, WP 182/1996 (2000.05.12)

See Futrell, J. William, Wake Up Call for India.

²¹ Israel High Court Ruling 4128/02, Israel Union For Environmental Defence v Prime Minister of Israel et al.

²² See European Parliament Fact Sheet on environmental policy:
http://www.europarl.eu.int/factsheets/4_9_1_en.htm (last visited on June 30, 2004).

²³ See Treaty Establishing the European Community Articles 174 (130r) (2) and 95 (100a) (3).

²⁴ Treaty of Amsterdam Amending the Treaty on European Union, the Treaties Establishing the European Communities and Certain Related Acts, Oct. 2, 1997, Article 5.
The EU defines subsidiarity as "the principle whereby the Union does not take action (except in the areas which fall within its exclusive competence) unless it is more effective than action taken at national, regional or local level. It is closely bound up with the principles of proportionality and necessity, which require that any action by the Union should not go beyond what is necessary to achieve the objectives of the Treaty."
<http://europa.eu.int/scadplus/leg/en/cig/g4000s.htm> (last visited June 30, 2004).

²⁵ Law of the Knesset, 1994, Amendment Number 14, Sec. 8, Art.'s 30-48.