

# Principles of Environmental Compliance and Enforcement Handbook

## Chapter 11: References

International Network for  
Environmental Compliance and Enforcement

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The full text of the Principles Handbook is available online at <http://www.inece.org/principles>.

## 11. REFERENCES

<sup>1</sup> This section is based on a number of important publications and studies, including Inter-American Development Bank website, "Rule of Law," *available at* [http://www.iadb.org/sds/SCS/site\\_2776e.htm](http://www.iadb.org/sds/SCS/site_2776e.htm); U.S. ENVIRONMENTAL PROTECTION AGENCY, *Communications Strategies for Enforcement Programs, Capacity Building Support Document, International Training Workshop*, 21 (1996) (emphasizing the importance of creating the right perception: "It is crucial to make [the regulated community] see and believe there is a good chance to get caught if they offend the rules.");

Williams, E. et al., *Exploring the Value of Scotland's Environment*, QUARTERLY ECON. COMMENTARY (Fraser of Allander Instit.), vol. 28, no. 1, Mar. 2004;

Williams, E. et al., *The Value of Scotland's Ecosystem Services and Natural Capital*, J. OF EUR. ENVTL. POL'Y, vol. 13, no. 2, Mar.-Apr. 2003;

BBC News, Air pollution causes early deaths, 21 Feb. 2005, at <http://news.bbc.co.uk/2/hi/health/4283295.stm> ;

Massachusetts Institute of Technology News Office, *Environmental regulations cut health costs, MIT team finds*, 9 Sept. 2005, at <http://web.mit.edu/newsoffice/2005/health.html> ;

see also USEPA, *The Benefits and Costs of the Clean Air Act, 1970 to 1990* (1997) *available at* <http://www.epa.gov/oar/sect812/copy.html>; Friends of the Earth Europe et al., *Reaching the right conclusions: Economic facts and figures on the REACH proposal*, Sept. 2006; [http://www.foe.co.uk/campaigns/safer\\_chemicals/chemical\\_reaction/REACH\\_facts&figures\\_Oct06.pdf](http://www.foe.co.uk/campaigns/safer_chemicals/chemical_reaction/REACH_facts&figures_Oct06.pdf) ;

see also, Pedersen, Finn, et al., Rpt. for DG Environment, *The impact of REACH on the environment and human health*, ENV.C.3/SER/2004/0042r, [http://ec.europa.eu/environment/chemicals/pdf/impact\\_on\\_environment\\_report.pdf](http://ec.europa.eu/environment/chemicals/pdf/impact_on_environment_report.pdf);

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See J. Spigelman, *Address at the ICAC-Interpol Conference*, Hong Kong; Carothers, Thomas *The Rule of Law Revival*, 77 FOREIGN AFFAIRS 95, 97 (1998).

See Porter, Michael E. & van der Linde, Claas, *Green and Competitive: Ending the Stalemate*, HARVARD BUS. REVIEW (1995); Porter, Michael E. & van der Linde, Claas, *Toward a New Conception of the Environment – Competitiveness Relationship*, J. OF ECON. PERSPECTIVES, Vol. 9(4), p. 97 (1995 reprinted in MAKING LAW WORK, vol. 2, at 441 (discussing how environmental regulation can encourage innovation); Cambridge Econometrics & AEA Technology, *The Benefits of Greener Business* (2003), [http://www.environment-agency.gov.uk/commondata/acrobat/benefits\\_of\\_green\\_business1.pdf](http://www.environment-agency.gov.uk/commondata/acrobat/benefits_of_green_business1.pdf);

See generally, Dowell, Glenn, Hart Stuart, & Yeung, Bernard, *Do Corporate Global Environmental Standards Create or Destroy Market Value?*, 46(8) MGMT. SCI. 1059 (2000), reprinted in MAKING LAW WORK, vol. 2, at 465; Network of Heads of European Environment Protection Agencies, *The Prague Statement: The Contribution of good environmental regulation to competitiveness* (2005), available at <http://inece.org/praguestatement>.

<sup>2</sup> Becker, Gary S., *Crime and Punishment: An Economic Approach*, 76(2) J. POLITICAL ECON. 169 (1968), reprinted in MAKING LAW WORK, vol. 1, at 115 (explaining that potential offenders respond to both the probability of detection and the severity of punishment).

<sup>3</sup> Rechtschaffen, Clifford & Markell, David L., REINVENTING ENVIRONMENTAL ENFORCEMENT AND THE STATE/FEDERAL RELATIONSHIP, Chps. 2 & 3 (2003), reprinted in MAKING LAW WORK, vol. 1, at 157; Silberman, Jon B., *Does Environmental Deterrence Work? Evidence and Experience Say Yes, But We Need to Understand How and Why*, 30 ENVTL. LAW REPORTER 10523 (2000), reprinted in MAKING LAW WORK, vol. 1, at 379.

<sup>4</sup> Cohen, *id.* (citing Burby, R.J. & Paterson, R.G., *Improving Compliance with State Environmental Regulations*, 12(4) J. POLICY ANALYSIS & MGMT, 753-72 (1993)).

<sup>5</sup> See, OECD, *Guiding Principles for Reform of Environmental Enforcement Authorities in Transition Economies of Eastern Europe, Caucasus and Central Asia* (2003), available at <http://www.oecd.org/dataoecd/36/51/26756552.pdf>.

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<sup>6</sup> *Id.* at p. 3.

<sup>7</sup> ISO, *The ISO 1400 Essentials*, available at [http://www.iso.org/iso/iso\\_catalogue/management\\_standards/iso\\_9000\\_iso\\_14000/iso\\_14000\\_essentials.htm](http://www.iso.org/iso/iso_catalogue/management_standards/iso_9000_iso_14000/iso_14000_essentials.htm).

<sup>8</sup> Chemical Industry's Responsible Care® Program web site, available at <http://www.responsiblecare.org>.

<sup>9</sup> U.S. Department of Energy's Climate Challenge Program web site, available at [http://www.climatevision.gov/climate\\_challenge/factsheet.htm](http://www.climatevision.gov/climate_challenge/factsheet.htm).

<sup>10</sup> See generally IMPEL Project "Developing a checklist for assessing legislation on practicability and enforceability" (2006) available at [http://ec.europa.eu/environment/impel/pdf/pe\\_checklist.pdf](http://ec.europa.eu/environment/impel/pdf/pe_checklist.pdf).

<sup>11</sup> Shimshack, Jay P. & Ward, Michael B, *Regulator Reputation, Enforcement & Environmental Compliance*, J. ENVTL. ECON. & MGMT. (2005) (discussing the need to design enforcement systems that enable the regulator to maintain credibility); see also, Bowles, Chester, PROMISES TO KEEP: MY YEARS IN PUBLIC SERVICE, 1941-1969, 25 (1971) (estimating that 20% of the regulated population automatically complies with any regulation, 5% attempts to evade it, and the remaining 75% complies as long as they think that the 5% will be caught and punished).

<sup>12</sup> De Aragão, Murillo & Bunker, Stephen, *Brazil: Regional Inequalities and Ecological Diversity in a Federal System*, in *Engaging Countries: Strengthening Compliance with International Environmental Accords* 437-474 (Weiss & Jacobson, eds., 1998), reprinted in *MAKING LAW WORK*, Vol. 1, 337.

<sup>13</sup> Environmental laws may contain provisions that allow a regulated source to petition the government for an exemption from a general requirement. This exemption is called a "variance" and contains specific terms and conditions similar to a permit. Facilities may request variances for many different reasons. For example, their operating conditions are different from those that were assumed when the standard was set, or peculiar physical circumstances (such as naturally contaminated intake water) make it impossible to comply.

<sup>14</sup> CEC, *Successful Practices of Environmental Management Systems in Small and Medium-Size Enterprises* (2005) available at [http://www.cec.org/files/PDF/ECONOMY/EMS-Report\\_en.pdf](http://www.cec.org/files/PDF/ECONOMY/EMS-Report_en.pdf), p 4, 27.

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<sup>15</sup> For a database of U.S. laws and regulations currently open for public comment, see <http://www.regulations.gov>.

<sup>16</sup> China Watch, *SEPA Releases New Measure on Public Participation in Environmental Impact Assessment Process*, 2006, available at <http://www.worldwatch.org/node/3886> .

<sup>17</sup> For a list of USEPA Compliance Assistance Centers, see <http://www.epa.gov/Compliance/assistance/centers/index.html>.

<sup>18</sup> Environmental Compliance Assistance Centers Deliver Targeted Help to the Regulated Community, Thomas, Deborah Limanon, Watcharee, Simachaya, Wijarn, Nepomuceno, Dolora, <http://www.inece.org/conference/8/papers.html>.

<sup>19</sup> UNEP, *Saving the ozone layer: UNEP responds to evolving needs of developing countries in implementing the Montreal Protocol (2002)* available at [http://www.unep.org/Ozone/Press\\_Releases/25March\\_2002.pdf](http://www.unep.org/Ozone/Press_Releases/25March_2002.pdf).

<sup>20</sup> For USEPA's Audit Policy, see <http://www.epa.gov/oecaerth/incentives/auditing/auditpolicy.html>.

<sup>21</sup> For information about Profepa's environmental audit policy (in Spanish), see <http://www.profepa.gob.mx/PROFEPA/AuditoriaAmbiental/>.

<sup>22</sup> Krahn, Peter, *Enforcement versus Voluntary Compliance: An Examination of the Strategic Enforcement Initiatives Implemented by the Pacific and Yukon Regional Office of Environment Canada, 1983 to 1998*, reprinted in MAKING LAW WORK, Vol. 2, at 305.

<sup>23</sup> Afsah, Shakeb, Laplante, Benoit & Wheeler, David, *Regulation in the Information Age: Indonesian Public Information Program for Environmental Management* (World Bank, New Ideas in Pollution Regulation, 1997), reprinted in MAKING LAW WORK, Vol. 2, at 75, 78.

<sup>24</sup> Wang, Hua, *et al*, *Public Ratings of Industry's Environmental Performance: China's Greenwatch Program*, 6<sup>th</sup> INECE Conference Proceedings, vol. 2 (2002), reprinted in MAKING LAW WORK, Vol. 2, at 85, 87; see also, World Bank, Press Release, *Polluters in China Face Public Scrutiny*, 17 May 2006.

<sup>25</sup> For an overview, see, Potter, S. and Parkhurst, G., *Transport Policy and Transport Tax Reform* (2005), available at [http://oro.open.ac.uk/4380/1/Potter\\_and\\_Parkhurst\\_17\\_2\\_05.pdf](http://oro.open.ac.uk/4380/1/Potter_and_Parkhurst_17_2_05.pdf).

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<sup>26</sup> For more information on inspections and other types of compliance monitoring, see Zaelke, Durwood, Kaniaru, Donald and Kružiková, Eva, eds., MAKING LAW WORK: ENVIRONMENTAL COMPLIANCE & SUSTAINABLE DEVELOPMENT, Vol. 2, at 372-75 (2005) (discussing the literature on inspections as a means of ensuring compliance and enforcement) [hereinafter MAKING LAW WORK].

<sup>27</sup> See U.S. Environmental Protection Agency, CONDUCTING ENVIRONMENTAL COMPLIANCE INSPECTIONS, INSPECTOR'S FIELD MANUAL, INTERNATIONAL EDITION (2002), available at <http://www.inece.org/manual> [hereinafter EPA Field Manual].

<sup>28</sup> Nguyen, Ngoc Sinh & Phung, Van Vui, *A Large Scale Survey Using Environmental Inspections to Assess and Enforce the Implementation of the Law on Environmental Protection in Vietnam, 1997*, 5<sup>th</sup> INECE Conference Proceedings, Vol. 1 (1998), reprinted in MAKING LAW WORK, Vol. 1, at 415, 421.

<sup>29</sup> As defined by the U.S. EPA, "audit" means a "systematic, documented, periodic, objective review by regulated entities of facility operations and practices related to meeting environmental requirements." *Environmental Auditing Policy Statement*, OPPE-FRL-3046-6, 51 Fed. Reg. 25,004, at 20,006 (July 9 1986).

<sup>30</sup> UNEP, MANUAL ON COMPLIANCE WITH AND ENFORCEMENT OF MULTILATERAL ENVIRONMENTAL AGREEMENTS (2006) [hereinafter UNEP MANUAL ON COMPLIANCE]; see also, Gambia Hazardous Chemicals and Pesticides Control and Management Act (1994).

<sup>31</sup> See EUROPEAN UNION NETWORK FOR THE IMPLEMENTATION AND ENFORCEMENT OF ENVIRONMENTAL LAW, IMPEL REFERENCE BOOK FOR ENVIRONMENTAL INSPECTION (1999), available at <http://ec.europa.eu/environment/impel/pdf/refbook.pdf>.

<sup>32</sup> The purpose of an opening conference is to inform the facility of the agency's intentions regarding the inspection and learn more about the facility's operation and structure, such as layout, management structure, plant processes, and safety protocols. EPA Field Manual, *supra* note 27.

<sup>33</sup> See e.g., EPA Field Manual, *supra* note II, at 27.

<sup>34</sup> EPA Field Manual, *supra* note 27; see also, EUROPEAN UNION NETWORK FOR THE IMPLEMENTATION AND ENFORCEMENT OF ENVIRONMENTAL LAW, IMPEL MINIMUM CRITERIA FOR INSPECTIONS (1997), available at [http://ec.europa.eu/environment/impel/impel\\_guidance\\_doc.htm#min\\_criteria](http://ec.europa.eu/environment/impel/impel_guidance_doc.htm#min_criteria).

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<sup>35</sup> “Process-based investigations are comprehensive facility evaluations that initially focus on a comprehensive understanding of all facility operation and maintenance processes. The process-based investigation includes tracking raw materials through the industrial and support operations; identifying by-product, co-product and products; identifying wastes generated; and determining how these wastes are ultimately managed.” U.S. EPA, “National Enforcement Investigations Center,” at <http://www.epa.gov/compliance/basics/neic.html>.

<sup>36</sup> “Exceptional reporting” is reporting that is only required when a violation or potential violation has been detected.

<sup>37</sup> Whereas “exceptional reporting” only occurs when a violation has been detected, “fixed interval reporting” occurs at regularly scheduled times, regardless of whether a violation has been detected.

<sup>38</sup> INECE, International Comparison of Source Self-Monitoring, Reporting, and Recordkeeping Requirements (1996), *available at* <http://www.inece.org/PDFDocs/source.pdf> .

<sup>39</sup> Casey-Lefkowitz, Susan, et al., *The Evolving Role of Citizens in Environmental Enforcement*, 4<sup>th</sup> INECE Conference Proceedings, Vol. 1 (1996), reprinted in MAKING LAW WORK, Vol. 1, 559, 566-567; *see also*, Izaak Walton League of America website, <http://www.iwla.org> .

<sup>40</sup> DENR Administrative Order 96-37 (2 Dec. 1996), “Revising DAO 21 To Further Strengthen the EIS System,” <http://www.emb.gov.ph/laws-eia.htm>.

<sup>41</sup> Ley 13.577 Creacion de la Obras Sanitaria de la Nacion, art. 31 and 32, Decreto 674/89 Reginman contra la Contaminacion de Rios Bs. As. 29/V/89.

<sup>42</sup> Casey-Lefkowitz et al., *supra* note 39, at 568-569.

<sup>43</sup> Regional Environmental Center for Central and Eastern Europe, *Status of Public Participation Practices in Environmental Decisionmaking in Central and Eastern Europe*, Sept. 1995; Casey-Lefkowitz et al., *supra* note 39.

<sup>44</sup> Act No. 183/2006 Coll., on Territorial Planning and the Building Code [The Building Act] (an amended version of this Act came into effect on 1 January 2007); *see also*, Casey-Lefkowitz et al., *supra* note 39.

<sup>45</sup> The Commissioner for Civil Rights Protection website, *available at* <http://www.rpo.gov.pl/index.php?s=3>.

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<sup>46</sup> *Citizen Enforcement: Tools for Effective Participation*, INECE 5<sup>th</sup> Conference Proceedings (1998), available at <http://www.inece.org/CBldg%20Docs/citenf.pdf> ; Environmental Law Institute, *Draft Report of Environmental Authority in: A Review of the Legal and Institutional Framework for Environmental Protection at the State Level* (1996); Ley General de Ecologia Equilibrada y Proteccion Ambiental, art. 189, discussed in Katherine M. Bailey, *Note: Citizen Participation in Environmental Enforcement in Mexico and the United States: A Comparative Study*, 16 GEO. INTL. ENVTL. L. REV. 323 (2004).

<sup>47</sup> Bailey, *id.*

<sup>48</sup> This list of enforcement authorities is a hybrid and does not appear in any one law or country. Depending on the jurisdiction, each authority may be granted directly by statute or through court order.

<sup>49</sup> Panek-Gondek, Krystyna, *Experience of the Inspectorate for Environmental Protection in Implementation and Enforcement of Environmental Law in Poland*, INECE 6<sup>th</sup> Conference Proceedings (2002), <http://www.inece.org/conf/proceedings2/23-Inspectorate.pdf>.

<sup>50</sup> UNEP MANUAL ON COMPLIANCE, *supra* note 30.

<sup>51</sup> See U.S. EPA website, "Compliance and Enforcement," <http://www.epa.gov/compliance>; see also, "U.S. EPA to Release Guidance on Which Criminal Enforcement Actions the Agency Will Pursue," INECE Newsletter 14, <http://www.inece.org/newsletter/14/>.

<sup>52</sup> Porter, Michael E. & van der Linde, Class, *Green and Competitive: Ending the Stalemate*, HARVARD BUS. REVIEW (1995); see also, Porter & van der Linde, *Toward a New Conception of the Environment-Competitiveness Relationship*, 9(4) J. OF ECON. PERSPECTIVES 97 (1995), reprinted in MAKING LAW WORK, Vol. 2, at 441.

<sup>53</sup> Oposa, Jr., Antonio A., *A Socio-Cultural Approach to Environmental Law Compliance: A Philippine Scenario*, INECE 5th Conference Proceedings, vol. 1 (1998).

<sup>54</sup> This is loosely based on a worksheet used for a U.S. environmental program.

<sup>55</sup> Adjustments may range from -20% to +20% for factors 1, 2, and 3, and from -100% to 0% for factor 4. Selection of appropriate percentages is based on subjective judgment and should be fair relative to adjustments made when calculating penalties for other similar violations.

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<sup>56</sup> Supplemental environmental projects are projects the facility is conducting or will conduct to benefit the environment.

<sup>57</sup> UNEP MANUAL ON COMPLIANCE, *supra* note 32.

<sup>58</sup> Beyond compliance has been described as a “[v]oluntary overmeeting of environmental standards.” See Arora, Seema & Gangopadhyay, Shubhashis, *Toward a theoretical model of voluntary overcompliance*, 28 J. ECON. BEHAVIOR & ORG. 289 (1995); see also Bruce Smart *ed.*, BEYOND COMPLIANCE: A NEW INDUSTRY VIEW OF THE ENVIRONMENT (1992).

<sup>59</sup> Excerpts for this text box are drawn from: Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), Participatory Coastal Law Enforcement Practices in the Philippines (2003), available at <http://www.gtz.de/de/dokumente/en-lesson5.pdf>.

<sup>60</sup> Kravchenko, Svitlana, *Citizen Enforcement of Environmental Law in Eastern Europe*, 10 Widener L. Rev. 475 (2004), reprinted in MAKING LAW WORK, Vol. 1, 591, 592.

<sup>61</sup> Bandi, Dr. Gyula, *Environmental Enforcement in Hungary – Today and Tomorrow*, <http://www.inece.org/2ndvol1/bandi.htm>; see also, Global Legal Group, INTERNATIONAL COMPARATIVE LEGAL GUIDE TO: ENVIRONMENT LAW 2006, 196, <http://www.iclg.co.uk/khadmin/Publications/pdf/735.pdf>.

<sup>62</sup> For more information on public interest litigation and citizen suits, see Thompson, Jr., Barton H., *Symposium: Innovations in Environmental Policy: The Continuing Innovation of Citizen Enforcement*, 2000 U. of Illinois L. Rev. 185 (2000), reprinted in MAKING LAW WORK, Vol. 1, at 577; for general background on the procedures for initiating public interest litigation in India, see Helpline law website, <http://www.helplinelaw.com/docs/pub-i-litigation/index.php>.

<sup>63</sup> BRAZIL CONSTITUTION at art. 5, § LXXIII.

<sup>64</sup> BRAZIL CONSTITUTION at art. 129.

<sup>65</sup> Nat’l Env’tl. Law Center website, “About NELC,” available at <http://www.nelconline.org/nelc.asp?id2=15157>.

<sup>66</sup> *Citizen Enforcement: Tools for Effective Participation*, 5<sup>th</sup> INECE Conference Proceedings (1998), <http://www.inece.org/CBIldg%20Docs/citenf.pdf>; for examples of Good Neighbor Agreements, see Civic Practices Network website, “Good Neighbor

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Agreements: A Tool for Environmental and Social Justice,” *available at* <http://www.cpn.org/topics/environment/goodneighbor.html>.

<sup>67</sup> GOOD NEIGHBOR AGREEMENTS, *supra* note 66.

<sup>68</sup> UNEP MANUAL ON COMPLIANCE, *supra* note 30.

<sup>69</sup> U.S. EPA website, “About Performance Partnerships,” *available at* <http://www.epa.gov/ocirpage/nepps/about.htm> .

<sup>70</sup> UNEP MANUAL ON COMPLIANCE, *supra* note 30.

<sup>71</sup> For more information, see Interpol, “Ecomessage: Briefing Document,” *available at* [http://www.interpol.int/Public/EnvironmentalCrime/Pollution/Eco\\_message.pdf](http://www.interpol.int/Public/EnvironmentalCrime/Pollution/Eco_message.pdf) .

<sup>72</sup> European Network for the Implementation and Enforcement of Environmental Law, About IMPEL, *available at* <http://ec.europa.eu/environment/impel/introduction.htm> .

<sup>73</sup> Environmental Compliance and Enforcement Network for Accession (ECENA) website, “Introduction,” *available at* <http://www.rec.org/REC/Programs/rerep/ecena/Introduction.html> .

<sup>74</sup> Network for Environmental Compliance and Enforcement in the Maghreb (NECEMA) website, *available at* <http://www.inece.org/mena/necema/index.html> .

<sup>75</sup> Gerardu, Jo J.A. & Zaelke, Durwood, *The Importance of International Environmental Enforcement Networks – INECE as an example*, ELNI REVIEW, No. 2, 2005, at 3-7.

<sup>76</sup> UNEP MANUAL ON COMPLIANCE, *supra* note 30.

<sup>77</sup> INECE Secretariat, Performance Measurement Guidance for Compliance and Enforcement Practitioners, Second Edition, April 2008, *available at* <http://www.inece.org/indicators/guidance.pdf>.





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