

**University of Baltimore Journal of Environmental Law**  
Spring 2006

Articles

**ETHICAL EMISSIONS TRADING AND THE LAW**

Kirk W. Junker<sup>1</sup>

Copyright (c) 2006 University of Baltimore School of Law; Kirk W. Junker

**ABSTRACT:**

The idea of permit trading in the United States can be traced as far back as the 1970s, but emissions trading has really only become a popular and exportable idea with the more recent demands that environmental protection acknowledge economic pressures through such ideas as sustainable development. Now the idea of emissions trading has caught on in South America, China and Europe as well. Yet in the eagerness of governments and industry to work out the technical details and legal mechanics of the emissions trading tool, insufficient attention has been paid to its underlying legal and ethical assumptions. In this article, it is emphasized that emissions trading is a part of compliance with environmental law, not a market alternative to compliance. The difference between the two greatly affects and is affected by theories of rights. As part of the scheme of rights and accompanying duties, the author questions whether an implicit right to pollute has been created through emissions trading, as exemplified by the comparison of the systems in the U.S., China and Europe.

**INTRODUCTION--WHENCE THE RIGHT TO CLEAN AIR?**

If one begins to reflect upon the idea of pollution credits trading in the here and now, with many countries doing it, with the International \*150 systems of the Kyoto Protocol and the European Trading System having just come on line in 2005, and with the programs in the United States and elsewhere having gone beyond air pollution credit trading to water pollution credit trading and more, it might seem that pollution credit trading is ubiquitous and has always and already been with us. Ubiquity alone, however, is not persuasive. The breadth and depth of abhorrent practices such as slavery, for instance, or treating women as chattel property, have marked much of human history and might have convinced people that these practices would always be with us. Ubiquity might also suggest that the practice must be a good idea; otherwise everyone would not be doing it. Moreover, legal systems both domestic and international recognized and protected slave trade and the treatment of women as chattel, although many cultures today would abhor those practices and genuinely wonder how they could ever have been considered legal, let alone ethical. This article analyses the ethical bases, both explicit and implicit, that are posited to support the legal establishment and maintenance of pollution credit trading.

**CURRENT EMISSION TRADING SYSTEMS**

The past twenty years have seen many countries in the world institute various schemes of emissions trading, whereby compliance with pre-existing duties not to pollute is regarded as a positive property right that can be bought and sold on the market. In general terms, "emissions trading" has been defined as:

The creation of surplus emission reductions at certain stacks, vents or similar emissions sources and the use of this surplus to meet or redefine pollution requirements applicable to other emissions sources. This allows one source to increase emissions when another source reduces them, maintaining an overall constant emission level. Facilities that reduce emissions substantially may "bank" their "credits" or sell them to other facilities or industries.<sup>1</sup>

While the concept of trading pollution rights has been extended to water pollution<sup>2</sup> and several spheres of air pollution,<sup>3</sup> for purposes of this article, one needs only to look at the oldest of the systems--those for air pollutants, and within them, the representative programs related to acid rain and climate change. Critics and proponents alike distinguish between two different types of trading programs. Byron \*151 Swift, director of the Center for Energy and Innovation at the Environmental Law Institute, neatly summarizes the distinctions as

follows: “Emissions cap-and-allowance trading programs impose both a strict regulatory standard that reduces pollution--a permanent cap on the amount of allowable emissions--as well as an allowance-trading program,”<sup>4</sup> whereas “emissions credit trading programs are grafted onto existing regulatory programs, and allow sources that emit below their baseline levels to trade the resulting credits once they receive regulatory approval.”<sup>5</sup> In Swift’s estimation, the former has been very successful, having led to “major emissions reductions at low cost,” whereas the latter “have failed to result in much trading or regulatory benefit.”<sup>6</sup>

In 1992, when the United States had first put the emissions trading market into law, in a comic strip called “Tom the Dancing Bug,” Ruben Bolling satirized the U.S. Clean Air Act (“C.A.A.”) Amendments that permitted emissions trading with an enduring 1940s-style crime story called “Tales of Market-Driven Crimes.”<sup>7</sup> In it, the fictional protagonist Martin Ryder is awakened by an intruder into his home. Announcing that he fears for his life, Martin notes that he has a right therefore to kill the intruder with the pistol that he keeps in his nightstand. But he has a better idea. He phones “Crimebrokers” to sell his justifiable homicide. The broker at the Crimebrokers’ switchboard quotes the price of thirty thousand dollars to Martin, a price to which he agrees. Martin then lets the intruder leave his house, rather than killing him.

Meanwhile, on the other side of town, pinstriped gangsters are in the act of murdering someone in a bar. Before they complete the murder, they too phone Crimebrokers, and fortuitously find that the agency has a murder for sale for thirty thousand dollars. They buy the justifiable homicide that Martin has just sold, thus comfortably completing their murder without fear of retribution, simply by paying Crimebrokers thirty thousand dollars. The final frame shows Martin again peacefully sleeping, with the caption “The same number of deaths result, but with a more efficient allocation. Another happy outcome, when crimes are market driven!”

One of the reasons that the black humor of Bolling’s cartoon is effective is because we like to think that society would never provide an extra reward for individuals who simply fail to violate proscriptions or otherwise comply with pre-existing legal duties. In contract law, for instance, it is well-established that compliance with a pre-existing duty, \*152 established by agreement or legislation, cannot constitute consideration in support of a contract.<sup>8</sup> And yet, when it comes to emissions trading, we provide extra reward to persons for their compliance with the pre-existing duty not to pollute. Surprising the reader with this apparent contradiction, Bolling’s cartoon questions not only the difference between compliance with the pre-existing duties not to murder or pollute, but also questions the notion that such compliance can create a right for sale.

Several qualifications must be stated in order to keep the social commentary of the cartoon legally clear. First is the issue of fungibility. Murder is not fungible. Even exceeding the speed limit while driving is not a fungible act. And while global warming may be fungible as to its effects, it is not fungible as to its causes any more than murder or speeding. The second issue is the distinction between criminal and civil liability. Civil law often tolerates conflicting norms and the legal system must be accessed to adjudicate between or among these conflicting norms, whereas criminal concretizes one norm for any given area of human activity. In an era when businesses like Enron shift their *raison d’être* from the production of energy to the invention of abstractions for value, and when eighty-five percent of the Standard and Poors 500 market capitalization assets are intangible as opposed to tangible,<sup>9</sup> it is not idealistic tree-hugging to question the ethical basis for the creation of value in compliance with a pre-existing duty. How might one do this in an informed and methodical fashion? As an issue of applied ethics, one can best answer this question by examining the particular facts of the issue in question to determine the appropriate ethical frames of analysis.<sup>10</sup>

### **A. The United States’ Emissions Trading Program**

Among the various emissions trading systems in place in the world, it is important to focus upon the U.S. systems because, as the oldest, they have influenced the systems of other countries as well as international systems. The idea of permit trading can be said to have begun in the United States as long ago as 1960.<sup>11</sup> But it was not until the C.A.A. Amendments of 1977 that the U.S. began permitting “open market” credit trading for criteria pollutants. When it came time to \*153 create the tradable permit allowances under the C.A.A., Congress wrote:

An allowance under this title is a limited authorization to emit sulfur dioxide. . . . Such allowance does not constitute a property right.<sup>12</sup> The environmental community, on the other hand, has just as consistently argued that the air belongs to the people and it, as a matter of ethics, should not become private property. According to this view the ends cannot justify the

transfer of a community right into a private one; the right to a reasonable level of clean air is seen as inalienable. The practical resolution of this matter involved providing some security to the permit holders, while making it clear that it was not a property right.<sup>13</sup>

Of course, one must question whether a simple unilateral declaration that a property right is not established is sufficient to prevent the right from being recognized de facto.<sup>14</sup> Without a legal right to pollute, there cannot be an ethical foundation to emissions trading. Today's type of emissions trading, brought about by the C.A.A. Amendments of 1977, are among a set of what Byron Swift and others term "market-incentive" policies established by the United States Environmental Protection Agency ("E.P.A."), and which include bubbles, netting and offsets.<sup>15</sup>

The United States did not begin market trading of carbon emissions until the passage of the 1990 C.A.A. Amendments.<sup>16</sup> Thereafter, in September of 2000, China also established a program for trading sulfur emissions nationally and carbon emissions internationally. And most recently, in 2005, the European Union brought to life its own emissions trading program as a method of implementing the mandates of the Kyoto Protocol. This article will consider as examples the United States' C.A.A. system, the Chinese Emissions Trading System, and the European Union Greenhouse Gas Emissions Trading Scheme ("E.U.E.T.S."). These three systems have been selected because they present a spectrum of public legal construction ranging from the \*154 purely domestic sovereignty of the United States' system, to the partial sovereignty of the European Union, to the Chinese dual system of a domestic sulfur emission-trading system coupled with an international carbon-trading system.

Considering the three examples chronologically, of the United States, China and the European Union as they established emissions-trading systems, it is worth noting that the United States' system was put in place before the Kyoto Protocol was negotiated. As such, the United States' system was put in place without any suggestion of trading emissions internationally or within an international legal framework. The 1977 Amendments to the C.A.A. established an emissions credit trading system and the 1990 Amendments to the C.A.A. established a cap-and-trade system that authorized the E.P.A. to put a cap on the amount of sulfur dioxide (SO<sub>2</sub>) that a fossil-fueled plant was permitted to emit.

Thus the United States brought a track record in both systems--emissions credit trading and cap-and-trade to the table when it sat down to negotiate the Kyoto Protocol.<sup>17</sup> Before the Bush administration withdrew from the Protocol, the United States insisted upon several flexibility mechanisms, including an emissions trading system, before it would consider observing the Protocol.<sup>18</sup>

At this point, compliance with the Kyoto Protocol in the United States remains voluntary, even though the Protocol is now law for all signatory countries, after Russia's accession pushed the number of countries and quantity of emissions over the threshold required to trigger the Protocol's requirements.<sup>19</sup> In addition to the emissions credit trading and cap and trade systems already in place in the United States, the voluntary system includes several networks of emission reduction organizations, including public-private partnerships and private exchange groups.<sup>20</sup>

While one might say that the U.S., being first, has provided a model as to how emissions trading can be done, discussions around the Kyoto Protocol go further to provide the legal reasons as to why it might be done, for countries like China, for instance, as well as for the European Union. The Protocol includes several flexibility mechanisms, including emissions trading, which are properly characterized as "market-based" and designed to help countries or companies lower the cost of reducing their greenhouse gas emissions. According to United States Information Agency science writer Jim Fuller, these \*155 mechanisms were modeled after U.S. efforts to reduce levels of SO<sub>2</sub> and lead spewed from power plants.<sup>21</sup> The U.S. therefore needs to be considered for its efforts outside its own borders as well.

As associate director of the International Affairs Office of Air and Radiation at the U.S. E.P.A., Jennifer Macedonia reported that several countries had set up procedures for domestic trading programs to reduce greenhouse gases modeled after what she called the "highly successful U.S. acid rain program." In a 1998 interview, Macedonia opined that "New Zealand, Australia, Denmark, the United Kingdom and Norway are the countries that are farthest along in their domestic trading proposals--and I think Canada is planning to do something similar." Anticipating China's 2000 program, she added "We've also gotten interest from China to do domestic trading to reduce sulfur dioxide emissions-- so I think there are a lot of people who are trying to apply the same model."<sup>22</sup>

Although the United States has failed to ratify the Kyoto Protocol, individual states have taken actions that

either expressly or tacitly serve to fulfill its mandates.<sup>23</sup> For instance, in 2003, New York State proposed and attained commitments from nine Northeast U.S. states to cap and trade carbon dioxide emissions. Since then, those states, led by New York governor George Pataki, who openly disagreed with President Bush's anti-Kyoto Protocol policy, have agreed to cut power plant emissions.<sup>24</sup> Another potential emission trade project involves the purchase by the Netherlands of carbon dioxide credits from a United States electric utility's program that captures methane at a landfill in New Jersey.<sup>25</sup> The authors of that agreement, former Commissioner of the New Jersey Department of Environmental Protection (N.J. D.E.P.) Robert Shinn and Counsel to the N.J.D.E.P. Matthew Polsky, report that "part of the purpose for each party [is] to gain experience in emissions trading for expanding use in the future if and when global trading becomes a more commonplace means of addressing global warming."<sup>26</sup> It has also been observed that if the Kyoto emission trading system were to shift from providing the privilege to trade, to providing private enterprise the privilege to trade, "such a scheme would work only if the participating states agree on establishing \*156 a kind of transnational permit trading system, comparable to the two systems which exist in the United States."<sup>27</sup>

## **B. Emissions Trading Under the Kyoto Protocol**

The United Nations Framework Convention on Climate Change (U.N.F.C.C.C.)<sup>28</sup> as supplemented by the Kyoto Protocol<sup>29</sup> has been called "the most complex international regulatory regime created so far."<sup>30</sup> Among the three systems being considered here, only the United States' system of emissions trading preceded the signing of the Kyoto Protocol. This timing is significant insofar as the Kyoto Protocol provides for what came to be known as "flexibility mechanisms"<sup>31</sup> for compliance with the Protocol's Article 3 mandates. Economists and some lawyers have been quick to add the prefix "market based" to the term "flexibility mechanisms."<sup>32</sup> Even though it subsequently withdrew, it was the United States that pushed for emissions trading to be included in the Kyoto Protocol.<sup>33</sup>

While one flexibility mechanism is emissions trading, the other two are known as Joint Implementation and the Clean Development Mechanism. The Kyoto Protocol's emissions trading flexibility mechanism is similar to that constructed by the United States' 1990 Amendments to the C.A.A. . Internationally, the U.N.F.C.C.C. sets caps for each nation. According to the Protocol, nations that emit less than their quota of greenhouse gases will be able to sell emissions credits to polluting nations. Article 17 of the Protocol states:

The Conference of the Parties shall define the relevant principles, modalities, rules and guidelines, in particular for verification, reporting and accountability for emissions trading. The Parties included in Annex B may participate in emissions trading for the purpose of fulfilling their commitments under Article 3. Any such trading shall be supplemental to domestic actions for the purpose of meeting quantified emission \*157 limitation and reduction commitments under that Article.<sup>34</sup>

Notably, "all these 'economic' instruments have in common the fact that they do not constitute pure market instruments, as there is no natural market. Like all markets, the emissions-trading market is created by law, and is thus an artificial market."<sup>35</sup> Even here, it must be noted that the apparent dichotomy of "natural market" and "artificial market" is false. There is no such thing as a natural market. Even in the simplest example of barter, the parties need to have some idea of the rules of exchange in order to conduct the barter. Those rules are not rules that each has invented on his or her own, but rather they are rules understood from the context of having observed or having been persuaded of the operation of the rules. That said, one may therefore distinguish expressed or explicit rules that establish or control a market from those that are implied or implicit, but these categories alone are not sufficient to support claims to "natural" or "artificial" markets.

Some commentators have suggested that because emissions trading under Article 17 is supplemental to Article 3 requirements, "any such trading does not bestow rights or entitlements to Annex B parties."<sup>36</sup> That alone would not deny the status of the property value that is created for polluters from being characterized as a right. As Don Brown has observed, under some versions of rules pushed by the United States, "the Kyoto Protocol trading mechanisms can be understood to create property rights in the use of the global commons. This is so because credits received by those financing carbon reduction projects in other nations are classified as 'entitlements' by the Kyoto Protocol and apparently create rights . . ."<sup>37</sup> Moreover, given that Article 3 does not set a baseline for compliance, the Article 17 "supplements" can be used to supplement from zero on up to the permitted limit.

After first suggesting that global warming was not occurring,<sup>38</sup> and then arguing as recently as January 2005 that humans make no contribution to it,<sup>39</sup> conservative American critics have finally come around to acknowledging that global warming exists, and that human activities **\*158** cause it.<sup>40</sup> With that admission, U.S. critics are left with no alternative but to admit that their real concerns are economic. Critics of the Kyoto Protocol say that it is a means of redistributing wealth from the United States to the developing world. This is because the U.S., which produces twenty-five per cent of the world's greenhouse gas emissions, would likely exceed its quota and subsequently have to buy emissions credits from nations such as China, India or Russia.

#### China's Emissions Trading Program

As a developing country under Annex II of the Kyoto Protocol, China may not yet be required to meet Kyoto Protocol emissions limits; however, it has already enacted legislation that is not inconsistent with Kyoto Protocol requirements, including establishing both domestic and international trading mechanisms. China began its program in September 2000 with an Amendment to the Air Pollution Prevention and Control Law.<sup>41</sup> This amendment provided a legal foundation for Total Emissions Control (T.E.C.). The T.E.C. policy is combined with emissions trading to reduce SO<sub>2</sub> emissions. These T.E.C. policies were also highlighted in China's Tenth Five Year Plan (2001-2005). That plan advocates "a 10% reduction in SO<sub>2</sub> from year 2000 levels, . . . and reductions of 20% from year 2000 levels in two highlighted 'control zones' in eastern and southern China."<sup>42</sup>

Working under a general five-year framework in 2002, the U.S.-based non-governmental organization ("N.G.O.") Environmental Defense Fund ("E.D.F.") began a pilot emissions trading program with the Chinese State Environmental Protection Agency ("S.E.P.A."). So far, China has established a domestic plan for SO<sub>2</sub> emissions trading to cut SO<sub>2</sub> emissions by between 2000 and 2005. China's first SO<sub>2</sub> emissions trading agreement between two plants in different cities came into effect in July 2003. The Chinese central government is now preparing a blueprint in various areas, including the Yangtze River Delta, during its eleventh Five Year Plan period (2006- 2011).<sup>43</sup>

In addition to the E.D.F.'s involvement, the U.S. E.P.A. has been actively involved in providing technical assistance for these projects. According to the U.S. E.P.A., in order for regional or national trading to be successful beyond the pilot phase, China must build and strengthen monitoring and assessment capabilities. China also needs **\*159** tracking and registration systems and national databases of industrial emissions data.<sup>44</sup> The Kyoto signatories have already begun negotiations with developing countries like China to establish a post-2012 greenhouse gas emission regime. It remains to be seen whether China will agree to reduction targets in the post-2012 period.<sup>45</sup>

#### The European Union Greenhouse Gas Emissions Trading Scheme

The E.U. E.T.S. is the largest multi-national, greenhouse gas emissions trading system in the world. In compliance with Directive 2003/87/EC, the system commenced operation in January 2005 with all twenty-five member states of the European Union participating. As a unique public legal entity that holds some of the sovereignty of its twenty-five member states, without itself being a sovereign state, the European Union has treaty capacity and has acceded to the Kyoto Protocol. Under the European Union emissions trading Directive,<sup>46</sup> the emission reductions targets of the Kyoto Protocol are to be observed, but may vary from member state to member state.<sup>47</sup> The overall European Union target is an eight percent reduction, but while Germany has a reduction target of over twenty percent, and Austria and the United Kingdom of over ten percent, Ireland for example can in fact increase emissions.<sup>48</sup> Emitters covered by this trading scheme need a permit for their carbon emissions, and must surrender an allowance for each ton of carbon that is emitted.<sup>49</sup> The individual member states allocate the freely-tradable allowances.<sup>50</sup> The total number of allowances that each member state may distribute is limited by each state's obligation under the Kyoto Protocol to reduce emissions.<sup>51</sup> This first-ever multinational emissions trading system allows emissions from 12,000 installations across the E.U.'s twenty-five countries to be traded. Some business estimates that the subsequent management and trading of these allowances is expected to create a market worth one billion Euros in 2005, and perhaps as much as six billion Euros by the year 2008.<sup>52</sup> Emissions trading may be available to thousands of companies across Europe, but whether a right or even an ethical foundation exists for this positive law, is ignored or forgotten. In fact, **\*160** some international practitioners doubt whether this trading scheme even meets the requirements of the E.U.'s fundamental rights, and expect national and local courts to be called upon to decide that issue.<sup>53</sup>

## A. International

Part I of the United Nations Environmental Programme's (U.N.E.P.) Programme for the Development and Periodic Review of Environmental Law for the First Decade of the Twenty-First Century, entitled "Effectiveness of Environmental Law,"<sup>54</sup> begins with a section called "Implementation, Compliance, and Enforcement." Section 9 of Part I is entitled "Innovative Approaches to Environmental Law," and therein, one finds a recommended action to "[a]ssess state practice in utilizing tools such as . . . emissions trading. . . ."<sup>55</sup> This seemingly simple and general policy statement both properly characterizes emission trading as a state tool for implementation, compliance and enforcement, and sets its context for public policy: emissions trading fits into the strategy of "innovative approaches, tools and mechanisms that will improve the effectiveness of the law."<sup>56</sup> It is not a market-determined alternative to the law, but a tool within the law. For example, the Kyoto Protocol, among other international sources, also characterizes emissions trading as a supplemental method of compliance in its Article 17.<sup>57</sup> With regard to municipal law, a survey of constitutions around the world yields more than one hundred constitutions that explicitly include the right to a clean natural environment among the catalogue of individual rights.<sup>58</sup> In addition to these rights, one also finds in constitutions a variety of mandates to governments to protect the environment.

In contraposition, nowhere will one find the act of polluting the natural environment explicitly established as a right for any legal person, natural or fictitious, in any international or municipal source of law. Moreover, in the United States, many state and federal environmental statutes provide for both civil and criminal sanctions against \*161 polluters.<sup>59</sup> Additionally, the European Court of Justice has annulled a Framework Decision of the European Council, and has stated that the European Community legislature has the power to take measures relating to the criminal laws of member states,<sup>60</sup> which it considers necessary to ensure that the European Community rules on environmental protection are fully effective.<sup>61</sup> This position regarding penalties is consistent with the nature of establishing the right to a clean natural environment for all persons. A violation of that right harms not only individuals but also society as a whole, and can thus properly be said to expose a polluter to civil liability and criminal sanction. In summary, it would seem rather obvious that societies all over the world value clean environments, and reflect this value in international and domestic legal rights to a clean environment through prescriptive constitutional rights and criminal and civil proscriptions against pollution. Emissions trading is inconsistent with rights to a clean environment (specifically, clean air) and the appurtenant duties not to pollute because the necessary underlying theories of contract, tort and property that would be needed to enable emissions trading must begin with an assumption that the traders own something of value, measured by nothing more than their measurable compliance with a pre-existing duty established by law. It is important to note that while the price of a ton of SO<sub>2</sub> may be set at a level that the market will bear, the market itself is a wholly artificial one, created and maintained by pollution control laws. As Professor Michael Bothe reminded the audience at a Sino-German Symposium on Environmental Law, there is no "natural" market for the creation, buying and selling of emissions credits.<sup>62</sup>

Among other tasks, the 1972 United Nations Conference on the Human Environment promulgated the Stockholm Declaration. In its first principle, the Declaration states that "Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being . . . ." This principle is not a regulation of the right to a clean environment nor a binding statement of positive law, but as Nukhet Turgot points out, it not only names the environmental right, but also represents "the first important international document that establishes a link between the human rights concept and environmental protection."<sup>63</sup> The same suggestions have been also put forward at international \*162 level in the form of including a provision on a right to a clean environment into current human rights documents such as European Human Rights Conventions and the Universal Declaration of Human Rights.<sup>64</sup>

## B. Domestic

### The Public Trust Doctrine

The umbrella concepts under which much of legal thought on the environment rests are the notion of common goods, and the state's role in maintaining and allocating the use of those common goods for the benefit of the public. In his seminal work "The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention,"<sup>65</sup> Joseph L. Sax explains that if the public trust "doctrine is to provide a satisfactory tool, it must meet three criteria. It must contain some concept of a legal right in the general public; it must be enforceable against the government; and it must be capable of an interpretation consistent with contemporary concerns for

environmental quality.”<sup>66</sup> The source of modern public trust law can be found in a concept “that received much attention in Roman and English law--the nature of property rights in rivers, the sea, and the seashore.”<sup>67</sup> Sax elaborates:

[T]hree types of restrictions on governmental authority are often thought to be imposed by the public trust: first the property subject to the trust must not only be used for a public purpose, but it must be held available for use by the general public; second, the property may not be sold, even for a fair cash equivalent; and third, the property must be maintained for particular types of uses.<sup>68</sup>

### Constitutions

Doctrines, however, are not enforceable without recognition in the law. If one begins by looking to constitutions, the most fundamental of sources of law since the onset of Westphalian nation-state structures, one finds, worldwide, a remarkable number that recognize the right of the legal person to enjoy a healthy or clean natural environment.<sup>69</sup> In *Constitutional Environmental Rights*,<sup>70</sup> Tim Hayward maintains that a fundamental right to an adequate environment ought to be provided in the constitution of any modern democratic state. According to **\*163** to Hayward, the importance of securing a provision for environmental protection at the constitutional level is now widely recognized.<sup>71</sup> Almost all nation’s constitutions drafted after 1970 contain some provision regarding environmental protection.<sup>72</sup> One can find the right announced in the constitution of the People’s Republic of China, and in the constitutions of some EU member states such as Austria, Germany, the Netherlands, Portugal and Spain. A right to a clean environment cannot be found in the constitutive treaties of the EU,<sup>73</sup> nor has it been placed into the as-yet unratified Treaty Establishing a Constitution for Europe.<sup>74</sup>

Whether recognized as a right or simply stated as a duty of the state, environmental protection has also been defined as the duty and responsibility of citizens. In this context, the Spanish Constitution formulates this duty in terms of “the duty of defense of the environment.”<sup>75</sup> The Turkish constitution states that “it is the duty of state and citizens to prevent pollution, to protect the health of environment, and to improve the environment.”<sup>76</sup> Although there exists no right to a clean environment in the U.S. Constitution,<sup>77</sup> all three branches of the federal government considered the notion of the right during the awakening of legal recognition of environmentalism.<sup>78</sup> In his state of the union address on January 22, 1970, President and chief executive Richard M. Nixon defined “the great question of the seventies” as how to secure an unpolluted environment as “the birthright of every American.”<sup>79</sup> In the legislative **\*164** branch, Senator Gaylord Nelson called for a constitutional amendment guaranteeing every American “an inalienable right for a decent environment.”<sup>80</sup> In 1965, U.S. Supreme Court Justice William O. Douglas published *A Wilderness Bill of Rights* and, in his 1972 dissent to *Sierra Club v. Morton*,<sup>81</sup> stated not only that the right to a clean environment is fundamental, but that the burden of proof in the case should have been with the developer, Mineral King, since it proposed action that encroached upon the right to a clean environment. That, in his mind, amounted to a “conferral of standing upon environmental objects to sue for their own preservation.”<sup>82</sup> Although the U.S. Constitution has not yet been interpreted to recognize the right to a clean environment, some state constitutions do.<sup>83</sup> At least one state constitution, that of Pennsylvania,<sup>84</sup> has been interpreted as having established a self-executing right<sup>85</sup> But even if a constitutional right is self-executing, one must consider what a statute might entail if it either creates a right or provides the necessary positive statement of law to execute a constitutionally-created right.<sup>86</sup> The record of scholarship and public debate shows that the question of whether the right needs to be stated in a constitution or in a positive statement of law such as a statute or regulation, is however more often hotly debated than whether the right exists at all.<sup>87</sup> In the history presented by Nash, one might induce a pattern whereby the many ethical rights, including race, gender and religion, have become established as legal rights when a series of advocates name those rights, and then governments legislate those names into statutes or constitutions.<sup>88</sup>

### **\*165** Third Generation Human Rights

The right to the environment is included in a new category of human rights called “third generation rights.”<sup>89</sup> In his thorough study of human rights and the environment, Nukhet Turgut summarizes the connection as follows: If we analyze the constitutions having provisions on environmental protection we can remark that there are three main different formulations about the issue. Firstly some constitutions have only a requirement stating the environmental protection as a state goal and duty which are called policy guidelines or programmatic provisions by some writers, and are debated as far as their binding effects are concerned. Secondly, there are constitutional requirements which explicitly formulate a right to environment. The well-known examples of these kinds of formulations are Spanish and Portuguese constitutions. Thirdly some constitutions recognize a right to

environment implicitly (or indirectly) such as the amended 56th article of Turkish Constitution of 1982 states that “everyone has a right to life in a balanced and healthy environment” which aims and recognizes the right to environment indirectly as linking it with the right to life. In this sense there is a similarity between the Turkish Constitution and the Stockholm Declaration promulgated at the United Nations Conference on the Human Environment held in 1972.<sup>90</sup>

Turgut concludes however, that “recognizing the right to environment as a human right is important to protect the environment, but it is not sufficient because of differences between the characteristics of this right and traditional human rights.”<sup>91</sup>

### **RIGHT TO POLLUTE?**

On the contrary, is there a right to pollute? To understand conceptual bases for the concept of a right to pollute, one might begin by considering the historical development of environmental law. Before specific environmental rights were written into constitutions, and before pollution prohibitions were written into statutes and environmental law, pollution as a legal issue was subsumed under property law and the torts of nuisance and trespass. Joseph Sax begins his famous discussion of environmental rights with this historical foundation, but strangely, so does M.I.T. economist A. Denny Ellerman, who, while crediting the concept to fellow economist Coase in 1960, refers to air as a matter of property of a “common pool” that like land once **\*166** was, is “free for the taking.”<sup>92</sup> “In its most general use, a tradable permit can be defined as a transferable right to a common pool resource.”<sup>93</sup>

Ellerman’s economic discussion is filled with talk of emissions rights. “Allocating emissions rights is a prerequisite of allowance trading only, although rights to emit are implicit in both credit trading and averaging, as they are in conventional environmental permits.”<sup>94</sup> These, however, are not rights; rather, they are licenses, and as with all licenses, can only be exercised when the government’s conditions are met. If the government is treating the air as part of the right of citizens, then the protection of the air, in the public trust, cannot be sold by the government, nor licensed for sale by the government. The so-called “common pool” resource that Ellerman uses by analogy is land, but land historically has not been permitted to be used as though there is an absolute individual and independent right. Most recently, the dozens of states that had had “right to farm” statutes have seen those statutes fall.

The public and the media recognize this without resorting to the mathematics of economics:

The Public Trust Doctrine is simple: Wisconsin holds its waters in trust for the public, and the rights of the public are paramount to any private use of state waters. . . . But if a grower creates a public nuisance by harming public trust waters, the attorney general has a duty to protect the public interest by going to court to right the wrong. The highest law of our state is the state constitution--and where the Public Trust Doctrine is concerned, both the Right to Farm Law and the Cranberry Law must yield to it.<sup>95</sup>

These restrictions on use are balanced by the favorite tools of private property interests, the takings clause and the related argument of reverse condemnation. At the end of the 1990s, Jerry Taylor, director of natural resource studies at the Cato Institute, asked whether farmers in the United States, for instance, have a right to pollute.<sup>96</sup> He answered himself with reference to the anti-environmental lobbyists in the 1990s who countered pollution regulation with invented property **\*167** rights arguments such as “reverse condemnation,” made famous in the case of *Lucas v. South Carolina Coastal Council*.<sup>97</sup>

Those arguments made for some surprising political bedfellows when, in 1995, the County Board of Supervisors of Kossuth County, Iowa “reclassified a residential neighborhood as an ‘agricultural area’ and allowed a large-scale hog operation to start up next to a number of homes.”<sup>98</sup> Hog farmers in Iowa were protected from nuisance actions that might be filed due to the stench by Iowa’s right to farm statute. Property owners argued reverse condemnation. Holding the right-to-farm statute unconstitutional, the Iowa Supreme Court opined: “When all the varnish is removed, the challenged statutory scheme amounts to a commandeering of valuable property rights without compensating the owners, and sacrificing those rights for the economic advantage of a few.”<sup>99</sup> After the U.S. Supreme Court refused to hear the case on appeal, the Iowa law was repealed. Taylor suggests that the case puts every other state’s right-to-farm law in question:

Advocates for expanded property rights heralded the Supreme Court’s 1992 decision in *Lucas v. South Carolina Coastal Commission* as the dawn of a new era in which landowners would obtain increased constitutional compensation for the burdens of regulation, and which in turn would

discourage regulatory initiatives. The post-Lucas era has been a considerable disappointment to property rights advocates, however. Ensuing decisions have confined the categorical takings rule to regulations that result in complete economic wipeouts, a rare phenomenon. On the other hand, courts have expansively interpreted the decision's exemption from compensation for regulations that merely forbid uses prohibited by background principles of property and nuisance law. In fact, a dozen or more categorical defenses have evolved under the Lucas decision's background principles inquiry. Thus, surprisingly enough, Lucas's chief effect has been to make the nature of the claimant's property interest a threshold issue in all takings cases. Instead of increasing the likelihood of either landowner compensation or deregulation, Lucas's principal legacy lies in affording government defendants numerous effective categorical defenses with which to defeat takings claims.<sup>100</sup>

**\*168** More generally, while one might conclude that while environmental rights might be included among property rights, a right to pollute is not included within the concept of a property right. The public use and Fifth Amendment takings issues continue to catch the attention of the United States Supreme Court. In *Kelo v. City of New London*<sup>101</sup> the Court held that the city's taking of private property to sell for private development qualified as a "public use" within the meaning of the takings clause. The city was not taking the land simply to benefit a certain group of private individuals, but was following an economic development plan. Such justifications for land takings, the majority argued, should be given deference. The takings here qualified as "public use" despite the fact that the land was not going to be used by the public. The Fifth Amendment did not require "literal" public use, the majority said, but the "broader and more natural interpretation of public use as 'public purpose.'"<sup>102</sup>

#### CAN EMISSIONS TRADING SURVIVE THE ANALYSIS OF LEGAL ETHICS?

It remains disputed among scholars as to how and when rights, as a manifestation of justice and ethical positions, become recognized as law.<sup>103</sup> In his study of the history of the rights of nature, Roderick Frazier Nash provides a number of moments in legal history when attempts have been made to extend legal rights to entities beyond living persons, such as future persons and trees.<sup>104</sup> Within that history are the more modest attempts to establish or recognize those rights,<sup>105</sup> depending upon one's sense of the fundamental nature of the source of law.

The ethics of emissions trading need to be made explicit before the legal bases can be fully considered. The tacit adoption of a teleological approach to air pollution regulation results in a situation whereby simply complying with a state-created privilege creates a private property right that can be sold on the open market. Bolling's cartoon demonstrates the need to consider the distinction between deontological and teleological approaches to creating legal rights, privileges and **\*169** duties. Whereas a teleological approach allows ends (Greek, *telos*, "end") to justify means, non-consequentialist theories such as a deontological one (Greek, *deontos*, "duty") focus upon individual acts that constitute the means. A simpler, but perhaps less effective analogy might be to suggest that if one drives his or her automobile slower than a posted speed limit of sixty-five miles per hour, he or she could obtain speed credits for the miles per hour under sixty-five and sell those credits to other drivers who just "can't drive sixty-five," thus permitting those other drivers to exceed sixty-five without penalty.

If there is no right to pollute, upon what legitimation does emissions trading rest? Although we may not often examine the foundation upon which a legal prescription or proscription rests, we engage the practice and study of the law as though each prescription and proscription does indeed have a legitimate foundation. The Air Pollution Control Act clearly says that the creation of an emissions credit is not a property right.<sup>106</sup>

Basic contract law tells us that "where a party does or promises to do what he is already legally obligated to do or promises to refrain from doing or refrains from doing what he is not legally privileged to do he has not incurred detriment"<sup>107</sup> because it was a pre-existing duty. Moreover, the pre-existing duty need not be contractual, but may be set by civil or criminal law. Without a new duty upon which the parties agree, there is a failure of consideration and thus a failure of contract.<sup>108</sup>

The argument in favor of emissions trading must assume that under any given "meteorological-juridical bubble", including a worldwide model, there will be a net reduction in emissions, either under the bubble or worldwide, even if some polluters are in fact permitted or encouraged to pollute more in the process, so long as offset credits are available and affordable.<sup>109</sup> Moreover, the E.U. has taken advantage of its regional integration and insisted upon the inclusion of Article 4 of the Kyoto Protocol. Under Article 4, Annex I parties that have

reached an agreement to fulfill their commitments under Article 3 jointly “shall be deemed to have met those commitments, provided that their total combined aggregate emissions do not exceed their assigned amounts calculated pursuant to their quantified emission reduction and limitation commitments inscribed in Annex B to the Protocol.”<sup>110</sup> Such an arrangement has been called the joint implementation “bubble.”<sup>111</sup> In considering this assumption, if one focuses upon the term “net,” it becomes evident that the emissions-trading \*170 process justifies its means by further assuming its ends, or what philosophers might term setting a bias in favor of a teleological rather than a deontological approach to the right to a clean environment versus the putative property right to pollute with the allowance of an emissions-trading credit. These circumstances further emphasize the unsubstantiated assumptions of emissions trading if one considers duties, the necessary counterpart of all rights. Alternatively, as any beginning student of the law learns, for every right established there exists a corresponding duty. As applied, that would mean for example that “[a]ccording to rights and duties theories, the question of the moral acceptability of US greenhouse gas emissions does not turn on the probability that harm would occur but rather on whether one is engaged in behavior that one has a duty to avoid.”<sup>112</sup> When applied to emissions trading, it demands that because a right to a clean environment exists as a statement of positive law, a corresponding duty exists among others not to pollute. At the level of individual or governmental action, one would therefore need to determine whether the act being considered is inherently wrong, as understood within the constitutional prescriptions to a clean environment and the statutory proscriptions on pollution. One may go one step further and extend the act of air pollution to the category of all similarly-situated legal persons, thus asking, per the deontology of Kant,<sup>113</sup> whether such behavior can be made universal. Of course not.<sup>114</sup> In other words, could all industries of the type in question, such as electric power plants, exceed their statutory or permit limits? With emissions trading, the assumption is that some persons will comply with the law, creating an additional property right which can then be sold to those who do not comply with the law. Rather than the determination of how many persons may exceed their statutory or permit limits, as determined by human health or environmental concerns, it is based upon the illusory pure marketplace.

One might counter the deontological critique of the teleological approach, however, by arguing that the deontological approach would stop most industry, assuming that it is only possible for industry to operate by causing at least some air pollution. That response is overly broad for the issues at hand. Specifically, one can see the ramifications of a teleologically-biased rights assumption by looking directly to Article 17 of the Kyoto Protocol.<sup>115</sup>

Under the Kyoto Protocol, developing countries assume voluntary emissions limitations. Some non-governmental organizations and developing countries argued “that the targets should be based on a set per capita emissions level, arguing that this is the most equitable and \*171 enduring system because all citizens of the world would have the same “right” to emit.”<sup>116</sup> Now that the United States, China, Europe, and the Kyoto signatories have established emissions trading, however, little discussion of the assumptions concerning the basic rights and duties takes place. Instead, governments and non-governmental organizations ruminate upon such issues as the Kyoto Protocol Article 17’s condition that emissions trading flexible mechanisms be “supplemental” to countries’ attempts to curb emissions, whereas “clean development mechanisms” in Kyoto Protocol article 12.2 need not be supplemental. Other such issues include verification of credit purchase values, counterfeit emission reduction units, discounting, insurance, minimum thresholds for banking, and liability for the over sale of credits,<sup>117</sup> windfall profits,<sup>118</sup> and political fairness.<sup>119</sup>

As Bothe has noted, emission trading under the U.N.F.C.C.C. and Kyoto Protocol appears to be a mechanism involving transactions among the states that are parties to the Protocol. The parties “may participate in emission trading for the purpose of fulfilling their commitments.”<sup>120</sup> Such a suggestion ignores the differing duties and hence, the attitude in application between states and private enterprises. The market goals of efficiency and monetary cost-reduction may be better fit to private industry, but the relationship of a set goal to the search for an efficient achievement of that goal is a trick that places the rabbit in the hat, exposing an assumption regarding duties rather than rights. Given a market goal, a market industry is well suited. But neither the Kyoto Protocol nor the constitutional framework of any of the three systems under consideration has stated that the goal of emissions trading is to produce a commodity market. Were this the case, the duty with which we would be concerned would be a fiduciary one, as evidenced by the articles of incorporation of any of the industries involved. But when states are the parties to emissions trading, the trader has more than a fiduciary duty; it has the moral and legal duties that arise out of the public trust, as evidenced by the Kyoto Protocol and domestic constitutions.

## CONCLUSIONS

A range of conclusions can be drawn from this analysis. For those who continue to favor emissions trading, due consideration to the <sup>172</sup>questionable nature of the underlying property rights must be considered in order to avert defeat if an established emissions trading system is challenged. For those who do not favor emissions trading, the weak nature of the underlying property assumptions provides the foundation from which a challenge can be mounted. While environmentalists may want to resist the idea that anyone owns nature, the record of events in the emissions trading history of the last forty years demonstrates that silence is a luxury that cannot be afforded.<sup>121</sup>

If we accept the assertion that even within the emission trading community, only cap and trade systems have a performance record that justifies the teleological assumption that net worldwide emissions reductions will result, then only a system that is based upon a regulatory standard is possible. Regulatory standards are not produced by market economics. Thus, if the only way emissions trading works is with a role for government, then the government must also manage the public interest in the common good that is clean air. The United States' programs, being generally regarded as the oldest and having been expressly used as the models for other programs, have elements of both the cap-and-trade and emissions credit trading systems. Even emissions trading supporters, however, must admit that only cap-and-trade has achieved its intended consequences. This crucial distinction has not been keenly observed when the systems are adapted and adopted elsewhere, and, unfortunately, it is precisely the emissions credit trading system that fails the most in ethical analysis. The differences elucidated by Byron Swift<sup>122</sup> matter---without an ethical basis that fits an emissions system into a legal enforcement regimen, the system cannot be justified.

What way forward with flexibility mechanisms? It is unlikely that emissions trading will go away, even if it is recognized or admitted that it is premised upon an unfounded assumption that a right to pollute exists and can be turned into a tangible property right. But even if the cow has gone, the barn door may still need to be closed. "Environmental compliance and enforcement are the foundation for the rule of law, good governance, and sustainable development," says Kenneth <sup>173</sup>J. Markowitz of the secretariat of the International Network for Environmental Compliance and Enforcement (I.N.E.C.E.).<sup>123</sup> He adds that only a relatively small part of the regulated community chooses economic incentives not to comply with environmental regulation. Thus, if there is non-compliance, it would likely be the result of other reasons. Since those who will benefit most from effective measures to halt the greenhouse effect will not necessarily be the same as those who would have to bear most of the cost for these measures, it is impossible to rely entirely on the informed self-interest of those polluters in order to achieve the purposes of reducing or slowing global warming.<sup>124</sup> Thus, at an International Conference in 2004 and an Enforcement of Emissions Trading Workshop (7th Conference, 2005), the I.N.E.C.E. "recognized that credibility of an emissions trading system is dependent upon compliance and enforcement."<sup>125</sup>

In his lengthy study of international trade and its effects on human rights and the environment, Francesco Francioni concludes that "[i]n the absence of a world government capable of functioning as a global arbiter in resolving conflicts between trade and non-commercial interests, stakes must inevitably address such conflicts on the basis of principles and methods which are typical of the decentralized structure of international law. These methods must include international cooperation for appropriate standard-setting, diplomatic negotiation and binding adjudication, and as a last resort, unilateral State action."<sup>126</sup>

"The movement toward the adoption of international human rights standards predates the effort to establish a global system of free trade. As early as 1919, with the constitution of the International Labor Organization, social and economic rights began to develop. . . . Its legacy proved to be relevant in the early formulation of the instruments designed to set up and govern the institutions of the UN."<sup>127</sup>

According to neo-conservative supporters of emissions trading:

Critics also argue that emissions trading does little to solve pollution problems overall, as groups that do not pollute sell their conservation to the highest bidder. Overall reductions would need to come from a reduction of permits available in the system. Likely this would occur over time through central regulation, though some environmental groups acted more immediately by buying credits and refusing to use or sell them.<sup>128</sup> Nevertheless, the transfer of wealth from polluters <sup>174</sup>to non-polluters, provides incentives for polluting firms to change, especially if the market price for pollution credits is very high.<sup>129</sup>

Note that even in this formulation of the assumptions, central regulation would be required to make equitable use of the market. It is not a pure market; it is not an open market.

Concluding with the cartoon image with which this article opens, one is reminded of the nature of the emissions “market.” It is not a natural market, but one that is artificially constructed only through government legislation that creates a property right.<sup>130</sup> This point is made not out of a general agoraphobia, but rather to demonstrate that only after that right is created does the market operate come into play, and then largely to agree upon the prices. A comparison of the deontological with the teleological approaches in answering the title question yields differing results. A deontological approach would make it difficult to justify the act of polluting, given that there is no underlying right to do so, and given that there is in fact a duty not to do so, established by the rights to a clean environment. If one can provide some degree of certainty as to the assumptions that must be built into the bubble models of geographic and meteorological systems, and the human behavior within them, then the end, net or telos of the system should be lower air pollution.

#### Footnotes

a1 Assistant Professor of Law and Director of International Programs, Duquesne University School of Law, 600 Locust Street, Pittsburgh, Pennsylvania, 15282, USA, telephone + 412 396 1047, facsimile +1 412 396 4014, e-mail junker@duq.edu. The author would like to thank Mr. Xie Zhenhua, then-Minister of the State Environmental Protection Agency for the People’s Republic of China for taking his time to meet with the author and for his insightful comments, Dean Emeritus Nicholas P. Cafardi for his generous writing stipend to support the research and writing of this article, Professor Bruce Ledewitz of Duquesne University School of Law and Dr. Konrad Ott, Chair of Environmental Ethics, University of Greifswald, Germany for agreeing to read the article, Dr. Fan Xiaobo of the Chinese University for Political Science and Law, Beijing, for her correspondence, and Mr. Jianyu Zhang of the Environmental Defense Fund, Beijing, for his insights and Ms. Julie Schaffer for her research assistance.

- 1 See <http://environment.about.com/cs/glossary/g/emissionstradin.htm> (last visited Aug. 15, 2005).
- 2 Alexandra Dapolito Dunn & Elise Bacon, Doing Water Quality Credit Trading Right, 20 Nat. Res. & Env’t. 43 (2005).
- 3 Tom Tietenberg, The Tradable Permits Approach to Protecting the Commons: What Have We Learned? (Jun., 2002), at <http://www.ucd.ie/envinst/envstud/CATEP%20Webpage/Papers/tietenberg.pdf>.
- 4 Byron Swift, U.S. Emissions Trading: Myths, Realities and Opportunities, 20 Nat. Res. & Env’t. 3, 4 (2005).
- 5 Id.
- 6 Id.
- 7 Ruben Bolling, Tom the Dancing Bug, “Tales of Market-Driven Crimes”, Quaternary Features (1992).
- 8 Joseph D. Calamari & Joseph M. Perillo, The Law of Contracts, § 4.9 (West, 4th ed. 1998).
- 9 Ron Laurie & John Amster, Securitizing and Monetizing IP, (Dec., 2004), at [http://conferences.utcle.org/law/cle/conferences/fall2004/PJ04/Laurie\\_PJ04\\_ppt.pdf](http://conferences.utcle.org/law/cle/conferences/fall2004/PJ04/Laurie_PJ04_ppt.pdf) (citing “Brookings Institute Figures for Fortune 500 Companies 2002”).
- 10 Kirk W. Junker & Konrad Ott, Ethics and Science: More Than Just Doing What’s Right, in SCIENCE AND SOCIETY (1997).
- 11 Ronald H. Coase, The Problem of Social Cost, III J. L. & Econ., (Oct. 1960).
- 12 Act of Nov. 15, 1990, Pub. L. No. 102-549, 104 Stat 2591 (1991).

- 13 Tom Tietenberg, *Tradable Permit Approaches to Pollution Control: Faustian Bargain or Paradise Regained?*, *Property Rights, Economics and the Environment* (M.D. Kaplowitz, ed. 1999), 175- 199.
- 14 Interview with Annie Petsonk, International Counsel for Environmental Defense, at the ALI-ABA International Environmental Law Conference, Washington D.C. (May 7, 2005) (maintaining that the drafters of emissions trading legislation are careful not to explicitly use the term “right” when establishing emissions credit trading systems.) Yet one must ask whether even a strategy that avoids using the name “right” significantly changes the nature of the referent. Cf. Annie Petsonk, *The Kyoto Protocol and the WTO: Integrating Greenhouse Gas Emissions Allowance Trading into the Global Market Place*, 10 *DUKE Env'tl. L. & Policy F.* 185 (1999).
- 15 Swift, *supra* note 4, at 9.
- 16 42 U.S.C. § 7401, et seq. (2000).
- 17 42 U.S.C. § 7401 et seq (2000).
- 18 Donald A. Brown, *American Heat: Ethical Problems with the United States’ Response to Global Warming* 35 (Rowman & Littlefield, 2002).
- 19 Steven Lee Myers, *Putin Ratifies Kyoto Protocol on Emissions*, *N.Y. Times*, Nov. 5, 2004, at A10.
- 20 Kenneth Berlin, *American Business and Greenhouse Gases--What’s Next?* *International Environmental Law* 117 (American Law Institute, 2005).
- 21 Jim Fuller, *U.S. Acid Rain Program Serves as Emissions Trading Model* (Nov. 9, 1998), <http://greennature.com/article326.html>.
- 22 *Id.*
- 23 Kirk W. Junker, *Conventional Wisdom, De-emption and Uncooperative Federalism in International Environmental Agreements*, 2 *Loy. U. Chi. Int’l L.R.* 93 (2005).
- 24 Anthony DePalma, *9 States in Plan to Cut Emissions by Power Plants*, *N.Y. Times*, Aug. 24, 2005, at A1.
- 25 Robert C. Shinn, Jr. & Matt Polsky, *The New Jersey Department of Environmental Protection’s Non-Traditional Role in Promoting Sustainable Development Internationally*, *Seton Hall J. Dipl. Int’l Rel.* 93 (Summer/Fall 2002).
- 26 *Id.*
- 27 Michael Bothe, *Tradable Emission Certificates as a Mechanism for National Compliance under the UNFCCC*, in *Implementing International Environmental Law in Germany and China* 121, 131 (Tao Zhenghua, Rüdiger Wolfrum, eds. 2001) (emphasis added).
- 28 United Nations Framework Convention on Climate Change, May 9, 1992, available at <http://unfccc.int/resource/docs/convkp/conveng.pdf>.

- 29 Kyoto Protocol to the United Nations Framework Convention on Climate Change, December 10, 1997, U.N. Document FCCC/CP/197L.7/Add.1, Art. 17 [hereinafter Kyoto Protocol].
- 30 Bothe, *supra* note 27, at 121.
- 31 BROWN, *supra* note 18, at 186.
- 32 See Wolf Friedrich Spieth & Martin Hamer, Implementation of the EU ETS Directive in the EU Member States, 2 J. For European Env'tl. & Plan. L. 112 (2005); Herbert Prosser & Stefan Altenschmidt, European Union Emissions Trading Directive, 23 J. Energy & Nat. Res. L. 60 (2005).
- 33 Brown, *supra* note 18, at 186.
- 34 Kyoto Protocol, *supra* note 29.
- 35 Bothe, *supra* note 27, at 123.
- 36 Liu Zhenmin, The Kyoto Protocol to the Convention on Climate Change: Commitments, Implementation, and Mechanisms in Implementing International Environmental Law in Germany and China 139 (Tao Zhenghua, Rüdiger Wolfrum, eds. 2001).
- 37 Brown, *supra* note 18, at 198.
- 38 *Id.* at 16.
- 39 Patrick J. Michaels, Cato Institute, Environmental Law Society debate at Duquesne University School of Law, Jan., 2005.
- 40 See Climate Stewardship Act (S. 342/H.R. 759), which as of this writing has passed in the United States Senate, but not yet in the United States House of Representatives.
- 41 Law on Prevention and Treatment of Air Pollution, as amended, 2000.
- 42 See Embassy Beijing, China's Emission Trading Pilot Projects (Dec. 2003), <http://www.usembassy-china.org.cn/sandt/ptr/Emissions-Trading-prt.htm> [hereinafter Pilot Projects].
- 43 Fu Jing, China Daily, at <http://www.chinadaily.com.cn/english/home/index.html> (last visited July 10, 2005).
- 44 See Pilot Projects, *supra* note 42.
- 45 Berlin, *supra* note 20, at 113.
- 46 Council Directive 2003/87/EC, available at [http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l\\_275/l\\_27520031025en00320046.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_275/l_27520031025en00320046.pdf).

- 47 Id.
- 48 Berlin, *supra* note 20, at 113.
- 49 Prosser, *supra* note 32, at 60.
- 50 Id.
- 51 See Prosser, *supra* note 32.
- 52 Emissions markets are purported to be managed privately. See Cantor Environmental Brokerage Home Page, <http://www.emissionstrading.com/> (last visited Apr. 15, 2006); see also World Business Council for Sustainable Development Home Page, <http://www.wbcsd.org> (last visited Apr. 15, 2006).
- 53 Prosser, *supra* note 32, at 60.
- 54 Decision 21/23 of the Governing Council of 9 February 2001, United Nations Environmental Programme, The Programme for the Development and Periodic Review of Environmental Law for the First Decade of the Twenty-First Century.
- 55 Id. at 10.
- 56 Id.
- 57 Kyoto Protocol, *supra* note 29, at Art. 17.
- 58 Hari M. Osofsky, Learning from Environmental Justice: A New Model for International Environmental Rights, 24 STAN. ENV. L.J. 71 (2005); Tim Hayward, Constitutional Environmental Rights (Oxford University Press, 2004).
- 59 The Clean Air Act, Clean Water Act, CERCLA, RCRA, HSCA and others all provide for this.
- 60 Commission of the European Communities v. Council of the European Union, E. C. JUSTICE, Case C-176/03, Sept. 13, 2005.
- 61 Id.
- 62 Bothe, *supra* n. 27 at 123.
- 63 Nukhet Turgut, The Right to Environment: Does it Reflect Environmental Ethics? 8 Eubios J. Asian & Intl. Bioethics 169 (1998), available at: <http://www.biol.tsukuba.ac.jp/~macer/EJ86/ej86d.html>.
- 64 Id.
- 65 Joseph L. Sax, The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention, 68 Mich. L. Rev. 471, 474.

- 66 Id. at 474.
- 67 Id. at 475, internal citations omitted.
- 68 Id. at 477, internal citations omitted.
- 69 Osofsky, *supra* note 58, at 80.
- 70 See Hayward, *supra* note 58.
- 71 Id. at 27, 28.
- 72 Turgut, *supra* note 63.
- 73 European Coal and Steel Community (Paris, 1952), European Atomic Energy Community Treaty and European Economic Community Treaty (Rome, 1958), the Treaty on European Union (Maastricht, 1993) together, as amended by The Merger Treaty (Brussels, 1967), The Single European Act (The Hague, 1987), The Treaty of Amsterdam (1999) and the Treaty of Nice (2003).
- 74 The Treaty Establishing a Constitution for Europe (Dublin, 2004), were it to have taken effect in its present form, would have provided some environmental protection for the four hundred and seventy million citizens of Europe, although it falls short of stating a right for the citizens. In Part II, Title IV (Solidarity), Article II-97 is entitled “Environmental Protection” and states: “A high level of environmental protection and the improvement of the quality of the environment must be integrated into the policies of the Union and ensured in accordance with the principle of sustainable development.”
- 75 Turgut, *supra* note 63.
- 76 Constitution of the Republic of Turkey, art. 56, para. 2.
- 77 Although the United States does recognize a right “to healthy and productive life in harmony with nature.” United Nations, The Rio Declaration on Environment and Development, Sales No. E.73.II.A.14 and corrigendum, chap. I, 1992.
- 78 See Bruce Ledewitz, Establishing a Federal Constitutional Right to a Healthy Environment in Us and in Our Posterity, 68 *Miss. L.J.* 565, 608-15 (1998).
- 79 Roderick Frazier Nash, *The Rights of Nature: A History of Environmental Ethics* 125 (Univ. of Wisconsin Press, 1989).
- 80 Id.
- 81 405 U.S. 727 (1972).
- 82 Id. at 130.

- 83 E. Dick Howard, *State Constitutions and the Environment*, 58 Va. L. Rev., 193, 196 (1972).
- 84 PA. Const: art. I, §27. “The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic, and esthetic values of the environment. Pennsylvania’s public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.” *Id.*
- 85 *Commonwealth v. Nat’l Gettysburg Battlefield Tower, Inc.*, 302 A.2d 886, (Pa. Commw. Ct. 1973), *aff’d*, 311 A.2d 588 (Pa. 1973).
- 86 See Jonathan Verschuuren, *Het grondrecht op bescherming van het leefmilieu*, W.E.J. Tjeenk Willink *bv*, Zwolle, 1993, translated into English as “The constitutional right to environmental protection” and presented abridged at: <http://www.portill.nl/data/topic/envartcult.html> (last visited, Apr. 15, 2006).
- 87 See e.g., Hayward, *supra* note 58.
- 88 Nash, *supra* note 79.
- 89 Turgut, *supra* note 63, at 169.
- 90 *Id.* at 169-70.
- 91 *Id.* at 170.
- 92 A. Denny Ellerman, *Tradable Permits--A Market-Based Allocation System for the Environment*, 1 *Cesifo Forum* 1, 7 (2003).
- 93 *Id.* at 3. However, appropriate to Ellerman’s comparison to land, one must distinguish between fixed common pool resources such as land, and fluid ones such as water or air. Legal history demonstrates that, unlike land, societies do not consider quanta of water to be discrete, fixed resources that one can privately buy and sell. Air and water are both fluid, so the analogy to land is a misleading one.
- 94 *Id.* at 5.
- 95 Melissa K. Scanlan, *Growers: A Right to Pollute?* *Wis. St. J.*, Aug. 14, 2004, A8.
- 96 Jerry Taylor, *Do Farmers Have a Right to Pollute?* (Apr. 10, 1999), <http://cato.org/dailys/04-10-99.html>.
- 97 505 U.S. 1003 (1992).
- 98 Taylor, *supra* note 96.
- 99 *Bormann v. Board of Supervisors in and for Kossuth County*, 584 N.W.2d 309, 322 (Iowa 1998), *cert. denied*, *Girres v. Bormann*, 525 U.S. 1172 (1999).
- 100 Michael C. Blumm & Lucus Ritchie, *Lucas’s Unlikely Legacy: The Rise of Background Principles As Categorical*

Takings Defenses 29 Harv. Envtl. L. Rev. 321, 321 (2005).

101 125 S. Ct. 2655 (2005).

102 Id.

103 Keith Dowding and Martin Van Hees, The Construction of Rights, 97 American Political Science Review, no. 2 (May, 2003).

104 Nash, *supra* note 79.

105 Legal naturalists may insist that since rights exist beyond human machinations, one must say the rights exist regardless of human acknowledgement, and therefore are not created, but rather are recognized. By contrast, a legal positivist, using Hans Kelsen's formulation that law is the will of the sovereign backed by the threat of force, would presumably be quite comfortable with saying that rights are created or established. See Hans Kelsen *Die Philosophischen Grundlagen Der Naturrechtslehre Und Des Rechtspositivismus* (Charlottenburg, 1928).

106 Tietenberg, *supra* note 3.

107 Calamari & Perillo, *supra* note 8, at § 4.9.

108 Id.

109 Bothe, *supra* note 27.

110 Zhenmin, *supra* note 36, at 136-37.

111 Id. at 136.

112 Brown, *supra* note 18, at 146.

113 Id.

114 Osofsky, *supra* note 58.

115 Kyoto Protocol, *supra* note 29, at Art. 17.

116 Chad Carpenter, International Institute for Sustainable Development, Flexibility Mechanisms--Emissions Trading, Jul. 7, 2005 at [http:// www.iisd.ca/climate/ba/mechanisms.html](http://www.iisd.ca/climate/ba/mechanisms.html) (last accessed, September 25, 2005) (on file with author).

117 Id.

118 Bothe, *supra* note 27, at 131.

- 119 Id. at 132.
- 120 Kyoto Protocol, *supra* note 29 (as cited and discussed by Michael Bothe, *supra* note 27, at 131).
- 121 “Environmentalists rarely talk about ownership of nature. In part, this silence is attributable to their feeling that nature is sacred and shouldn’t be commoditized - an appealing notion philosophically, but one that’s no match for modern capitalism.” Peter Barnes, *Who Shall Inherit the Sky?*, YES! (Spring 1999), <http://www.futurenet.org/article.asp?id=772>. “[B]ecause when tradable usage rights in scarce natural resources are created, what are also created are property rights - the rights to use scarce assets, or to sell those valuable usage rights for cash. That cash is what economists call scarcity rent. When applied to scarce natural systems, it can be a sizeable amount of cash indeed. Ask any television or radio station that has paid millions of dollars to purchase a license to use scarce electromagnetic frequencies for broadcasting. Corporation for Enterprise Development, Sept. 2000, <http://www.cfed.org> (last visited, Mar. 10, 2005).
- 122 Swift, *supra* note 4.
- 123 Kenneth J. Markowitz, presentation to the ABA-ALI International Environmental Law Conference, Washington, D.C., May 6, 2005.
- 124 Bothe, *supra* note 27, at 121.
- 125 Markowitz, *supra* note 123.
- 126 Francesco Francioni, *Environment, Human Rights, and International Trade 2* (Hart Publishing, 2d ed. 2001).
- 127 Id. at 5.
- 128 This in fact does occur. Conservation groups that are shy of confrontation often may exercise their environmental concern by buying as much land as possible to keep it from private hands that may exploit or destroy the environmental value of the land. Similarly, environmental groups and even the Boy Scouts of America make it a practice to raise money to buy credits and not use them.
- 129 Poncier, “Current Emissions Trading,” at [http:// www.poncier.com/articles/Emissions\\_trading](http://www.poncier.com/articles/Emissions_trading) (last visited Apr. 15, 2006).
- 130 Bothe, *supra* note 27, at 121.