

## TARGETS, TIMETABLES AND EFFECTIVE IMPLEMENTING MECHANISMS: NECESSARY BUILDING BLOCKS FOR SUSTAINABLE DEVELOPMENT

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### I. INTRODUCTION

Sustainable development provides a framework for reconciling and simultaneously furthering the broad goals of peace and security, economic development, social development, and environmental protection.<sup>1</sup> The traditional development model included security and economic and social goals, but accepted environmental degradation as the necessary price of progress.<sup>2</sup> However, environmental degradation undermines the achievement of development goals and contributes to a growing gap between rich and poor.<sup>3</sup> Sustainable development redefines progress to include environmental protection or restoration.<sup>4</sup> It is intended to foster environmental protection while achieving the goals of the traditional development model.<sup>5</sup> With much fanfare and publicity, the 1992 United Nations Conference on Environment and Development (“UNCED” or “Earth Summit”) in Rio de Janeiro endorsed sustainable development and agreed to an ambitious plan, called Agenda 21, for achieving it.<sup>6</sup>

A nagging question is the extent to which sustainable development actually, as opposed to rhetorically, protects the environment. Countries,

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<sup>1</sup> John C. Dernbach, *Sustainable Development as a Framework for National Governance*, 49 CASE W. RES. L. REV. 1, 9 (1998) [hereinafter *Framework*].

<sup>2</sup> *See id.*

<sup>3</sup> *Id.* at 14-16.

<sup>4</sup> *Id.* at 17.

<sup>5</sup> *Id.* at 21.

<sup>6</sup> Agenda 21, U.N. Conference on Environment and Development, U.N. Doc. A/CONF.151.26 (1992). The participating countries also agreed to a set of twenty-seven principles, known as the Rio Declaration, to guide the implementation of Agenda 21. *See* Rio Declaration on Environment and Development, U.N. Conference on Environment and Development, U.N. Doc. A/CONF.151/5/Rev.1 (1992), *reprinted in* 31 I.L.M. 874 [hereinafter Rio Declaration].

companies, and others make claims that they are engaging in sustainable development, but the condition of the world's environment continues to worsen and the gap between rich and poor continues to widen.<sup>7</sup> Some skeptics have suggested that the concept of sustainable development should be abandoned because it ultimately undermines environmental protection.<sup>8</sup>

The problem with such suggestions is that the need to integrate environmental protection with these other widely accepted goals (peace and security, economic development, and social well-being) is not going to go away. No one who has spent any time actually trying to protect the environment in specific situations believes that the environment can be discussed and protected on its own terms without reference to these other objectives. In fact, most observers recognize that we are more likely to protect the environment when we can show that environmental protection will further these other goals, or at least will not interfere with them.<sup>9</sup>

Therefore, environmental protection is more likely to occur when economic development is harnessed on its behalf. In developing countries, where poverty causes or contributes to environmental degradation, and where financial resources are especially scarce, environmental protection is much more likely to be accomplished when it is combined with economic development. In developed countries, the greater efficiency and conservation required for sustainable development are more likely to occur when it is plainly more economically attractive than current high levels of materials and energy consumption.<sup>10</sup> Sustainable development, moreover, is the internationally accepted framework for making these

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<sup>7</sup> See UNITED NATIONS ENV'T PROGRAMME, GLOBAL ENVIRONMENTAL OUTLOOK 3 (2002); *Implementing Agenda 21: Report of the Secretary-General*, U.N. Commission for Sustainable Development Acting as the Preparatory Committee for the World Summit on Sustainable Development ¶4, 2d Sess., U.N. Doc. E/CN.17/2002/PC.2/7 (2002) [hereinafter *Implementing Agenda 21*].

<sup>8</sup> See, e.g., Samudu Atapattu, *Sustainable Development, Myth or Reality?*, 14 GEO. INT'L ENVTL. L. REV. 265, 271 (2002); Jim Bailey, *Sustainable Development: Searching for the Grail or a Wild Goose?*, 24 ENVTL. L. 1159, 1162 (1994); Jennifer McIver, *Environmental Protection, Indigenous Rights and the Arctic Council: Rock, Paper, Scissors on the Ice?*, 10 GEO. INT'L ENVTL. L. REV. 147, 162-63 (1997).

<sup>9</sup> See generally *Framework*, *supra* note 1, at 31.

<sup>10</sup> *Id.* at 49-50.

broad goals mutually reinforcing.<sup>11</sup> It is the only framework that exists for responding to massive environmental degradation all around the world and the growing gap between rich and poor.

Rather than abandon this framework, then, it makes sense to improve it by filling in the gaps. An extremely critical set of gaps has been the virtual absence of specific internationally-agreed goals for environmental protection and social well-being. Few, if any, such goals exist in Agenda 21 or in binding multilateral agreements.<sup>12</sup> International actions to establish and meet such goals are likely to make sustainable development more understandable and more achievable. Similarly, national actions to establish and implement goals are more likely to succeed than national actions carried on without such goals. Targets and timetables, by themselves, are not enough; they must be accompanied by political and legal commitments and resources to achieve them. Sustainable development also requires many other things, including appropriate national and international governance structures. But targets, timetables, and implementing machinery are a crucial component of sustainable development.

Part II of this Article explains the importance of specific environmental and social goals as well as the legal and administrative mechanisms necessary to realize them. The particular focus of this Article is longer-term international targets and timetables, primarily because the achievement of sustainable development will require a continuing global commitment over a long time. Part III surveys efforts to establish targets and timetables as well as effective implementing mechanisms in legally binding and non-legally binding agreements. This survey includes the nonbinding agreement reached in the recently completed World Summit on Sustainable Development (“WSSD”) in Johannesburg, which was held to evaluate progress in implementing Agenda 21 over the ten-year period since Rio, and to make recommendations for future actions. Part IV

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<sup>11</sup> See Agenda 21, *supra* note 6.

<sup>12</sup> BOARD ON SUSTAINABLE DEVELOPMENT, NATIONAL RESEARCH COUNCIL, *OUR COMMON JOURNEY: A TRANSITION TOWARD SUSTAINABLE DEVELOPMENT* 44 (1999), available at <http://www.nas.edu/books/0309067839/html> (last visited Jan. 10, 2003) [hereinafter *OUR COMMON JOURNEY*]. (“Compared to targets for meeting human needs, quantitative targets for preserving life support systems are fewer, more modest, and more contested.”)

evaluates progress toward effective targets and timetables since Rio. Targets and timetables, and the mechanisms needed to implement them, are an increasingly prominent feature of international efforts to achieve sustainable development, and will likely become more prominent over time. While progress has certainly been made in the past decade, including progress in Johannesburg, a great deal remains to be done to implement targets and timetables on which agreement has already been reached and to establish and achieve other objectives. National targets and timetables (whether they mirror international objectives exactly or not) also need to play a growing role in sustainable development.

## II. TARGETS, TIMETABLES, AND EFFECTIVE IMPLEMENTING MECHANISMS

### A. *Understanding Sustainable Development*

Humans have put increasing pressure on the environment, and they are on a trajectory to put even more pressure on the environment.<sup>13</sup> The result is growing environmental degradation around the world, and a growing gap between rich and poor.<sup>14</sup> Growing human demands on the environment have interfered with conventional development and cannot be sustained indefinitely. Sustainable development is a constructive response to this problem.

In his environmental history of the twentieth century, J.R. McNeill found large and almost certainly unsustainable changes in the pressure humans put on the earth between the 1890s and 1990s.<sup>15</sup> World population grew by a factor of four, the world economy by a factor of fourteen, industrial output by a factor of forty, and energy use by a factor of sixteen.<sup>16</sup> Carbon dioxide emissions became seventeen times greater,

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<sup>13</sup> See UNITED NATIONS ENV'T PROGRAMME, *supra* note 7; *Implementing Agenda 21*, *supra* note 7.

<sup>14</sup> See UNITED NATIONS ENV'T PROGRAMME, *supra* note 7; *Implementing Agenda 21*, *supra* note 7.

<sup>15</sup> J.R. MCNEILL, SOMETHING NEW UNDER THE SUN: AN ENVIRONMENTAL HISTORY OF THE TWENTIETH-CENTURY WORLD 360 (2000).

<sup>16</sup> *Id.*

sulfur dioxide emissions thirteen times greater, and atmospheric lead emissions eight times greater.<sup>17</sup> In the same period water use grew by a factor of nine, marine fish catch grew by a factor of thirty-five, irrigated area increased by a factor of five, and cropland doubled.<sup>18</sup>

If we limit our attention to more recent history, between 1950 and 1993, the world's population grew by a factor of 2.2, food grain production by a factor of 2.7, energy use by a factor of 4.4, and gross domestic product ("GDP") by a factor of 5.1.<sup>19</sup> Looking forward, to 2050, the world's population will likely be 1.6 times its present size, and the world's economy or GDP is projected to be 4.3 times what it is now.<sup>20</sup> Food production is projected to be 1.8 times greater than present levels, and energy consumption 2.4 times greater than at present.<sup>21</sup>

Consequently, humans faced daunting challenges as the world began the new century. Nearly all of the projected increase in population will be in developing countries.<sup>22</sup> It will be necessary to provide food, shelter, clothing, education, and employment opportunities to at least three billion more people.<sup>23</sup> This is in addition to the six billion people who currently inhabit the planet, billions of whom already lack many of these necessities.<sup>24</sup>

Growing wealth and consumption increase the magnitude of this challenge. GDP has grown, and is projected to grow, much faster than population.<sup>25</sup> While growth in energy and food consumption has not been, and is not expected to be, as great as growth in GDP, both have grown faster than population and are expected to continue growing faster than population.<sup>26</sup> By 2025, according to a United Nations report prepared for the Johannesburg summit, "as much as two-thirds of the world's

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<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*

<sup>20</sup> *Id.*

<sup>21</sup> McNEILL, *supra* note 15.

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

<sup>24</sup> *Id.* at 61-62, 64-66.

<sup>25</sup> OUR COMMON JOURNEY, *supra* note 12, at 70

<sup>26</sup> *Id.*

population could live in countries with moderate or severe water stress.”<sup>27</sup> Three-fourths of the world’s marine fisheries are already fished to capacity or overfished.<sup>28</sup> Deforestation and the destruction of coral reefs continue at an alarming rate.<sup>29</sup> Greenhouse gas emissions and energy consumption continue to increase.<sup>30</sup> At the same time, there is a growing gap between the rich and the poor, both across and within countries.<sup>31</sup> The poor, in fact, are likely to experience environmental stresses and limits much more severely than those with greater means.<sup>32</sup> These trends pose two challenges to sustainability. One is ending the growing disparity between rich and poor; the second is providing for the growing global consumption of food, energy, and other materials in an environmentally protective manner.<sup>33</sup>

Figure 1 is a simplified model of the relationship between conventional development and the environment. Because conventional development has come to be equated with progress, Figure 1 is framed in those terms. The conventional development model has also worked as shown in Figure 1, at least since the end of World War II. That is, there have been improvements in peace and security, economic development, and social development or human rights, but continued environmental degradation.<sup>34</sup>

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<sup>27</sup> *Implementing Agenda 21*, *supra* note 7, ¶ 38.

<sup>28</sup> *Id.* ¶ 40.

<sup>29</sup> *Id.* ¶¶ 41-44.

<sup>30</sup> *Id.* ¶ 44.

<sup>31</sup> OUR COMMON JOURNEY, *supra* note 12, at 67.

<sup>32</sup> MCNEILL, *supra* note 15, at 359:

The poor and powerless cannot shield themselves from ecological problems today, nor will they be able to in the future. The wealthy and powerful in the past have normally had the wherewithal to insulate themselves from the effects of pollution, soil erosion, or fishery collapse. Only in a very severe crunch are they likely to face heavy costs.

<sup>33</sup> OUR COMMON JOURNEY, *supra* note 12, at 71.

<sup>34</sup> *Framework*, *supra* note 1, at 9-14 (explaining basis for Figure 1).

**FIGURE 1**  
**CONVENTIONAL DEVELOPMENT**

<b>Progress</b>	<b>Price of Progress</b>
Peace and Security Economic Development Social Development/ Human Rights Supportive National Governance	Environment and Natural Resources

The four goals identified under the “Progress” heading in Figure 1 are related in at least two key ways. First, economic development, security, and social well-being are mutually reinforcing. Well-educated children are better and more productive employees. Both education and economic activity are difficult, if not impossible, when there is strife or civil war. Second, security as well as economic and social development all require national governance that supports and furthers these goals.<sup>35</sup> In an international system of sovereign states, nations bear the primary responsibility for achieving these goals.

The problem is that the price of progress has become intolerable. Degradation of the environment and natural resources impedes, hinders, and even prevents realization of conventional progress.<sup>36</sup> Deforestation and overfishing mean that many people and businesses can no longer earn a livelihood.<sup>37</sup> Pollution impairs human health and thus human betterment. Poor people often live or work in the most polluted or degraded environments, thus worsening their poverty.<sup>38</sup> Although poverty and environmental degradation are significant in their own right, they also can cause or contribute to wars, starvation, ethnic tensions, and terrorism, which are more likely to get headlines than their underlying causes.<sup>39</sup> All

<sup>35</sup> See generally *Implementing Agenda 21*, *supra* note 7, ¶¶ 148-50.

<sup>36</sup> See generally *Framework*, *supra* note 1, at 9-14.

<sup>37</sup> See generally *Implementing Agenda 21*, *supra* note 7, ¶¶ 40-41.

<sup>38</sup> McNEILL, *supra* note 15, at 359.

<sup>39</sup> WORLD COMM'N ON ENV'T AND DEV., *OUR COMMON FUTURE* 27-42 (1987) (describing relationships between poverty and environmental degradation). See also *Framework*, *supra*

of these things make national governance much harder and less effective. Thus, while the general direction of social, economic, security and governance efforts has been positive, environmental degradation is a growing impediment to even further progress.

Sustainable development is premised on the interdependence and essential equality of economic development, social well-being, peace and security, and environmental protection.<sup>40</sup> These things, taken together, provide the basis for greater human freedom, opportunity, and quality of life.<sup>41</sup> Sustainable development is normative, though; it is not descriptive of how things are currently working. Figure 2 shows the state of affairs that sustainable development would achieve. Essentially, sustainable development modifies the definition of progress. Instead of conventional development at the environment's expense, sustainable development would protect and restore the environment at the same time that conventional development occurs.<sup>42</sup>

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note 1, at 14-21.

<sup>40</sup> *Programme for the Further Implementation of Agenda 21*, U.N. GAOR, 19th Special Sess., Annex ¶ 23, U.N. Doc. A/S-19/29 (1997) [hereinafter *Programme*] ("Economic development, social development and environmental protection are interdependent and mutually reinforcing components of sustainable development."). None of these is possible in the absence of peace and security. See, e.g., Rio Declaration, *supra* note 6, princs. 24 ("Warfare is inherently destructive of sustainable development.") and 25 ("Peace, development and environmental protection are interdependent and indivisible.").

<sup>41</sup> AMARTYA SEN, *DEVELOPMENT AS FREEDOM* (1999). See also *A Sustainable Europe for a Better World: a European Union Strategy for Sustainable Development: Communication from the Commission of the European Communities to the Gothenburg European Council Com(01)264 final at 2*, at [http://europa.eu.int/eur-lex/en/com/cnc/2001/com2001\\_0264en01.pdf](http://europa.eu.int/eur-lex/en/com/cnc/2001/com2001_0264en01.pdf) [hereinafter *European Union Strategy*] ("Sustainable development offers . . . a positive long-term vision of a society that is more prosperous and more just, and which promises a cleaner, safer, healthier environment—a society which delivers a better quality of life for us, for our children, and for our grandchildren.") (emphasis omitted).

<sup>42</sup> *Framework*, *supra* note 1, at 21-29 (explaining basis for Figure 2).

**FIGURE 2**  
**SUSTAINABLE DEVELOPMENT**

<b>Progress</b>
Peace and Security Economic Development Social Development/Human Rights Environmental Protection/Restoration Supportive National Governance

Thus, a necessary predicate to sustainability is slowing the rate at which environmental conditions get worse. A great deal of United States environmental law is based on that premise.<sup>43</sup> If we slow the rate of degradation in the United States and elsewhere, presumably we can then protect and even restore the environment, making progress on environmental quality even as the economy grows, social well-being increases, and we live more securely. But this is not going to be easily or quickly accomplished. A 1999 report by the National Research Council stated that a transition to sustainable development—not sustainability itself—could be achieved in two generations (roughly by 2050).<sup>44</sup>

This analysis suggests five important conclusions about the relationship between sustainable development and environmental protection. First, and this should go without saying, environmental protection and even restoration is what makes sustainable development different from conventional development. Without environmental protection, development is not sustainable. Second, and more subtly but no less importantly, our understanding of what environmental protection means will determine whether we actually protect the environment. Put more plainly, environmental protection must be measured against what is actually happening in the environment. Damage control in environmental

<sup>43</sup> See, e.g., Dennis D. Hirsch, *Globalization, Information Technology, and Environmental Regulation: An Initial Inquiry*, 20 VA. ENVTL. L.J. 57, 57 (2001) (“The main function of our environmental laws is to reduce the harmful effects that economic activity has on human health and the environment.”).

<sup>44</sup> OUR COMMON JOURNEY, *supra* note 12, at 3.

law often means, for example, reducing emissions of pollutants from levels emitted at an earlier time.<sup>45</sup> Without question, such reductions are a step in the right direction. But pollutants are still being emitted, albeit in reduced amounts.<sup>46</sup> Thus, year after year, concentrations of those pollutants in the environment often increase, even if that occurs at a slower rate.<sup>47</sup> A continued increase in the concentration of those pollutants (e.g., sulfur dioxide, carbon dioxide, and lead) in the environment is not sustainable. It is only by stabilizing and even reducing the concentrations of those pollutants in the environment that we can achieve sustainability.

Third, the quest for sustainability will require determined and persistent efforts to protect the environment over a much longer period of time than we ordinarily apply to other activities, including activities relating to the environment. On many of the hardest and most important issues, progress will need to be measured over decades, generations, or longer.<sup>48</sup>

Fourth, the objectives of environmental protection within sustainable development will likely need to shift over time. Environmental protection efforts will in many cases need to go through stages, including damage control, stabilization, and in many cases some form of restoration. Beyond that, threats to the environment are likely to be understood differently over time because of changes in technology, scientific information, the size and location of human populations, economic development, and other factors. The quest for sustainable development, in short, necessarily requires a substantial level of long-term monitoring and adaptability.

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<sup>45</sup> The acid deposition control program in the Clean Air Act (42 U.S.C. §§ 7651-7651o), for instance, was intended to reduce sulfur dioxide emissions by approximately ten million tons per year from 1980 levels by 2000. *Id.* § 7651(b).

<sup>46</sup> Between 1992 and 2001, sulfur dioxide emissions in the United States declined by twenty-four percent. See U.S. Evtl. Prot. Agency, National Air Quality: 2001 Status and Trends-Sulfur Dioxide, <http://www.epa.gov/air/aqtrnd01/sulfur.html> (last visited February 17, 2003). Yet in 2001, approximately fifteen million tons of sulfur dioxide were emitted into the environment from fuel combustion. *Id.*

<sup>47</sup> Sulfur dioxide from fuel combustion is now being added to the environment at a rate of about fifteen million tons per year, rather than twenty million tons per year. *Id.*

<sup>48</sup> See, e.g., OUR COMMON JOURNEY, *supra* note 12, at 3.

Finally, environmental protection cannot be separated from poverty alleviation. Environmental degradation and poverty are mutually reinforcing.<sup>49</sup> While poverty alleviation has been a major focus of international development efforts since at least the end of World War II, environmental degradation has hindered and undermined the effectiveness of this effort.<sup>50</sup> Because environmental degradation is a global phenomenon, it will require global cooperation to address. Because developing countries are primarily interested in economic development, it will be impossible to secure their cooperation without acknowledging that priority and giving special attention to environmental problems that most directly interfere with economic development in developing countries.

B. *Why Targets and Timetables are Needed*

Specific internationally-agreed environmental and social goals are a necessary means of achieving sustainable development. By goals, I mean specific, measurable targets that are to be achieved by specific dates or according to specified timetables. Thus, a target and timetable is a goal whose achievement or lack of achievement can be determined to a reasonable level of certainty. A target and timetable might be expressed as “achieving A by Year C” or “reducing B by fifty percent by Year C.” Timetables without specific targets usually can be achieved by some minimal activity that arguably fits the meaning of a vaguely defined goal or target. A goal of “making efforts toward D by Year E,” for instance, can be met by almost any effort at all. Similarly, targets without timetables are merely aspirational statements of goals. A goal of simply “achieving F” is an example. Without a specific date, there is, as a practical matter, nothing to achieve and little incentive to achieve it. There are other ways to water down the commitments contained in targets and timetables, using a variety of qualifying phrases and exceptions. Obviously, the strongest targets and timetables have no built-in escape clauses.

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<sup>49</sup> See *supra* note 39 and accompanying text.

<sup>50</sup> See *supra* note 39 and accompanying text.

This Article focuses on longer-term targets and timetables. A great many environmental treaties require compliance in a time frame that more or less coincides with the date that these treaties go into effect.<sup>51</sup> My focus, instead, is on timetables that often stretch a decade or more from the present date. Many of the hardest problems we face at the international level will need to be addressed at least that long, if not longer, to achieve even a modicum of success. These include, but are certainly not limited to, poverty, climate change, and loss of biodiversity.<sup>52</sup>

The establishment of targets and timetables can accomplish at least six valuable tasks. It can identify priorities, force decision makers to clarify objectives, demonstrate commitment to sustainable development and thus give it greater credibility, give operational meaning to sustainable development, and clarify the role of law. For difficult long-term objectives, the establishment of short-term or interim goals can also provide benchmarks of progress. These things are all needed for the achievement of sustainable development, and are unlikely to occur without the establishment of targets and timetables.

#### 1. Identifying Priorities

The process of setting goals necessarily forces a decision maker to think strategically about how to set and achieve them. A strategy for sustainable development<sup>53</sup> would necessarily identify those issues or goals that should be given priority. Decision makers would reduce a large number of pressing tasks into a smaller and more manageable number of objectives. Priority setting permits governmental and nongovernmental actors to concentrate their limited time and resources on a smaller number of tasks, and should in principle allow them to address those tasks more effectively than if their time and resources were spread among many tasks.

A threshold problem is that there are more needs and problems

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<sup>51</sup> See generally ALEXANDRE KISS & DINAH SHELTON, INTERNATIONAL ENVIRONMENTAL LAW 191-224 (2d ed. 2000).

<sup>52</sup> *Framework*, *supra* note 1, at 32.

<sup>53</sup> Agenda 21, *supra* note 6, ¶ 8.7 (recommending that countries adopt national strategies for sustainable development). See also *Programme*, *supra* note 4, ¶ 24(a) (recommending that each national government have such a strategy in place by 2002).

than any government or other institution can handle at once. As already noted, the core objectives of sustainable development are arresting and reversing trends toward global environmental degradation, and reducing the gap between rich and poor. But each of these contains a large number of component parts or issues. Agenda 21 includes chapters addressing consumption, air pollution (including climate change), land resources, deforestation, desertification, mountain ecosystems, agriculture, biological diversity, oceans, fresh water, toxic chemicals, hazardous wastes, solid wastes, and radioactive wastes.<sup>54</sup> Agenda 21 also contains chapters on trade, poverty, human health, housing, and biotechnology.<sup>55</sup> Within each chapter, there are many specific programs and activities. It is difficult to imagine how any decision maker could give priority to all of these things and still accomplish much of significance.

To address this problem, Agenda 21 states that national governments “will develop their own priorities in accordance with their prevailing conditions, needs, national plans, policies, and programmes.”<sup>56</sup> For every country, these priorities will be somewhat different. But virtually all countries, in different degrees, are experiencing worsening problems with poverty and environment because of unsustainable development.<sup>57</sup> The immediate task, then, is damage control or responding to the greatest threats.

The National Research Council’s Report, *Our Common Journey*, captures some of this sense of damage control. The international community’s primary goals for the next two generations, the Council said, “should be to meet the needs of a much larger but stabilizing human population, to sustain the life support systems of the planet, and to substantially reduce hunger and poverty.”<sup>58</sup> To a great degree, these are also damage control goals. If these goals are achieved, the planet’s life support systems will be sustained, but probably not restored in any

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<sup>54</sup> Agenda 21, *supra* note 6, chs. 4, 9-15, 17-22.

<sup>55</sup> *Id.* chs. 2-3, 6-7, 16.

<sup>56</sup> *Id.* ¶ 8.3. See also Rio Declaration, *supra* note 6, princ. 11 (“Environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply.”).

<sup>57</sup> See UNITED NATIONS ENV’T PROGRAMME, *supra* note 7.

<sup>58</sup> OUR COMMON JOURNEY, *supra* note 12, at 4.

meaningful degree; many people will still live in hunger and poverty; and the planet's human population will finally stop growing.

The European Union ("EU") has adopted a sustainable development strategy that also has a significant damage control element.<sup>59</sup> These priorities are global warming, public health, poverty, aging of the population, loss of biodiversity, and transport congestion.<sup>60</sup> These priorities were not picked out of thin air. They resulted from an analytical process that focused on three criteria: severity of the problem, the extent to which severe and adverse effects are likely to be felt by subsequent generations, and the extent to which the problem is common among EU member countries.<sup>61</sup> The methodology is problem-oriented and is directed against many of the same problems that international sustainable development efforts have targeted, especially climate change, biodiversity, and poverty. For both the National Research Council and the EU, then, the first step in the strategic process is problem identification and priority setting.

## 2. Clarifying Objectives

A general description of priorities is useful, but goal setting also requires decision makers to think clearly about what they want. It moves, or ought to move, decision makers beyond rhetoric and generalizations toward goals that are both precise and meaningful. This process of clarifying objectives is necessary to ensure that goals make sense, that progress toward goals can be measured in a reasonably accurate way, that goals can be achieved within the time specified, and that achievement of the goals will actually address the underlying problems.<sup>62</sup>

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<sup>59</sup> European Union Strategy, *supra* note 41.

<sup>60</sup> *Id.*

<sup>61</sup> COMM. OF THE EUROPEAN COMMUNITIES, CONSULTATION PAPER FOR THE PREPARATION OF A EUROPEAN UNION STRATEGY FOR SUSTAINABLE DEVELOPMENT 14 (2001), available at [http://europa.eu.int/comm/environment/eussd/consultation\\_paper\\_en.pdf](http://europa.eu.int/comm/environment/eussd/consultation_paper_en.pdf).

<sup>62</sup> See William F. Pederson, *Regulation and Information Disclosure: Parallel Universes and Beyond*, 25 HARV. ENVTL. L. REV. 151, 177 (2001) (stating need for "operationally meaningful goals").

American administrative and environmental law is replete with evidence, both positive and negative, of the importance of goals. The Government Performance and Results Act of 1993 (“GPR”) <sup>63</sup> obligates federal agencies to develop and implement multi-year strategic plans, to establish specific performance goals and performance indicators showing progress in achieving them, and to report annually on their progress in meeting these goals. <sup>64</sup> The basic idea of GPR was to improve the effectiveness and efficiency of government agencies by forcing them to think strategically about their overall goals and the best ways of achieving those goals. <sup>65</sup> A labor agency, for example, might otherwise focus on increasing the number of eligible persons who complete job training programs rather than on increasing the number of those persons who actually get long-term jobs. <sup>66</sup> The most effective environmental programs, similarly, appear to be those with specific environmental goals. Air and water quality standards established pursuant to United States environmental laws provide substantive goals by which to measure the effectiveness of those laws. <sup>67</sup>

Air quality standards are to be established at a level that is “requisite to protect public health.” <sup>68</sup> If people are breathing air that is in attainment of these standards, they are ostensibly breathing healthy air. Attainment of these standards is probably the single most important goal of the Clean Air Act. States must strengthen their implementation plans for regions that are not in attainment, <sup>69</sup> and the Act establishes specific procedures and deadlines for bringing nonattainment areas into

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<sup>63</sup> The Government Performance and Results Act of 1993, Pub. L. No. 103-62, 107 Stat. 285 (1993) (codified in scattered sections of 31 U.S.C.).

<sup>64</sup> 31 U.S.C. § 1115(a)(2000).

<sup>65</sup> OFFICE OF INSPECTOR GEN., U.S. ENVTL. PROT. AGENCY, GOVERNMENT PERFORMANCE AND RESULTS ACT (GPR) REVIEW GUIDE 2-3 (1999).

<sup>66</sup> S. REP. NO. 103-58, at 15 (1993) (Senate report on GPR).

<sup>67</sup> See Clean Water Act § 301-320, 33 U.S.C. §§1311-1330 (2000); Clean Air Act, 42 U.S.C. §7401-7671q (2000).

<sup>68</sup> 42 U.S.C. § 7409(b)(1) (2000). See also *Whitman v. Am. Trucking Ass’ns*, 531 U.S. 457 (2001) (upholding modification of air quality standard based on this requirement).

<sup>69</sup> 42 U.S.C. § 7502(c) (2000).

attainment.<sup>70</sup> Somewhat similarly, water quality standards are established under the Clean Water Act to “protect the public health or welfare” and “enhance the quality of water,” among other purposes.<sup>71</sup> Water that meets these standards would be, at a minimum, fishable and swimmable.<sup>72</sup> For waters that are not in compliance with these standards, states are required to establish specific remedial programs.<sup>73</sup> As a result, air and water quality have improved in the three decades since those laws were first enacted, though more remains to be done.<sup>74</sup>

The absence of goals is a common problem in other United States environmental regulatory programs, however.<sup>75</sup> It has been difficult for the United States to make progress on problems like biodiversity, oceans under United States jurisdiction, forestry, and land use because of the absence of substantive national goals and legal mechanisms to achieve those goals.<sup>76</sup> Oceans under United States jurisdiction would be much better protected if the country had coherent objectives for ocean water quality and marine resources.<sup>77</sup> The lack of a coherent biodiversity conservation based legal framework in the United States would be remedied by a national biodiversity conservation objective and the legal machinery to achieve that objective.<sup>78</sup> Although some states are moving in the direction of “smart growth,” state and local governments as well as the federal government need to move in a more coordinated and decisive way

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<sup>70</sup> *See id.* §§ 7501-7515.

<sup>71</sup> 33 U.S.C. § 1313(c)(2)(A) (2000).

<sup>72</sup> *Id.* § 1251(a)(2).

<sup>73</sup> *See id.* §§ 1313(d), 1314(l).

<sup>74</sup> Robert W. Adler, *Fresh Water*, in *STUMBLING TOWARD SUSTAINABILITY* 208-215 (John C. Dernbach ed. 2002); David M. Driesen, *Air Pollution*, in *STUMBLING TOWARD SUSTAINABILITY*, at 261-64.

<sup>75</sup> *See, e.g.*, Pederson, *supra* note 62, at 177-79 (criticizing Toxics Release Inventory program for lack of goals).

<sup>76</sup> John C. Dernbach, *Synthesis*, in *STUMBLING TOWARD SUSTAINABILITY*, *supra* note 74, at 1, 3.

<sup>77</sup> Robin Kundis Craig, *Oceans and Estuaries*, in *STUMBLING TOWARD SUSTAINABILITY*, *supra* note 74, at 227,254-55.

<sup>78</sup> A. Dan Tarlock, *Biodiversity and Endangered Species*, in *STUMBLING TOWARD SUSTAINABILITY*, *supra* note 74, at 311,319-25.

to ensure sustainable land use.<sup>79</sup> For forestry, on the other hand, the growing use of environmental performance standards—for water quality and endangered species habitat, for instance—appears to be providing substantive environmental goals.<sup>80</sup>

Any serious effort to foster sustainable development thus requires the establishment of clearly defined objectives. For the global level, the National Research Council's 1999 report identifies five key objectives: (1) accelerating fertility reduction so that the world's current population grows only to eight billion by 2050 rather than the nine billion currently projected; (2) providing "adequate water, sanitation, and clean air" for the expected seven billion people who will live in urban areas in 2050, which is two to three times the number of people who now live in urban areas; (3) increasing agricultural productivity in output per hectare by two to three times current productivity levels, on a sustainable basis, by 2050; (4) doubling the historic rate of efficiency improvements for materials and energy use; and (5) restoring and maintaining the functions and integrity of ecosystems that have been dominated by humans, and protecting the least affected ecosystems from land conversion.<sup>81</sup> The Council describes these goals as necessary, ambitious, and achievable by 2050.<sup>82</sup>

The Council's five goals represent an effort to convert the broad goals of sustainable development into achievable program elements. Three of the five are stated in quantitative terms, and the other two (relating to the urban environment and biodiversity) could be converted into quantitative terms.

The EU sustainable development strategy contains more precise objectives for each of its six identified priority areas.<sup>83</sup> The objectives for one priority area are illustrative. For climate change a primary EU objective is reducing greenhouse gas emissions by eight percent below 1990 levels in the time period of 2008-2012, as specified in the Kyoto

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<sup>79</sup> Patricia A. Salkin, *Land Use*, in STUMBLING TOWARD SUSTAINABILITY, *supra* note 74, at 369, 381-84.

<sup>80</sup> Robert L. Fischman, *Forestry*, in STUMBLING TOWARD SUSTAINABILITY, *supra* note 74, at 327, 344.

<sup>81</sup> OUR COMMON JOURNEY, *supra* note 12, at 12-14.

<sup>82</sup> *Id.* at 1-14

<sup>83</sup> European Union Strategy, *supra* note 41, pt. III.

Protocol.<sup>84</sup> Describing Kyoto as only “a first step,” the strategy states that the EU should aim for a one percent annual reduction in greenhouse gas emissions until 2020.<sup>85</sup> It also calls for a tax on energy products by 2002, the creation of a European system for tradable carbon dioxide permits by 2005, and an end to fossil fuel subsidies by 2010.<sup>86</sup> These objectives are in addition to increased research and development concerning renewable energy and more stringent energy conservation standards for buildings and appliances.<sup>87</sup> While these objectives would need to be carried out in each individual country within the EU,<sup>88</sup> they nonetheless provide a concrete set of targets and timetables for addressing climate change.

The establishment of achievable objectives moves the debate from generalizations to specific means of addressing problems. Under the Rio agreements, for example, countries—especially developed countries—are to “reduce and eliminate unsustainable patterns of production and consumption.”<sup>89</sup> According to Agenda 21, “the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries.”<sup>90</sup> This unsustainable pattern has led to proposals to increase the efficiency with which materials and energy are used by factors of four<sup>91</sup> or ten<sup>92</sup> before 2050. These reduction proposals are useful indicators of the

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<sup>84</sup> *Id.* See Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, U.N. Doc. FCCC/CP/197/L.7/Add. (1998), reprinted in 37 I.L.M. 22 [hereinafter Kyoto Protocol]; European Union Strategy, *supra* note 41, pt. III.

<sup>85</sup> European Union Strategy, *supra* note 41, pt. III.

<sup>86</sup> *Id.*

<sup>87</sup> *Id.*

<sup>88</sup> *Id.* pt. 2.

<sup>89</sup> Rio Declaration, *supra* note 6, princ. 8; see Agenda 21, *supra* note 6, ch. 4 (outlining strategies to meet this objective).

<sup>90</sup> Agenda 21, *supra* note 6, ¶ 4.3.

<sup>91</sup> BUSINESS COUNCIL FOR SUSTAINABLE DEV., GETTING ECO-EFFICIENT 10 (1993) (concluding that industrialized countries may need to reduce materials consumption, energy use and environmental degradation by more than ninety percent by 2040 just to maintain overall impacts at current levels).

<sup>92</sup> FACTOR 10 CLUB, CARNOULES DECLARATION (1994), [http://www.factor10.co.uk/carnoules\\_extract.htm](http://www.factor10.co.uk/carnoules_extract.htm) (concluding that resource productivity in industrialized countries needs to increase by more than a factor of ten in the next thirty to fifty years to achieve sustainability).

magnitude of the challenge, but they don't help answer the question of which materials and energy sources should be covered. Is consumption of electricity from windmills the same as consumption of electricity from fossil fuels? Is consumption of nickel or aluminum the same as consumption of sand? Quite plainly, environmental impacts of consumption depend on what is being consumed, and how it was produced.<sup>93</sup> The underlying challenge is understanding the specific types of environmental impacts that consumption creates, and addressing the sources of those impacts directly.<sup>94</sup>

For the production and consumption of energy in developed countries, for example, Lynn Price and Mark D. Levine have suggested that the path toward sustainability can be measured according to three indicators—the efficiency with which energy is used, the percentage of overall energy demand that is met by renewable energy, and the level of carbon dioxide emissions.<sup>95</sup> Policies addressing energy consumption should directly address these issues and should result in greater efficiency, more use of renewables, and lower levels of carbon dioxide.<sup>96</sup> Progress on the first two indicators in fact, is essentially captured by progress on the third.<sup>97</sup> Thus, sustainable production and consumption of energy depends primarily on reducing carbon dioxide emissions from fossil fuels.<sup>98</sup> Put differently, an international or national objective of reducing fossil fuel

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<sup>93</sup> See generally Amit Kapur & Thomas E. Graedel, *Production and Consumption of Materials*, in STUMBLING TOWARD SUSTAINABILITY, *supra* note 74, at 63, 65.

<sup>94</sup> See *id.* (noting broad challenges in the Rio Declaration and Agenda 21 and claiming that “in order to achieve a sustainable pattern of use, a different and specific set of measures and actions are [sic] required”).

<sup>95</sup> Lynn Price & Mark D. Levine, *Production and Consumption of Energy*, in STUMBLING TOWARD SUSTAINABILITY, *supra* note 74, at 79, 85-86. Sustainable use of energy in developing countries may require somewhat different measures, in large part because the severe problems created by burning wood and other organic material in enclosed places. See Amulya K.N. Reddy, *Energy and Social Issues*, in UNITED NATIONS DEVELOPMENT PROGRAMME, WORLD ENERGY ASSESSMENT: ENERGY AND THE CHALLENGE OF SUSTAINABILITY 38, 41-57 (Jose Goldemberg et al. eds., 2000).

<sup>96</sup> See Price & Levine *supra* note 95, at 94-98 (outlining measures to address the three indicators).

<sup>97</sup> *Id.* at 93.

<sup>98</sup> *Id.*

emissions by a specific amount by a specific time (like the EU objective) is also a key means of moving energy production and consumption in a sustainable direction.<sup>99</sup> Absent a technological breakthrough, reducing carbon dioxide emissions requires reducing the use of fossil fuels,<sup>100</sup> particularly fuels like coal, whose burning creates more carbon dioxide emissions than other fossil fuels.<sup>101</sup> Such objectives may raise political problems,<sup>102</sup> but they address the issue directly and precisely.<sup>103</sup>

Such objectives can also help address issues that might otherwise be polarized by competing ideological views. By focusing on carbon dioxide emissions, for instance, decision makers can move away from an abstract discussion of consumption—an ideological and divisive issue. For some, challenges to consumption are also challenges to “the good life” made possible by a high standard of living.<sup>104</sup> Yet for others, challenges to consumption are necessary because gluttony and waste threaten the planet’s future.<sup>105</sup> Obviously, a debate carried on in these terms is not going to be very constructive, or even civil. By focusing on specific objectives, such as carbon dioxide emissions, decision makers can actually reconcile these competing positions; focusing not on consumption itself, but rather on issues, such as forms of production and consumption that adversely affect the environment, that need to be addressed. These positions need to be reconciled, moreover, if we are going to achieve sustainable development.

Targets and timetables provide a way of discussing and deciding how ambitious we want, or need, to be. In the mid-1980s, for example, the

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<sup>99</sup> See *id.* at 94.

<sup>100</sup> See *id.* at 81; see also *Programme*, *supra* note 40, ¶¶ 42-46.

<sup>101</sup> Cf. Reddy, *supra* note 95, at 45 (explaining that fossil fuels, such as coal create more carbon dioxide emissions than electricity and liquified petroleum gas).

<sup>102</sup> See, e.g., *id.* at 46 (noting the differences in energy consumption between industrialized and developing countries).

<sup>103</sup> See *supra* notes 82-88 and accompanying text.

<sup>104</sup> See, e.g., Bradley A. Harsch, *Consumerism and Environmental Policy: Moving Past Consumer Culture*, 26 *ECOLOGY L.Q.* 543, 556-57 (1999) (describing consumption as a function of culture).

<sup>105</sup> Cf. John R.E. Bliese, *Conservative Principles and Environmental Policies*, 7 *KAN. J.L. & PUB. POL'Y* 1, 16 (1998) (claiming that environmental conservationists “have a sacred duty to protect and preserve” the environment).

Pennsylvania legislature debated the merits of a proposed program that would require large- and medium-sized municipalities across the state to establish curbside recycling programs for glass, metal, paper, and plastic.<sup>106</sup> An important issue in that debate was whether the recycling rate goal for that program by January 1, 1997 should be ten percent or twenty-five percent. The latter was eventually chosen<sup>107</sup> because it was more serious, seemed to better correspond to the magnitude of the waste problem, and was achievable, even though it was more difficult than the ten percent goal. When the twenty-five percent goal was later achieved, the state set another, higher goal.<sup>108</sup>

Specific objectives also focus efforts of governmental and nongovernmental actors over the long term.<sup>109</sup> Political and other leaders come and go, but properly established targets and timetables remain in place.<sup>110</sup> Goals are a management tool for focusing the efforts of administrative agencies, corporations and other organizations, and even national governments and the international community. Goals become the basis around which budgets are developed and implemented; personnel are hired and allocated; programs are created, modified, or harmonized; and rewards and punishments are meted out. The recycling goal is the polestar by which Pennsylvania's program has been administered; it is difficult to conceive of the program achieving that recycling rate without the twenty-five percent goal, much less without any goal at all.

Targets and timetables are particularly important when there are many public and private decision makers whose activities need to be

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<sup>106</sup> For a brief early commentary on Pennsylvania's recycling program, see Mark S. Singel, *State Recycling Program Off to a Good Start*, HARRISBURG PATRIOT, Nov. 9, 1989, at A17.

<sup>107</sup> Municipal Waste Planning, Recycling and Waste Reduction Act, 53 PA. CONS. STAT. ANN. § 4000.102(c)(1) (West 1997). See Thomas J. Elliott, *Annual Survey of Significant Developments in the Law: Environmental Law*, 61 PA. B. ASS'N Q. 13, 13-14 (1990) (summarizing the law).

<sup>108</sup> *Lt. Gov. Schweiker Announces 35 Percent Recycling Goal*, ENVTL.PROTECTION UPDATE (Pa.), Oct. 24, 1997, at <http://www.dep.state.pa.us/dep/deputate/polycomm/update/10-24-97/102497u7.htm>.

<sup>109</sup> Cf. Agenda 21, *supra* note 6, chs. 23-32 (describing variety of governmental and nongovernmental actors required for sustainable development).

<sup>110</sup> See NAT'L COMM'N ON THE ENV'T, CHOOSING A SUSTAINABLE FUTURE 47 (1993) (describing how a goal-based strategy lends continuity to environmental policy).

coordinated or, at least, consistent.<sup>111</sup> The breadth of sustainable development, and the broad range of persons, businesses, and governments affected, means this is probably true of all sustainable development objectives. Specificity reduces the likelihood of confusion or misunderstanding about what the objectives are, and thus increases the likelihood that they will be achieved.

Finally, *international* targets and timetables help ensure that individual nations are working together and motivated by a common objective. While national targets and timetables are also necessary, particular countries or groups of countries cannot successfully address global problems such as climate change or the loss of biodiversity by themselves. If some major emitters of greenhouse gases reduce their emissions, and other major emitters don't reduce their emissions, it may be impossible to prevent major climate change. The international cooperation that comes with international targets and timetables may also provide developed countries with opportunities to reduce compliance costs and provide a means for developing countries to receive financial or technical assistance.<sup>112</sup>

### 3. Demonstrating Commitment

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<sup>111</sup> Cf. Bradford C. Mank, *Protecting the Environment for Future Generations*, 5 N.Y.U. ENVTL. L.J. 444, 446-47 (1996) (commenting that agencies are generally not well-suited to address long term problems).

<sup>112</sup> The Kyoto Protocol, for instance, permits developed countries to get some credit toward their emission reduction targets by reducing emissions in other countries. Kyoto Protocol, *supra* note 84, arts. 6, 12, 17. Many international environmental agreements also specifically provide for financial or technical assistance to developing countries to help them comply with requirements under those treaties. See, e.g., United Nations Framework Convention on Climate Change, May 9, 1992, art. 11, S. TREATY DOC. NO. 102-38 (1992), 1771 U.N.T.S. 108, *reprinted in* 31 I.L.M. 849 [hereinafter Framework Convention].

Goals are necessary to measure whether a particular effort succeeds.<sup>113</sup> Targets and timetables also provide a way of measuring progress or lack of progress toward goals.<sup>114</sup> Thus, an agreement to a target and timetable is ordinarily a commitment to achieve it.<sup>115</sup> International environmental law is like an incubator for operationalizing sustainable development at the global or regional level. Within international environmental law, there is a kind of fault line that separates specific goals from all other goals. When a country agrees to adopt a specific goal, it is essentially agreeing to achieve it. For legally binding agreements, the reason is simple; failure to achieve a specific goal or target would put a nation in noncompliance with the agreement.<sup>116</sup> Failure to comply with specific goals in nonbinding agreements subjects a country to political penalties and other repercussions.<sup>117</sup> Quantitative targets are so significant that the United States ratified the Climate Change Convention—because it did not contain quantitative and, therefore, enforceable targets<sup>118</sup>—and filed reservations to portions of Agenda 21 (a nonbinding agreement) that contained a quantitative goal.<sup>119</sup> Thus,

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<sup>113</sup> Pedersen, *supra* note 62, at 178 (“As both popular writers on organizational reform and congressional government reformers have recognized, without generic and operationally significant goals, an agency (or a society) will have no standard by which to measure the success or failure of its efforts.”) (citations omitted).

<sup>114</sup> See Robert M. Sussman, *The Government Performance and Results Act and the Future of the EPA: A Second Look*, 29 *Envtl. L. Rep.* (Envtl. L. Inst.) 10, 347, 10,355 n.57 (1999) (stating that specific goals are required in order to achieve targets).

<sup>115</sup> Cf. Christina S. Chen, Comment, *Persistent Organic Pollutants: Regime Formation and Norm Selection*, 13 *CONN. J. INT’L L.* 119, 148 (1998) (noting that “[t]he best way to ensure active compliance is to make an agreement with specific and verifiable norms”).

<sup>116</sup> See LOUIS HENKIN, *HOW NATIONS BEHAVE: LAW AND FOREIGN POLICY* 54-56 (2d ed. 1979) (describing various repercussions that may result from noncompliance).

<sup>117</sup> See *id.* But cf. Paul R. Williams, *Can International Legal Principles Play a Positive Role in Resolving Central and East European Transboundary Environmental Disputes?*, 7 *GEO. INT’L ENVTL. L. REV.* 421, 425 n.13 (1995) (“[I]t is frequently not clear when a state is in violation of those laws.”).

<sup>118</sup> EXEC. REP. NO. 102-55, at 14-15 (1992) (Senate Foreign Relations Committee Report recognizing that some Committee members “think that additional measures are warranted,” but nonetheless supporting the Convention’s ratification).

<sup>119</sup> *Bureau of Public Affairs, U.S. Dep’t of State, U.S. Statement for the Record on the UNCED Agreements*, DEP’T ST. DISPATCH, Supp. No. 14, July 1992, at 35, 35 (refusing to commit to increasing levels of official development assistance to 0.7 percent of gross

sustainable development goals requiring a specific achievement by a specific date tend to matter more to national governments and the international community. By demonstrating greater commitment, targets and timetables are a way of providing additional credibility to decision makers when they claim to be interested in moving toward sustainability.<sup>120</sup>

#### 4. Giving Operational Meaning to Sustainable Development

Specific environmental and social goals also provide a way of clarifying the real world meaning of sustainable development. Much of the criticism directed toward sustainable development is based on the claim that it has multiple meanings and even, perhaps, no core meaning at all.<sup>121</sup> Sustainable development requires the integration of social, economic, and environmental goals in decision making.<sup>122</sup> But what, specifically, are those social and environmental goals? Providing context-specific answers to that question, for particular economic sectors, natural resources, countries, or the world, would provide a more precise definition of sustainable development. More basically, such goals would provide a way of putting the sustainable development framework into effect.

Another source of ambiguity is the tension between procedural integration and substantive integration, particularly for the environment.<sup>123</sup> At times, Agenda 21 and the other international texts suggest that sustainable development requires the environment to simply be considered in decision making processes (procedural integration), whatever the

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domestic product).

<sup>120</sup> Margot Wallstrom, Conclusions of World Summit on Sustainable Development in Johannesburg (Sept. 25, 2002), at [http://www.europa.eu.int/rapid/start/cgi/guesten.ksh?p\\_action.gettxt=gt&doc=SPEECH/02/422|0|RAPID&lg=EN&display=](http://www.europa.eu.int/rapid/start/cgi/guesten.ksh?p_action.gettxt=gt&doc=SPEECH/02/422|0|RAPID&lg=EN&display=) (stating that the European Union showed “real commitment by setting quantifiable targets, with timetables and monitoring mechanisms” at WSSD).

<sup>121</sup> See, e.g., Atapattu, *supra* note 8, at 271; Bailey, *supra* note 8, at 1162; McIver, *supra* note 8 at 162-63.

<sup>122</sup> John C. Dernbach, *Sustainable Development: Now More Than Ever*, in STUMBLING TOWARD SUSTAINABILITY, *supra* note 74, at 45.[hereinafter Dernbach, *Now More Than Ever*]

<sup>123</sup> See *id.* at 51-53.

substantive outcome.<sup>124</sup> At other times, the same texts suggest that sustainable development requires not simply consideration of the environment, but also the achievement of substantive environmental goals.<sup>125</sup> Because the transition to a sustainable society is likely to take at least two generations (or fifty years),<sup>126</sup> and because the substantive goals required for sustainability are in many cases extremely challenging, it is tempting to describe procedural integration as sustainable development.<sup>127</sup> Specific, substantive environmental and social targets and timetables can correct that tendency by providing a precise method for assessing claims that particular activities are sustainable, and for measuring progress (or lack of progress) in achieving sustainable development. In that way, specific targets and timetables can give credibility, or added credibility, to sustainable development.

Targets and timetables, however, are not a substitute for the conceptual framework provided by sustainable development. In fact, such goals can and should be measured against the framework, as set forth in the agreed international texts for sustainable development, including Agenda 21 and relevant treaties. In addition, such goals can and should be evaluated by the likelihood that they will achieve the purposes of sustainable development—reversing environmental degradation, reducing poverty, and reducing the gap between rich and poor.<sup>128</sup> Still, targets and timetables, if properly established, provide a specific and measurable way of putting the conceptual framework into effect.

## 5. Clarifying the Role of Law

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<sup>124</sup> *Agenda 21*, *supra* note 6, ¶¶ 8.5-8.6 (calling for environmental impact assessments); *See* Rio Declaration, *supra* note 6, princ. 17. For additional discussion, *see* Dernbach, *Now More Than Ever*, *supra* note 122, at 52.

<sup>125</sup> *See e.g.*, Rio Declaration, *supra* note 6, at princ. 11 (calling for the enactment of environmental legislation by the States); Dernbach, *Now More Than Ever*, *supra* note 122, at 53.

<sup>126</sup> *See supra* note 44 and accompanying text.

<sup>127</sup> *See* Dernbach, *Now More Than Ever*, *supra* note 122, at 52 (explaining that procedural integration can be a fallback, but that sustainable development requires substantive environmental protection).

<sup>128</sup> *Cf.* NAT'L COMM'N ON THE ENV'T, *supra* note 110, at 1 (stating that the national goals of sustainable development are “economic growth and environmental improvement”).

Specific objectives are helpful because they clarify the role of legal and policy instruments. In general, legal and policy instruments provide a means of achieving specific objectives; the instruments themselves are not the ends. As obvious as that sounds, a major problem with the environmental debate in the United States is the extent to which specific legal instruments have become associated with specific positions and objectives. All too often, regulatory reinvention debates in the United States are about economic instruments versus environmental regulation, with relatively little specific discussion of other instruments.<sup>129</sup> These debates often sound like, and are, debates about less environmental protection versus more environmental protection, even though specific and substantive environmental goals are often not discussed. The means, in other words, are all too often a stand-in for some unstated environmental objective. This is an extremely confusing and unhelpful way to proceed, and yet it happens all the time. When we can agree on substantive environmental goals, it becomes reasonably clear that the cheapest, most effective instruments will do just fine, regardless of what they are.<sup>130</sup> Successful implementation is more likely if decision makers are willing to be both creative and flexible in understanding what legal and policy tools are available, and in choosing the right mix of laws and policies for their particular purposes.

## 6. Achieving Long-Term Objectives Through Interim Goals

Achieving sustainable development is not a short-term objective. The National Research Council's conclusion that a transition to sustainability is possible by 2050<sup>131</sup> is a daunting statement about the

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<sup>129</sup> For discussion of recent examples of such debates, see Jonathan Z. Cannon, *EPA and Congress (1994 - 2000): Who's Been Yanking Whose Chain?*, 31 *Envtl. L. Rep. (Envtl. L. Inst.)* 10,942 (2001); Thomas O. McGarity, *Deflecting the Assault: How EPA Survived a "Disorganized Revolution" by "Reinventing" Itself a Bit*, 31 *Envtl. L. Rep. (Envtl. L. Inst.)* 11,249 (2001).

<sup>130</sup> See Kenneth R. Richards, *Framing Environmental Policy Instrument Choice*, 10 *DUKE ENVTL. L. & POL'Y F.* 221, 222 (2000) ("In an ideal world, [Congress] would employ those instruments that will allow the government to meet its goals at the lowest possible cost subject to external constraints.").

<sup>131</sup> OUR COMMON JOURNEY, *supra* note 12, at 6-7.

length of the journey. This two-generation period is a realistic time frame within which to set targets, attempt to change course, and measure success or failure. Yet many environment and development stresses will become much more challenging in this period.<sup>132</sup> As already noted, moreover, a transition toward sustainability is not the same thing as sustainability itself. Achieving this transition would mean that, by 2050, the world would be in the midst of a “gradual and continuous” shift from an unsustainable society to a sustainable society.<sup>133</sup>

While long-term objectives are important, they are fraught with many difficulties. The obstacles they would overcome appear to be, and often are, extremely challenging. As a result, they can dissuade people from even trying to achieve them. Long-term objectives can also seem so ambitious as to suggest that sustainable development is impossible. In addition, long-term objectives are often beyond the time range that decision makers are even willing to consider—beyond their retirement date, beyond their political term of office, and beyond the immediate problems they confront on a daily or weekly basis. For many issues, too, we do not have a very good idea of what the final sustainable development objective should be. The purpose of the United Nations Framework Convention on Climate Change, for instance, is “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic [human caused] interference with the climate system.”<sup>134</sup> No one is particularly sure what that level is.

Interim or short-term goals are a way of addressing these difficulties. They divide a larger problem into smaller and (if the interim goals are properly set) achievable pieces. They also help steer society in a general direction even if the precise destination is not yet known. Thus, the goal-setting process can result in interim goals, whether or not long-term targets and timetables are also established. Interim goals also provide an answer to the claim that sustainable development is impossible. By achieving discrete goals, we can learn better how to address specific

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<sup>132</sup> *Id.* at 3. On the other hand, this period “inevitably de-emphasizes obstacles that become severe only over the longer run.” *Id.*

<sup>133</sup> *Id.* at 59.

<sup>134</sup> Framework Convention, *supra* note 112, art. 2.

problems and gain the confidence and experience necessary to build on initial achievements.

### C. *Implementing Mechanisms*

Targets and timetables are useful only if they are effectively implemented—if the targets and timetables are actually achieved.<sup>135</sup> Monitoring and public reporting of progress (or lack of progress) toward targets and timetables is one way to help ensure that they are met. Legal mechanisms to ensure compliance are also important, and it is far from clear that political commitments are an effective substitute for such mechanisms.

#### 1. Monitoring and Public Reporting

A widely recognized means of inducing desired environmental outcomes is to require and publicly report information about specific activities.<sup>136</sup> Public reporting of releases of toxic chemicals into the environment is required under the Emergency Planning and Community Right-to-Know Act in the United States, for instance, even though the releases themselves are likely to be legal.<sup>137</sup> Public reporting of these releases has led companies to significantly reduce the amount of these chemicals released into the environment.<sup>138</sup> As a consequence, the implementation of goals should be accompanied by an effort to gather and publicly disclose information that measures progress in meeting goals.<sup>139</sup>

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<sup>135</sup> Targets and timetables are also useful if they result in a better state of affairs than would otherwise have occurred, even if they are not met. See *infra* note 146 and accompanying text. Still, even partial success requires some effectiveness in implementation.

<sup>136</sup> See generally Bradley C. Karkkainen, *Information as Environmental Regulation: TRI and Performance Benchmarking, Precursor to a New Paradigm?*, 89 GEO. L.J. 257 (2001).

<sup>137</sup> 42 U.S.C. § 11,023 (2000).

<sup>138</sup> Lynn Goldman, *Toxic Chemicals and Pesticides*, in STUMBLING TOWARD SUSTAINABILITY, *supra* note 74, at 403, 415-16.

<sup>139</sup> More generally, the establishment of goals as well as adequate implementing mechanisms requires public involvement. Rio Declaration, *supra* note 6, princ. 10 (stating the importance to sustainable development of public participation, public information, and access to justice). See also THE NEW "PUBLIC": THE GLOBALIZATION OF PUBLIC PARTICIPATION (Carl Bruch

Specific goals, including public reporting of data concerning success or failure in achieving goals, also provide a basis for resisting efforts to undermine those goals by weakening implementation.<sup>140</sup>

## 2. Legal vs. Political Commitments

The appeal of placing targets and timetables into international treaties is undeniable. The ratification process for a treaty, by which individual countries agree to be bound under international law by its provisions, helps ensure that countries take the commitments contained in the treaty seriously and have the domestic legal means of implementing it.<sup>141</sup> Beyond that, a treaty may contain any number of mechanisms to enhance the likelihood of compliance. These include regular meetings of the conference of the parties; the use of technical bodies to resolve scientific, technical, financial, and other issues; the required use of dispute resolution mechanisms; procedural mechanisms to encourage parties to come into compliance; financial assistance to developing countries to assist their compliance; and even trade restrictions and sanctions.

The challenge of international targets and timetables is that nations may be unwilling to agree to be bound by them under international law, and usually are. Benchmarks or measurable standards of environmental performance are used on only a limited basis in international environmental law.<sup>142</sup> The relatively recent adoption of framework conventions for biodiversity, climate, desertification, stratospheric ozone, and other problems masks the reality that only one of these conventions—stratospheric ozone—has resulted in effective and widespread use of targets and timetables.

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ed., 2002); ELENA PETKOVA ET AL., *WORLD RES. INST., CLOSING THE GAP: INFORMATION, PARTICIPATION, AND JUSTICE IN DECISION-MAKING FOR THE ENVIRONMENT* (2002).

<sup>140</sup> Cf. Pedersen, *supra* note 62, at 179 (“[L]ack of goals helps perpetuate captivity of [government] agencies to interest group pressure.”).

<sup>141</sup> INTERNATIONAL ENVIRONMENTAL TREATY MAKING (Lawrence E. Susskind et al. eds., 1992).

<sup>142</sup> Richard W. Parker, *Choosing Norms to Promote Compliance and Effectiveness: The Case for International Environmental Benchmark Standards*, in INTERNATIONAL COMPLIANCE WITH NONBINDING ACCORDS 145, 157-58 (Edith Brown Weiss ed., 1998).

Targets and timetables contained in other agreements, particularly plans of action adopted at international conferences, tend to lack most of these compliance-inducing mechanisms. Ordinarily, these conferences or meetings result in goals, an action plan to achieve those goals, and perhaps a statement of principles. The lack of a treaty structure makes it impossible to induce compliance through any kind of required procedure, and thus such mechanisms are not used.<sup>143</sup> While it is true that nations negotiate such agreements, and give their assent to these agreements at conferences, they are not subject to a ratification process and are not legally binding. They are “soft law,” not “hard” or real law. Their effect, if they have one, is primarily political, not legal.<sup>144</sup> Still, there are reasons to believe that nonbinding agreements may work to some degree. As already suggested, the precision of even nonbinding targets and timetables sets them apart from general goals or goals without timetables. Targets and timetables are likely to have greater political importance than vaguer objectives because it is possible to determine whether the targets have been achieved or not.<sup>145</sup> Internationally-established targets and timetables can also be a focal point for international cooperation even when these targets and timetables are not legally binding. Targets and timetables directed at poverty, for instance, appear to have had some positive effect in reducing global poverty.<sup>146</sup>

Finally, whether binding or nonbinding, the achievement of targets and timetables ordinarily requires some kind of institutional mechanism to monitor and ensure compliance.<sup>147</sup> For a treaty, this is likely to be the secretariat or administrative body for the treaty. For nonbinding

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<sup>143</sup> See *infra* Part III. B.

<sup>144</sup> Pierre-Marie Dupuy, *Soft Law and the International Law of the Environment*, 12 MICH. J. INT'L L. 420 (1991).

<sup>145</sup> See Geoffrey Palmer, *New Ways to Make International Environmental Law*, 86 AM. J. INT'L L. 259, 269-70 (1992).

<sup>146</sup> OUR COMMON JOURNEY, *supra* note 13, at 38-40; DEV. ASSISTANCE COMM., ORG. FOR ECON. COOPERATION AND DEV., SHAPING THE 21ST CENTURY: THE CONTRIBUTION OF DEVELOPMENT CO-OPERATION 7-8 (1996), at <http://www.oecd.org/pdf/M000033000/M00003334.pdf> [hereinafter DEV. ASSISTANCE COMM] .

<sup>147</sup> Cf. A. Dan Tarlock, *Ideas Without Institutions: The Paradox of Sustainable Development*, 9 IND. J. GLOBAL LEGAL STUD. 35 (2001) (analyzing difficulty of translating sustainable development into reality without supportive laws and institutions).

agreements, there often exist agreements to meet again in five years to discuss progress, and a United Nations body may be obliged to monitor and report on efforts in the meantime.

### III. EXISTING INTERNATIONAL TARGETS AND TIMETABLES

As a practical and legal matter, two sets of international targets and timetables exist. One exists in treaties and protocols to those treaties and is thus “hard” international law. The other exists principally in nonbinding agreements reached at international conferences and is thus “soft” international law.

#### A. “Hard” Targets and Timetables—Multilateral Environmental Agreements

Some global environmental agreements include environmental requirements or prohibitions that took effect at more or less the same time that the agreement went into effect.<sup>148</sup> Many more contain no environmental standard that is specific enough for compliance to be measured or judged.<sup>149</sup> Only a few contain longer-term targets and timetables. The most prominent of these, the Montreal Protocol and the Kyoto Protocol, focus on specific chemicals.<sup>150</sup> Specific targets for reducing or eliminating the production of particular ozone-depleting chemicals exist under the Montreal Protocol and various amendments to that protocol. For developed countries, the 1987 Montreal Protocol and its amendments require percentage reductions in production of specific ozone-depleting substances by particular future dates.<sup>151</sup> In general,

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<sup>148</sup> See generally, Parker, *supra* note 142.

<sup>149</sup> *Id.*

<sup>150</sup> Another similar agreement, which has not yet entered into force, is the Stockholm Convention on Persistent Organic Pollutants, May 22, 2001, U.N. Doc. UNEP/POPS/CONF/4 App.II (2001), *reprinted in* 40 I.L.M. 532 (2001). For an overview of this agreement, see Joel A. Mintz, *Two Cheers For Global POPs: A Summary and Assessment of the Stockholm Convention on Persistent Organic Pollutants*, 14 GEO. INT'L ENVTL. L. REV. 319 (2001).

<sup>151</sup> Montreal Protocol on Substances that Deplete the Ozone Layer, Sept. 16, 1987, art. 2, S. TREATY DOC. NO. 100-10, *reprinted in* 26 I.L.M. 1541, 1552 (1987).

developing countries get ten additional years to meet these deadlines.<sup>152</sup> As the Montreal Protocol has been amended over the years more substances have become subject to targets and timetables, and existing targets and timetables have become more stringent.<sup>153</sup> The Montreal Protocol is widely regarded as a success story in international environmental law because the targets and timetables set in the agreement and its amendments have been met, and because the concentration of ozone-depleting substances in the atmosphere appears to have been reduced.<sup>154</sup> The specificity of the agreement, its legal status, and the mechanisms contained in the agreement to foster compliance are all part of the explanation for this success.

A second agreement is the Framework Convention on Climate Change,<sup>155</sup> which creates an international legal framework for the purpose of stabilizing greenhouse gas concentrations “at a level that would prevent dangerous anthropogenic [human caused] interference with the climate system.”<sup>156</sup> Among other things, developed countries and countries in transition to a market economy agreed to “the aim of” reducing their greenhouse gas emissions to 1990 levels by 2000.<sup>157</sup> In 1997, at their annual meeting in Kyoto, Japan, the parties signed a protocol containing binding greenhouse gas emission limits for developed countries.<sup>158</sup> The Kyoto Protocol substitutes a target and timetable for the soft goal set in the Convention. Under the Kyoto Protocol, developed countries agreed to reduce their net emissions of six specific greenhouse gases by at least five percent from 1990 levels by 2008-2012.<sup>159</sup> The Protocol contains

<sup>152</sup> *Id.* art. 5.

<sup>153</sup> See DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 554-55 (2d ed. 2002).

<sup>154</sup> See, e.g., Barbara K. Bucholtz, *Coase and the Control of Transboundary Pollution: The Sale of Hydroelectricity Under the United States-Canada Free Trade Agreement of 1988*, 18 B.C. ENVTL. AFF. L. REV. 279, 281-91 (1991); Elizabeth R. DeSombre, *The Experience of the Montreal Protocol: Particularly Remarkable, and Remarkably Particular*, 19 UCLA J. ENVTL. L. & POL'Y 49 (2000)

<sup>155</sup> Framework Convention, *supra* note 112.

<sup>156</sup> *Id.* art. 2.

<sup>157</sup> *Id.* arts. 4.2(a), 4.2(b). Countries also agreed to inventory their greenhouse gas emissions and report that inventory to the conference of the parties. *Id.* art. 4.1(a).

<sup>158</sup> Kyoto Protocol, *supra* note 84.

<sup>159</sup> *Id.* art. 3.1. The Annex I or developed countries also agreed to make “demonstrable

somewhat different commitments for individual developed countries; the United States commitment is seven percent below 1990 levels.<sup>160</sup> No comparable commitment is included for developing countries. As the text of the Protocol acknowledges, this reduction is only a first step; the Conference of the Parties is to begin discussing commitments for subsequent periods by 2005.<sup>161</sup> According to the Intergovernmental Panel on Climate Change, much greater reductions are needed to stabilize atmospheric concentrations of greenhouse gases at current levels, or even at higher levels.<sup>162</sup> This conclusion, moreover, applies to emissions from both developed and developing countries.<sup>163</sup> In 2001, parties to the Climate Change Convention agreed to a set of detailed rules for implementing the Kyoto Protocol.<sup>164</sup> Also in 2001, President George W. Bush announced that the United States would not become a party to the Kyoto Protocol.<sup>165</sup> Still, in the fall of 2002, it appeared that the Kyoto Protocol would take effect even without United States participation.<sup>166</sup>

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progress” by 2005 in meeting their commitments. *Id.* art. 3.2. The developed countries in Annex I generally include the members of the Organization for Economic Cooperation and Development as well as a number of countries that are undergoing a transition to a market economy, such as the Russian Federation, Poland, Ukraine, the Czech Republic, and Slovakia. *Id.* annex B.

<sup>160</sup> Kyoto Protocol, *supra* note 84, annex B.

<sup>161</sup> *Id.* art. 3.9 (requiring discussion to begin seven years before the end of the “first commitment period” in art 3.7, or seven years before 2012).

<sup>162</sup> See Tsuneyuki Morita and John Robinson, *Greenhouse Gas Emission Mitigation Scenarios and Implications*, in CLIMATE CHANGE 2001: MITIGATION 115, 152-53 (Bert Metz et al. eds., 2001).

<sup>163</sup> *Id.* at 152-56.

<sup>164</sup> These rules, known as the Marrakesh Accords, are contained in three volumes. See Conference of the Parties, United Nations Framework Convention on Climate Change, Report of the Conference of the Parties on its Seventh Session, Held at Marrakesh from 29 October to 10 November 2001, Addendum Vol. I, FCCC/CP/2001/13/Add.1 (2002), <http://unfccc.int/resource/docs/cop7/13a01.pdf>; Addendum Vol. II, FCCC/CP/2001/12/Add.2 (2002), <http://unfccc.int/resource/docs/cop7/13a02.pdf>; & Addendum Vol. III, FCCC/CP/2001/13/Add.3 (2002), <http://unfccc.int/resource/docs/cop7/13a03.pdf>.

<sup>165</sup> See, e.g., Roberta Mann, *Waiting to Exhale? Global Warming and Tax Policy*, 51 AM. U. L. REV. 1135, 1147-62 (2002); Sean D. Murphy, *Contemporary Practice of the United States Relating to International Law*, 96 AM. J. INT’L L. 461 (2002).

<sup>166</sup> Wallstrom, *supra* note 120.

B. *“Soft” Targets and Timetables*

Targets and timetables have also, and more frequently, been established in international agreements at major conferences or at United Nations (“UN”) General Assembly meetings. These include, but are certainly not limited to, conferences that focus on environment or sustainable development; in fact, many relevant targets and timetables are missed by focusing on the environment alone. Unlike the targets and timetables contained in treaties, targets and timetables agreed at international conferences are not legally binding. However, a review of such agreements since 1990 suggests that these agreements are becoming both more numerous and more realistic. It also suggests that it is harder to reach ambitious agreements on environmental targets and timetables than on targets and timetables that are more traditionally labeled as social.

1. International Conferences of the Early and Mid-1990s

A series of conferences in the 1990s, focusing variously on education, children, environment, human rights, population, social development, and women, resulted in a series of targets and timetables for meeting human needs. The plan of action adopted at the 1990 World Summit for Children,<sup>167</sup> for instance, includes a series of goals for the year 2000, including universal access to safe drinking water, universal access to sanitary means of human waste disposal, reducing “severe and moderate malnutrition among under-5 children by one half of 1990 levels,”<sup>168</sup> reducing maternal mortality rates to half of 1990 levels, reducing under-five child mortality rates by one-third of 1990 levels, reducing adult illiteracy to half of 1990 levels, and completion of primary school by eighty percent of children.<sup>169</sup> In 1995, at the World Summit on Social Development, countries agreed to eradicate poverty through a

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<sup>167</sup> World Summit for Children, Plan of Action for Implementing the World Declaration on the Survival, Protection and Development of Children in the 1990s (1990), <http://www.unicef.org/wsc/plan.htm>.

<sup>168</sup> *Id.* ¶ 5.

<sup>169</sup> *Id.*

variety of measures, although countries did not set a date for doing so.<sup>170</sup> At the World Food Summit in 1996, the international community agreed to reduce “the number of undernourished people to half their present level no later than 2015.”<sup>171</sup> Additional conferences set goals for housing, employment, and other issues concerning human needs.<sup>172</sup>

Agenda 21, the plan of action that emerged from the 1992 Earth Summit, reaffirms prior commitments from the World Summit for Children and other agreements.<sup>173</sup> Agenda 21 specifies a broad range of actions for sustainable development that need to be undertaken by governmental and nongovernmental actors for virtually all natural resources and economic sectors.<sup>174</sup> It does not, however, contain any new targets or timetables for environment of the kind described above for health, hunger, or education.<sup>175</sup> The UN Commission on Sustainable Development was established to review progress in implementing Agenda 21 at the national level, to enhance the dialogue concerning sustainable development, and to make “appropriate recommendations to the General Assembly.”<sup>176</sup> It has been neither willing nor able to develop or recommend targets and timetables for environmental matters.<sup>177</sup> In 1997, at its five-year review of progress since the Earth Summit, the General Assembly added one time-bound objective. By 2002, “the formulation and

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<sup>170</sup> Programme of Action of the World Summit on Sustainable Development, in World Summit for Social Development, Report of the World Summit for Social Development, Copenhagen, 6-12 March 1995, U.N. Doc. No. A/CONF.166/9 (1995), <http://www.un.org/esa/socdev/docs/summit.pdf>.

<sup>171</sup> World Food Summit, Rome Declaration on World Food Security (1996), at <http://www.fao.org/docrep/003/w3613e/w3613e00.htm>. In 2001, the international community renewed that commitment. Declaration of the World Food Summit: Five Years Later, <http://www.fao.org/DOCREP/MEETING/005/Y7106E/Y7106E09.htm#TopOfPage>.

<sup>172</sup> OUR COMMON JOURNEY, *supra* note 12, at 39 (summarizing targets for human needs established at various conferences).

<sup>173</sup> See, e.g., Agenda 21, *supra* note 6, ¶ 6.12.

<sup>174</sup> See generally *id.*

<sup>175</sup> *Id.*

<sup>176</sup> *Id.* ¶¶ 38.13(a), (e), (g).

<sup>177</sup> *Framework*, *supra* note 1, at 34 (describing CSD’s 1995 recommended ban on leaded gasoline, without a specified date, as a partial exception).

elaboration of national strategies for sustainable development . . . should be completed in all countries.”<sup>178</sup>

2. Organization for Economic Cooperation and Development's *Shaping the 21st Century* Report

In 1996, the Development Assistance Committee of the Organization for Economic Cooperation and Development (“OECD”) issued a report entitled *Shaping the 21st Century: The Contribution of Development Co-operation*.<sup>179</sup> This report has had a seminal effect on the development and implementation of international targets and timetables.<sup>180</sup> The report states that a “higher quality of life for all people is the goal of sustainable development.” While many goals have been established at international conferences, “a few specific goals will help to clarify the vision of a higher quality of life for all people, and will provide guideposts against which progress toward that vision can be measured.”<sup>181</sup> Toward that end, the report proposes a global partnership directed at six goals, which it states are both important in their own right and useful proxies for other developmental goals.<sup>182</sup> While these goals are ambitious, the report states that they are also achievable:<sup>183</sup>

Economic well-being:

- a reduction by one-half in the proportion of people living in extreme poverty by 2015.

Social development:

- universal primary education for all countries by 2015;

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<sup>178</sup> *Programme*, *supra* note 40, ¶ 24(a).

<sup>179</sup> DEV. ASSISTANCE COMM., ORG. FOR ECON. CO-OPERATION AND DEV., *SHAPING THE 21ST CENTURY: THE CONTRIBUTION OF DEVELOPMENT CO-OPERATION* (1996), *available at* <http://www.oecd.org/pdf/M00003000/M00003334.pdf>.

<sup>180</sup> James Gustave Speth, *Development Assistance and Poverty*, in *STUMBLING TOWARD SUSTAINABILITY*, *supra* note 74, at 163, 170.

<sup>181</sup> DEV. ASSISTANCE COMM., *supra* note 146, at 9.

<sup>182</sup> *Id.* at 9.

<sup>183</sup> *Id.* at 2.

- demonstrated progress toward gender equality and the empowerment of women by eliminating gender disparity in primary and secondary education by 2005;
- a reduction by two-thirds in the mortality rates for infants and children under age five and a reduction by three-fourths in maternal mortality, all by 2015;
- access through the primary health care system to reproductive health services for all individuals of appropriate ages as soon as possible and no later than the year 2015.

Environmental sustainability and regeneration:

- the current implementation of national strategies for sustainable development in all countries by 2005, so as to ensure that current trends in the loss of environmental resources are effectively reversed at both global and national levels by 2015.<sup>184</sup>

The economic goal for reducing extreme poverty by half by 2015 is

both less ambitious and more ambitious than the 1995 goal of eradicating all poverty; it would only reduce extreme poverty by half, but a time period is specified. The social development goals are similar to those stated in earlier international agreements, except that the 2015 date is almost a generation later than the previously stated 2000 goal.<sup>185</sup> The environmental target, OECD explains, is based on the Earth Summit understanding that economic and social progress “depends critically on the preservation of the natural resource base and limitation of environmental degradation.”<sup>186</sup> Thus, the environmental target is explained as deriving from the Earth Summit agreements, including Agenda 21,<sup>187</sup> even though it is nowhere stated in Agenda 21 or other Earth Summit agreements. The report emphasizes that these targets and timetables cannot be achieved without the simultaneous achievement of less

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<sup>184</sup> *See id.*

<sup>185</sup> *Id.* at 10.

<sup>186</sup> *Id.* at 11.

<sup>187</sup> DEV. ASSISTANCE COMM., *supra* note 146, at 11.

measurable objectives—“more stable, safe, participatory and just societies,”<sup>188</sup> including “capacity development for effective, democratic and accountable governance, the protection of human rights and respect for the rule of law.”<sup>189</sup>

Much of the importance of this report derives from its authors. The OECD represents the developed countries, and the Development Assistance Committee’s member countries provide roughly \$60 billion annually in official development assistance.<sup>190</sup> Thus, the report states goals that developed countries appeared to be willing to support financially.<sup>191</sup> In 2000, the World Bank, International Monetary Fund, OECD, and the Secretary-General of the United Nations endorsed these goals.<sup>192</sup>

### 3. Millennium Declaration

In late 2000, “at the dawn of a new millennium,”<sup>193</sup> the UN General Assembly adopted a resolution setting forth “key objectives.”<sup>194</sup> These objectives fall into broad categories: security, development, environment, human rights, democracy and good governance, protection for children and other vulnerable people, meeting Africa’s needs, and strengthening the United Nations.<sup>195</sup> With two principal exceptions, these objectives are stated in qualitative terms. For development and poverty

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<sup>188</sup> *Id.* at 2.

<sup>189</sup> *Id.*

<sup>190</sup> *Id.* at 6

<sup>191</sup> The report also said that these objectives are “only a proposal of what we as donors consider to be helpful measures of progress,” *id.* at 9, and emphasized the importance of partnerships as well as developing country “ownership” of both goals and strategies to achieve them, *id.* at 13-17.

<sup>192</sup> UNITED NATIONS ET AL., 2000: A BETTER WORLD FOR ALL: PROGRESS TOWARD THE INTERNATIONAL DEVELOPMENT GOALS 3 (2000), [http://www.paris21.org/betterworld/pdf/bwa\\_e.pdf](http://www.paris21.org/betterworld/pdf/bwa_e.pdf).

<sup>193</sup> G.A. Res. 55/2, U.N. GAOR ¶¶ 1 & 7, U.N. Doc. A/RES/55/2 (2000), <http://www.un.org/millennium/declaration/ares552e.pdf>.

<sup>194</sup> *Id.*

<sup>195</sup> *Id.*

eradication, however, the Millennium Declaration sets out specific targets and timetables:

- to halve by 2015, “the proportion of the world’s people whose income is less than one dollar a day;”
- to halve by 2015 “the “proportion of people who suffer from hunger;”
- to halve by 2015 “the proportion of people who are unable to reach or to afford safe drinking water;”
- to ensure that by 2015 “children everywhere, boys and girls alike, will be able to complete a full course of primary schooling and that girls and boys will have equal access to all levels of education;”
- to reduce “maternal mortality by three-quarters” of its 2000 rate by 2015, and to reduce “under-five child mortality by two-thirds” of its 2000 rate by 2015;
- to halt and have begun to reverse, by 2015, “the spread of HIV/AIDS, the scourge of malaria and other major diseases that afflict humanity;”
- to “provide special assistance to children orphaned by HIV/AIDS;”
- to achieve “a significant improvement in the lives of at least 100 million slum dwellers” by 2020.<sup>196</sup>

For the environment, the Declaration contains one target and

timetable: “To make every effort to ensure the entry into force of the Kyoto Protocol, preferably by the tenth anniversary” of the 1992 Earth Summit.<sup>197</sup>

OECD’s *Shaping the 21st Century* report had a considerable effect on the Declaration, but the General Assembly deleted some objectives and added others. Four of the six goals stated in that report are contained, in similar or identical form, in the Millennium Declaration: poverty reduction, education, gender equality in education, and reversing maternal

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<sup>196</sup> *Id.* ¶ 19.

<sup>197</sup> *Id.* ¶ 23.

and child mortality.<sup>198</sup> Two goals were omitted: access to reproductive health services and reversal of current negative environmental trends.<sup>199</sup> In their stead, five new targets and timetables were added. These are reducing hunger, reversing the spread of HIV/AIDS and other major diseases, assisting children orphaned by HIV/AIDS, improving the lives of slum dwellers, and attempting to ensure that the Kyoto Protocol goes into effect in 2002.<sup>200</sup>

The Millennium Declaration thus increased the number of goals, and expanded and increased the ambitiousness of the social goals, but reduced the ambitiousness of the environmental goals.<sup>201</sup>

#### 4. Doha and Monterrey

Trade and foreign assistance are essential ingredients for sustainable development. The World Trade Organization's ministerial meeting in Doha, Qatar in November 2001 and the International Conference on Financing for Development in Monterrey, Mexico in March 2002 resulted in agreements that also influenced outcomes in Johannesburg.<sup>202</sup>

The ministerial declaration that emerged from Doha, which is widely viewed as moving international trade negotiations closer to the

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<sup>198</sup> *Id.*

<sup>199</sup> *Id.*

<sup>200</sup> G.A. Res. 55/2, *supra* note 192.

<sup>201</sup> The interaction between social and environmental goals requires a caveat here. Access to reproductive health services (which was not included in Millennium Declaration) is more than a social objective; it also is an effective means of reducing population growth. Access to clean drinking water (which was included) is more than a human development issue; it also requires a higher degree of water quality protection. Still, the overall effect of the Millennium Declaration is to increase attention to reducing poverty and reduce attention to environmental improvement.

<sup>202</sup> Ministerial Declaration, Nov. 14, 2001, WT/MIN(01)/DEC/1 (Nov. 20, 2001), at [http://www.wto.org/english/thewto\\_e/minist\\_e/min01\\_e/mindecl\\_e.pdf](http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.pdf) [hereinafter Ministerial Declaration]; UNITED NATIONS, REPORT ON THE INTERNATIONAL CONFERENCE ON FINANCING FOR DEVELOPMENT, MONTERREY, MEXICO, 18-22 MARCH 2002, U.N. Doc. A/CONF.198.11, U.N. Sales No. E.02.II.A.7 (2002), at <http://daccess-ods.un.org/doc/UNDOC/GEN?N02?392/67/PDF/N0239267.pdf> [hereinafter MONTERREY REPORT].

interests and needs of developing countries,<sup>203</sup> sets a different type of target and timetable. It commits countries to negotiations on nineteen specified issues, which are scheduled to conclude January 1, 2005.<sup>204</sup> These issues include trade distorting agricultural subsidies, intellectual property rights when developing countries need access to patented drugs to combat public health crises, reductions in fisheries subsidies, and “enhancing the mutual supportiveness of trade and environment.”<sup>205</sup> These are different from the targets in the Millennium Declaration because, while there is certainly a timetable for concluding negotiations, they are simply issues to be discussed or general objectives.<sup>206</sup>

At the Monterrey Conference on Financing for Development, countries agreed that there were already “dramatic shortfalls in resources required” for the Millennium Declaration goals established less than two years earlier, as well as other internationally agreed goals.<sup>207</sup> They called on developed countries that provide relatively little official development assistance (“ODA”) to “make concrete efforts towards the target of 0.7 per cent of gross national product (“GNP”) as ODA to developing countries.”<sup>208</sup> Countries also agreed to make ODA more effective.<sup>209</sup> Recognizing that ODA by itself is not a sufficient basis for development, countries also made a number of commitments to sound governance as well as trade with, and direct investment in, developing countries.<sup>210</sup> Finally, countries agreed to support a “global information campaign” that includes an annual report on financing for, and progress in achieving, the

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<sup>203</sup> *But see* Raj Bhala, *Poverty, Islam, and Doha: Unmet Challenges Facing American Trade Law*, 36 INT’L LAW. 159 (2002) (arguing that the conventional wisdom about Doha is wrong because the United States, the world’s dominant trading nation, failed to create a consensus among developing countries on behalf of trade liberalization and failed to persuasively link trade liberalization with greater peace and security through better ties to Islamic countries).

<sup>204</sup> Ministerial Declaration, *supra* note 202, ¶ 45.

<sup>205</sup> *Id.*

<sup>206</sup> On the other hand, successful negotiations would likely lead to legally binding rules under the auspices of the World Trade Organization.

<sup>207</sup> MONTERREY REPORT, *supra* note 202, ¶ 2.

<sup>208</sup> *Id.* ¶ 42. It also calls on such developed countries to contribute 0.15 to 0.20 percent of GNP to least developed countries. *Id.*

<sup>209</sup> *Id.* ¶ 43.

<sup>210</sup> *Id.* ¶¶ 10-38.

Millennium Declaration goals as well as other internationally agreed development goals.<sup>211</sup> As a result of Monterrey, many countries increased their ODA commitments.<sup>212</sup>

## 5. Johannesburg Plan of Implementation

The purpose of the WSSD was to review actions taken to foster sustainable development in the ten years since the Earth Summit, to reinvigorate efforts to achieve sustainable development, and to “focus on action-oriented decisions in areas where further efforts are needed.”<sup>213</sup> Thus, the idea was not to renegotiate Agenda 21, the Earth Summit plan of action, but to make further progress in implementing it. The Plan of Implementation agreed to at the WSSD is the principle negotiated document for doing so.<sup>214</sup> More than 30 targets and timetables are contained in the Plan of Implementation.<sup>215</sup>

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<sup>211</sup> *Id.* ¶ 71.

<sup>212</sup> George W. Bush, Remarks on Global Development (Mar. 14, 2002), <http://www.whitehouse.gov/news/releases/2002/03/20020314-7.html> (stating that the United States would increase official development assistance by \$5 billion over three years).

<sup>213</sup> G.A. Res. 55/199, U.N. GAOR, U.N. Doc. A/RES/55/199, *available at* [http://www.johannesburgsummit.org/web\\_pages/resolution.htm](http://www.johannesburgsummit.org/web_pages/resolution.htm) (resolution authorizing WSSD).

<sup>214</sup> Plan of Implementation of the World Summit on Sustainable Development, Report of World Summit on Sustainable Development, ch.1, resolution 2, annex, at 6-72, U.N. Doc. A/CONF.199/20, U.N. Sales. No. E.03.II.A.1 (2002), [http://www.johannesburgsummit.org/html/documents/summit\\_docs/131302\\_wssd\\_report\\_reissued.pdf](http://www.johannesburgsummit.org/html/documents/summit_docs/131302_wssd_report_reissued.pdf) [hereinafter Plan of Implementation]. The Plan of Implementation is divided into sections covering poverty eradication, changing unsustainable patterns of consumption and production, protecting and managing natural resources, sustainable developing in a globalizing world, health and sustainable development, sustainable development of small island developing states, sustainable development for Africa, other regional initiatives, means of implementation, and institutional framework for sustainable development. *Id.*

The other negotiated text is the Johannesburg Declaration. *Id.* at 1-5 [hereinafter Johannesburg Declaration]. The four-page Johannesburg Declaration is a political statement that endorses the plan of implementation and states “our responsibility to one another, to the greater community of life and to our children.” *Id.* ¶ 6. Among other things, the Declaration also commits countries “to expedite the achievement of the time-bound, socio-economic and environmental targets” contained in the Plan of Implementation. *Id.* ¶ 36.

<sup>215</sup> Stas Burgiel et al., *Summary of the World Summit on Sustainable Development: 26 August-4 September 2002*, EARTH NEGOTIATIONS BULL., Sept. 6, 2002, at 16, *available at*

The Plan of Implementation describes poverty eradication “as the greatest global challenge facing the world today and an indispensable requirement for sustainable development.”<sup>216</sup> That emphasis is reflected in the plan’s specific reaffirmation of every target and timetable contained in the Millennium Declaration.

The Johannesburg Plan of Implementation also contains the following new targets and timetables:

- to halve by 2015 “the proportion of people who do not have access to basic sanitation;”<sup>217</sup>
- to develop “integrated water resources management and water efficiency plans by 2005;”<sup>218</sup>
- to improve developing country access “to affordable, accessible, cost-effective, safe and environmentally sound alternatives to ozone-depleting substances by 2010;”<sup>219</sup>
- to have states take “immediate steps to make progress in the formulation and elaboration of national strategies for sustainable development and begin their implementation by 2005.”<sup>220</sup>

In some cases, countries were unable to agree on specific, categorical targets and timetables, and settled on softer language. Thus, countries did not agree to reduce unsustainable production and consumption in specific ways; they agreed to encourage and support a ten-year work plan “of regional and national initiatives to accelerate the shift towards sustainable consumption and production . . . .”<sup>221</sup> They agreed to

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<http://www.iisd.ca/linkages/download/pdf/enb2251e.pdf>.

<sup>216</sup> Plan of Implementation, *supra* note 214, ¶ 7.

<sup>217</sup> *Id.* ¶ 8.

<sup>218</sup> *Id.* ¶ 26.

<sup>219</sup> *Id.* ¶ 39(d).

<sup>220</sup> *Id.* ¶ 162(b).

<sup>221</sup> *Id.* ¶ 15.

“substantially increase the global share of renewable energy sources,”<sup>222</sup> but not to a date or a percentage share. Countries agreed only to “[aim] . . . to achieve, by 2020, that chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment.”<sup>223</sup> Instead of setting a hard deadline for the restoration of depleted fish stocks, countries agreed to do so “on an urgent basis and where possible not later than 2015.”<sup>224</sup> The Plan of Implementation notes that “achievement by 2010 of a significant reduction in the current rate of loss of biological diversity” would require new funding, technical resources, and a variety of actions at all levels;<sup>225</sup> it does not commit to that goal. Countries agreed to “[p]hase out lead in lead-based paints and in other sources of human exposure,”<sup>226</sup> but not to a date for achieving that result.<sup>227</sup>

In addition, many important outcomes are not stated as targets and timetables. For instance, countries agreed to “[e]nhance corporate environmental and social responsibility and accountability” through various means.<sup>228</sup> They also agreed to ask the Global Environment Facility, which funds sustainable development activities in developing countries under certain conventions, to make activities under the Desertification Convention “a focal area” of its funding.<sup>229</sup> The Plan recognizes that significant new financial resources will be needed to implement these commitments. It does not contain new commitments, though; it refers to prior commitments made, for example, in the Monterrey Conference on Financing for Development, and encourages countries to increase existing commitments.<sup>230</sup> Countries reaffirmed their

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<sup>222</sup> Plan of Implementation, *supra* note 214, ¶ 20(e). Countries could not agree to phase out subsidies for unsustainable energy production by a date certain. *Id.* ¶ 20(q).

<sup>223</sup> *Id.* ¶ 23.

<sup>224</sup> *Id.* ¶ 31.

<sup>225</sup> *Id.* ¶ 44.

<sup>226</sup> *Id.* ¶ 50.

<sup>227</sup> Similarly, they agreed to support an African initiative to secure access to energy “for at least 35 per cent of the African population within 20 years,” but not to achieve the objective contained in the initiative. *Id.* ¶ 62(j)(i).

<sup>228</sup> Plan of Implementation, *supra* note 214, ¶ 18.

<sup>229</sup> *Id.* ¶ 41(f).

<sup>230</sup> *Id.* ¶¶ 85, 88. It also calls on countries to reduce “unsustainable debt burden through such

commitment to the Commission on Sustainable Development as the international entity to review progress toward sustainable development (including progress under the Johannesburg Plan of Implementation). The Commission has not proven to be particularly effective at inducing countries to address poverty or environmental degradation. In Johannesburg, countries noted that the Commission needs to add more value to the implementation process by, among other things, focusing more on actions that enable sustainable development and on identifying both obstacles and means of overcoming them.<sup>231</sup>

#### IV. STATUS ASSESSMENT AFTER WSSD

More targets and timetables now exist than were in place immediately after the 1992 Earth Summit. There are also somewhat better implementation mechanisms. This is true of both “hard” and “soft” targets. Except in a few cases, it is too early to pronounce success or failure. But the movement over the past decade toward targets, timetables, and effective implementation mechanisms is positive for sustainable development.

##### A. *Progress Under “Hard” Law*

There are a few more targets under international law than there were after the Earth Summit. The Montreal Protocol has been amended numerous times since 1992, including the addition of some new ozone depleting substances. But the major addition to targets and timetables under international law has been the Kyoto Protocol.

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actions as debt relief.” *Id.* ¶ 89.

<sup>231</sup> *Id.* ¶¶ 127-32. Describing education as “critical for promoting sustainable development,” the Plan recommends that the UN General Assembly “consider adopting a decade of education for sustainable development, starting in 2005.” *Id.* ¶¶ 116, 124 (d). The plan also recommends further work on sustainable development indicators. *Id.* ¶ 130. In addition, countries agreed to “[e]nhance the integration of sustainable development goals” into the operations of relevant UN agencies, and to strengthen collaboration among international bodies. *Id.* ¶ 140.

These targets and timetables plainly have priority over soft law commitments as well as nonquantifiable commitments contained in treaties and protocols. Some of this is due to their status under international law, and some is due to their enforceable or measurable nature. They provide a very specific operational understanding of what movement toward sustainable development means in specific contexts, and the legal mechanisms contained in treaties and protocols facilitate achievement of the targets and timetables themselves. Even where there has been controversy over specific targets and timetables, and which countries should be bound by them, as in the case of the Kyoto Protocol, targets and timetables provide a focal point about how ambitious the first set of commitments should be, and which countries should be subject to them.<sup>232</sup>

Stratospheric ozone depletion and climate change are reasonable international priorities. Both involve significant economic, environmental, and social consequences at the global level.<sup>233</sup> The process of establishing targets and timetables has gone a long way toward clarifying specific objectives as well as the legal and policy mechanisms needed to achieve them.<sup>234</sup> They have thus helped operationalize what sustainable development means in two specific contexts and provided lessons that might be applied to other contexts. They have also, however inadvertently, sharpened the difference between rhetorical commitment and actual commitment.<sup>235</sup> For stratospheric ozone, there exists a broad consensus among developed and developing countries, and most countries have agreed to be legally bound. For climate change, the broad scientific consensus represented by the reports of the Intergovernmental Panel on Climate Change is not mirrored on the political stage, even among developed countries. While most developed countries appear willing to ratify the Kyoto Protocol, the United States is not.<sup>236</sup> Despite United States

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<sup>232</sup> See generally Edward A. Smeloff, *Utility Deregulation and Global Warming: The Coming Collision*, 12 NAT. RESOURCES & ENV'T 280, 281 (1998).

<sup>233</sup> See generally F. Sherwood Rowland, *Atmospheric Changes Caused by Human Activities: From Science to Regulation*, 27 ECOLOGY L.Q. 1261 (2001).

<sup>234</sup> *Id.*

<sup>235</sup> *Id.*

<sup>236</sup> See *supra* note 165 and accompanying text.

protests that it is engaged on the climate change issue, United States unwillingness to commit to Kyoto, or even a Kyoto-like target, suggests that a value of legally binding targets and timetables is that they smoke out who is really committed to sustainable development and who is not.

On the value of interim targets, the record is also mixed. On one hand, the Montreal Protocol process involves phasing out production of ozone depleting substances, often in several stages.<sup>237</sup> The Kyoto Protocol target would be the first in a series of steps toward reducing greenhouse gas emissions. Because the job of stabilizing greenhouse gas concentrations in the atmosphere at a safe level appears daunting or even impossible, the Kyoto targets can be understood as part of the learning curve and as confidence-building measures for a more ambitious subsequent effort. Yet it can be argued that United States greenhouse gas emissions through the 1990s increased so much as to make compliance with the Kyoto Protocol impossible.<sup>238</sup> While the United States can be blamed for not taking the issue seriously, some have argued that Kyoto is simply too ambitious for the United States.<sup>239</sup>

Moreover, short-term or interim targets and timetables, such as those established in the Kyoto Protocol, can also be a basis for misunderstanding.<sup>240</sup> Critics of the Kyoto Protocol, for instance, have treated it as a stand-alone agreement, asserting that its costs and benefits should be measured without reference to the targets and timetables that need to be set subsequently. Because the emissions reduction is relatively small (compared to what needs to be done) and because developing countries are not included, this argument goes, the benefits of the Protocol are relatively small.<sup>241</sup> Of course, the Kyoto Protocol is only a step toward the Convention's ultimate objective—stabilization of greenhouse gas

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<sup>237</sup> See generally Katya Jestin, *International Efforts to Abate the Depletion of the Ozone Layer*, 7 GEO. INT'L. ENVTL. L. REV. 829 (1995)

<sup>238</sup> Donald A. Brown, *Climate Change*, in STUMBLING TOWARD SUSTAINABILITY, *supra* note 74, at 273, 307.

<sup>239</sup> See generally Perry A. Wallace, *Global Climate Change and the Challenge to Modern American Corporate Governance*, 55 SMU L. REV. 493 (2002).

<sup>240</sup> See generally Matthew Vespa, *Climate Change 2001: Kyoto at Bonn and Marrakech*, 29 ECOLOGY L.Q. 395 (2002).

<sup>241</sup> *Id.* at 401.

concentrations at a safe level. But the long-term objective is abstract at present because there is no date by which stabilization at a specific concentration is to be achieved.<sup>242</sup> So it is possible, at least in countries like the United States, for opponents to successfully argue against a short-term goal by ignoring the longer-term objective.

For both regimes, monitoring and public reporting have been helpful. Even under the Climate Change Convention, the national obligation to annually report net greenhouse gas emissions has provided a much more informed basis for debate and problem solving concerning greenhouse gas emissions than that which existed before such reporting was conducted.<sup>243</sup> The stratospheric ozone experience suggests that other implementation mechanisms, including those that foster compliance and provide financial assistance to developing countries, can also play a significant role in ensuring achievement of targets and timetables.<sup>244</sup> For climate change, it is too early to say, except that the Kyoto Protocol was developed with the stratospheric ozone experience firmly in mind.<sup>245</sup>

#### B. *Progress Under "Soft" Law*

More progress toward targets and timetables has occurred in nonbinding commitments, including but not limited to the Johannesburg Plan of Implementation.<sup>246</sup> There also appears to be a stronger commitment to monitoring and publicly reporting progress. The lack of compliance-enhancing mechanisms, however, creates a serious possibility that these targets and timetables will not be met.

Some of the social goals contained in the Millennium Declaration and reaffirmed at WSSD cover the same subjects as those contained in other international conferences around the time of the Earth Summit. These include access to safe drinking water, access to sanitation, reducing malnutrition, reducing maternal mortality, reducing child mortality, and

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<sup>242</sup> *Id.*

<sup>243</sup> See generally Daniel Bodansky, *The United Nations Framework Convention on Climate Change: A Commentary*, 18 YALE J. INT'L L. 451, 496 (1993).

<sup>244</sup> *See id.*

<sup>245</sup> *See id.*

<sup>246</sup> Plan of Implementation, *supra* note 214.

completion of primary school.<sup>247</sup> Targets are to be achieved by 2015, however, instead of the 2000 date stated for most in the early 1990s. These targets are also less ambitious in other ways. Instead of providing universal access to safe drinking water and sanitation, for instance, the current target is to reduce the number of people who lack access to drinking water and sanitation by half.<sup>248</sup> On the other hand, some social and environmental goals are new. These include halting and reversing the spread of HIV/AIDS, assisting HIV/AIDS orphans, developing water resources and efficiency plans, ensuring that the Kyoto Protocol goes into effect, and implementing national sustainable development strategies.<sup>249</sup>

The greater number of targets and timetables represents movement “in the right direction.”<sup>250</sup> As a practical matter, these targets and timetables will tend to be given priority over other issues on which there is no particular objective and no particular deadline.<sup>251</sup> These objectives thus respond, in part, to the claim that sustainable development tries to do too much at once.<sup>252</sup> In some cases, too, such as the ten-year work plan for sustainable production and consumption, the Johannesburg Plan of Implementation should clarify the ways in which sustainable production and consumption can be achieved. In this and other ways, such goals move sustainable development from rhetoric toward reality, helping to operationalize it. The increase in targets and timetables gives a much sharper focus to the international community’s current understanding of the operational meaning of sustainable development. Moreover, meeting these targets and timetables would plainly move the world’s people closer to sustainability. Because the legal means needed to achieve these goals—at either the national or international level—were not specified, it is reasonably clear that particular laws would be means to achieving these goals and not ends in themselves.

The specific priorities represented in these targets and timetables are also reasonable. It is true that the global antipoverty agenda coming

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<sup>247</sup> *Id.* at ¶ 45.

<sup>248</sup> *Id.*

<sup>249</sup> *Id.* at ¶ 60.

<sup>250</sup> Wallstrom, *supra* note 120.

<sup>251</sup> *Id.*

<sup>252</sup> *Id.*

out of WSSD is broader and in some respects more ambitious than the global environmental agenda.<sup>253</sup> But poverty alleviation is important for humanitarian reasons.<sup>254</sup> Expanded prosperity can also reduce political instability and even some forms of environmental degradation. Beyond that, a long-term global effort to protect and restore the environment is unlikely to succeed unless developed countries seriously address poverty.<sup>255</sup> In addition, the Johannesburg Plan of Implementation contains environmental objectives that are of critical importance to human health, environmental protection, and economic development in developing countries; the water supply and sanitation goals are the two most prominent examples.<sup>256</sup>

It can be argued that the number of targets and timetables, particularly for environmental objectives, should have been greater. Two priorities identified by the National Research Council—stabilizing human population and protecting the earth's natural resource base—are not directly addressed in the Johannesburg Plan of Implementation.<sup>257</sup> The OECD proposal “to ensure that current trends in the loss of environmental resources are effectively reversed at both global and national levels by 2015”<sup>258</sup> is broader and more ambitious than anything established or affirmed in Johannesburg. Perhaps the OECD target is both too broad and too ambitious. The division of the global antipoverty agenda into more specific goals for hunger, income, education, and other subjects may suggest the wisdom of dividing the global environmental agenda into

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<sup>253</sup> Plan of Implementation, *supra* note 214, at 6.

<sup>254</sup> *Id.*

<sup>255</sup> One author writes,

Developing country views in international negotiations on environment are powerfully shaped by preoccupation with their own economic and social conditions, fear of high environmental regulatory costs, and distrust of industrial country intentions and policies. Sustained and sustainable human development provides the only context in which there is enough confidence, trust, and hope to ground the difficult measures needed to realize environmental objectives.

Speth, *supra* note 180, at 171.

<sup>256</sup> Plan of Implementation, *supra* note 214, ¶¶ 7, 25.

<sup>257</sup> OUR COMMON JOURNEY, *supra* note 12, at 31, 66, 83.

<sup>258</sup> DEV. ASSISTANCE COMM., *supra* note 146, at 2.

more specific goals. For both social and environmental goals, more specific targets and timetables are easier to discuss and more measurable. But the specific Johannesburg targets and timetables, taken together, do not add up to anything roughly equivalent to the OECD proposal or the National Research Council priorities. They cover a narrower set of issues, and in many cases the target-and-timetable language has been diluted by qualifiers.

More ambitious and specific goals were proposed and rejected. The Draft Plan of Implementation adopted at the last preparatory meeting before WSSD included a number of issues on which some nations had not yet reached agreement.<sup>259</sup> The bracketed text of the Draft Plan indicates governmental proposals to which all countries had not agreed. These proposals are indicative of the more ambitious nature of proposed targets and timetables that were not, but could have been, adopted at WSSD. There were proposals, for example, to increase the global share of renewable energy “to at least 15 percent of the total primary energy supply by 2010,”<sup>260</sup> to have countries adopt timetables for “phasing out energy subsidies which inhibit sustainable development,”<sup>261</sup> to put measures in place by 2010 to halt the loss of biodiversity or significantly reduce biodiversity loss by 2010.<sup>262</sup> At the same time, nongovernmental organizations were circulating other proposed targets and timetables.<sup>263</sup>

From an environmental perspective, the rejection of these more ambitious targets and timetables is disappointing. The rejection of such goals can be seen as reflecting a lack of commitment by the international community, at least as to those particular goals. Those looking for a silver lining here, however, do not have far to look. The debate has moved from rhetoric and generalizations into proposals for specific results by specific

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<sup>259</sup> U.N. Commission on Sustainable Development Acting as the Preparatory Committee for the World Summit on Sustainable Development, Draft Plan of Implementation for the World Summit on Sustainable Development, U.N. Doc. A/CONF.199/PC/L.5 (2002).

<sup>260</sup> *Id.* ¶ 16(e).

<sup>261</sup> *Id.* ¶ 16 (p.bis).

<sup>262</sup> *Id.* ¶ 40.

<sup>263</sup> *See, e.g.*, EUROPEAN WIND ENERGY ASS'N & GREENPEACE, WIND FORCE 12: A BLUEPRINT TO ACHIEVE 12% OF THE WORLD'S ELECTRICITY FROM WIND POWER BY 2020, <http://www.ewea.org/doc/windforce12.pdf>. (last visited Feb. 27, 2003).

dates, and this debate did not end in Johannesburg. Targets and timetables exist at the regional and national level, as evidenced, for example, by the European Union's sustainable development strategy. Experience with such targets and timetables, as well as those adopted or affirmed in Johannesburg, will no doubt inform future discussions about targets and timetables. This is particularly true because there will likely be future international conferences at which the targets and timetables contained in the Johannesburg Plan of Implementation will be reviewed and perhaps modified.<sup>264</sup>

Many of these targets and timetables can also be seen as interim points on a road toward more ambitious objectives. The National Research Council, for instance, has suggested that hunger be reduced by half by a specific date, and then by half again by another date.<sup>265</sup> Thus, meeting the 2015 goal may lead to another set of goals for a future date. This could also be true of certain more environmentally based goals.

The willingness of countries to monitor and assess progress after Johannesburg is also positive. Another indication of greater efforts to monitor progress toward agreed international goals is contained in the 2002 human development report issued by the United Nations Development Programme ("UNDP"), which contains a country-by-country assessment of progress toward the Millennium Declaration goals.<sup>266</sup> According to the UNDP report, fifty-five countries representing twenty-three percent of the world's population are on track to meet at least

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<sup>264</sup> It can be argued, on the other hand, that these targets and timetables are too ambitious. The periodic revision of unmet social targets "demonstrates the difficulties in acting in sustained ways over large scales and over long time horizons." *OUR COMMON JOURNEY*, *supra* note 12, at 38. It is also true that the periodic modification of social targets and timetables over the past decade indicates considerable social learning about how to set achievable goals; less ambitious goals are ordinarily more achievable. *Id.* at 40. A considerable amount of negotiation at WSSD concerned the content and achievability of proposed goals. As a consequence, it is likely that the goals contained in the Johannesburg Plan of Implementation are achievable.

<sup>265</sup> *OUR COMMON JOURNEY*, *supra* note 12, at 165.

<sup>266</sup> UNITED NATIONS DEVELOPMENT PROGRAMME, HUMAN DEVELOPMENT REPORT 2002: DEEPENING DEMOCRACY IN A FRAGMENTED WORLD 16-49 (2002), <http://www.undp.org/hdr2002> [hereinafter *DEEPENING DEMOCRACY*].

three-fourths of the Millennium Declaration goals.<sup>267</sup> Another thirty-one countries, with thirty-three percent of the world's population, are on track to meet at least half of these goals.<sup>268</sup> At least thirty-three countries, with twenty-six percent of the world's population, now appear likely to meet less than half of the Millennium Declaration goals.<sup>269</sup> The report provides an assessment of whether each country has achieved a particular goal, is on track to achieve it, is behind, or is far behind in making progress toward achieving it.<sup>270</sup> A key finding is that "the targets for poverty, HIV/AIDS and maternal mortality cannot be monitored directly with current international data."<sup>271</sup> A similar type of monitoring process will be needed after Johannesburg for the additional targets and timetables established in the Plan of Implementation. In addition, it will be necessary to ensure that national and international data is developed to accurately and fully assess and measure progress toward these goals on a national and international basis.

A key question, suggested by the UNDP report, is whether the international targets and timetables stated in the Johannesburg Plan of Implementation will also be understood as national goals, or even as relevant to national goals.<sup>272</sup>

As a practical matter, international targets and timetables will mean little unless the same or similar targets and timetables are also adopted at the national level (and at state, provincial, and local levels within a nation). National governments, after all, generally have the sovereign right to make decisions about what occurs within their boundaries. Yet national targets and timetables are not a substitute for international targets and timetables. The environmental and poverty problems that sustainable development addresses are international in scale and require coordinated international effort.

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<sup>267</sup> *Id.* at 18

<sup>268</sup> *Id.*

<sup>269</sup> *Id.*

<sup>270</sup> *Id.* at 46-49. High-income OECD countries are excluded. *Id.*

<sup>271</sup> *Id.* at 17. Many countries also lack data on which to measure progress toward these goals.

*Id.*

<sup>272</sup> *Id.*; Plan of Implementation, *supra* note 214, ¶ 145.

While agreement to the Plan of Implementation at Johannesburg did not legally bind any country, the intensity of the negotiations over targets and timetables suggests that each country made some kind of assessment about whether the goals were at least capable of being achieved within its boundaries.<sup>273</sup> It is certainly possible, however, for a country to understand an international target and timetable as an aggregate objective that is not specifically applicable to it. This is particularly true if it perceives an economic disadvantage from achieving the target, or a short-term competitive advantage from failing to achieve the goal. The tracking system contained in the UNDP report finesses the question of national commitment by assessing and publicly reporting progress, whatever the level of national commitment may be.<sup>274</sup> Such a tracking and reporting system would reward the leaders and, at a minimum, oblige the laggards to explain why they are behind. It might also put pressure on all countries to find ways to help the lagging countries get back on track.

Another dimension to the national responsibility issue is the applicability of the Johannesburg targets and timetables to developed countries. While some of the UNDP's analysis of Millennium Declaration goals focuses on developed countries, the country-by-country assessment excludes developed countries.<sup>275</sup> The antipoverty focus of the Millennium Declaration may provide an explanation, because developed countries by definition lack the severe poverty problem of developing countries. Yet the more encompassing goals of the Johannesburg Plan of Implementation, including the commitment to be implementing a national sustainable development strategy by 2005, indicate their applicability to both developed and developing countries.<sup>276</sup> While the European Union recognizes this goal,<sup>277</sup> it is not clear that the United States does. Prior to Johannesburg, the George W. Bush administration consistently treated sustainable development as a foreign policy matter, not a domestic policy matter.<sup>278</sup> The tracking and public reporting system for the Johannesburg

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<sup>273</sup> See Plan of Implementation, *supra* note 214.

<sup>274</sup> See DEEPENING DEMOCRACY, *supra* note 266.

<sup>275</sup> See *id.* at 16-49.

<sup>276</sup> Plan of Implementation, *supra* note 214, at ¶145.

<sup>277</sup> Wallstrom, *supra* note 120.

<sup>278</sup> Ironically, a consistently stated position of the administration was that "sustainable

targets and timetables will be neither credible nor effective if it excludes developed countries.

Significantly, as in Rio in 1992, realization of ambitious goals will require the transfer of money, technology, and capacity from developed to developing countries.<sup>279</sup> It is certainly true that national governance in many countries needs to be made more effective, both to reduce the need for aid and to increase the likelihood that aid will be used effectively. But improving governance does not guarantee the availability of resources to meet these goals. While trade can reduce the need for aid, trade does not automatically lead to public infrastructure and is limited to a relatively small number of developing countries.<sup>280</sup> Thus, there is no way to avoid providing additional aid to developing countries if the goals adopted in Johannesburg are to be met. The shortfall in such assistance after Rio was a major contributor to the Earth Summit's failure to achieve more progress. Although there were some hopeful signs at Monterrey, funding commitments will need to be maintained over a long time.<sup>281</sup>

The question of funding underscores the dividing line between agreements that are legally binding and those that are not. At day's end, the agreements that countries truly take seriously are those to which they are legally bound. From this perspective, the most worrisome aspect of Johannesburg is not the specific inadequacies of the agreement itself, but rather the form of the agreement; it is not legally binding, period. It also lacks the kind of compliance-enhancing legal procedures that exist, say, in the stratospheric ozone regime. Quite plainly, as the Doha agreement indicates, the hard law regime administered by the World Trade

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development begins at home." See, e.g., Paula J. Dobriansky, Remarks to the UN Economic Commission for Europe Regional Ministerial Meeting for the World Summit on Sustainable Development: Governance as a Foundation for Sustainable Development (Sept. 24, 2001), available at <http://www.state.gov.g/rls/rm/2001/5083.htm>. Ms. Dobriansky is Under Secretary of State for Global Affairs and was head of the United States delegation. What the administration apparently meant was that each country should, among other things, improve its system of governance. *Id.*

<sup>279</sup> Royal C. Gardner, Official Development Assistance, in *STUMBLING TOWARD SUSTAINABILITY*, supra note 74, at 149,150-151.

<sup>280</sup> *Id.*

<sup>281</sup> See *MONTERREY REPORT*, supra note 202.

Organization will continue to influence the course of world progress toward (or away from) sustainability.<sup>282</sup>

#### V. CONCLUSION: THE ROAD AHEAD

Several broad lessons emerge from this analysis. First, and most obviously, very few targets and timetables exist in formal international law. This can be understood as a reflection of the international community's reluctance at this point to make legally binding commitments to specific outcomes. While the stratospheric ozone regime is considered successful, it appears to be the only global model of a targets-and-timetables regime that has actually worked. Efforts to establish and implement targets and timetables under other treaties, such as the Climate Change Convention, are at such an early stage that it is difficult to draw conclusions.

This suggests the need for greater reliance, at least for the foreseeable future, on soft law systems like that contained in the Johannesburg Plan of Implementation. It is precisely because such agreements are not legally binding that they are easier to reach. They also make it possible for countries to decide what their priorities should be without worrying about the consequences of entering a legally binding agreement. Moreover, specific targets and timetables are a little "harder" than vaguer agreements because adherence to these agreements can be monitored and measured. While a variety of international cooperative activities can be built around such targets and timetables, it is also possible that they will lead to legally binding agreements in the form of treaties or protocols. Another possibility is that they will not achieve anything, and that they will be seen as more sophisticated forms of mere rhetorical commitment; only time will tell.

Second, the processes for developing both binding and nonbinding targets and timetables are iterative; that is, countries or parties meet on a continuing basis to discuss a particular issue or set of issues, review progress, and decide what should be done next. The continuing nature of the problem-solving discussion involves social learning about what has

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<sup>282</sup> See Ministerial Declaration, *supra* note 202.

worked and has not worked, modification of objectives in light of new information or changes, and (one hopes) more effective and intensive efforts toward achieving these targets and timetables.

Third, if the past decade and the negotiations about targets and timetables in the run-up to Johannesburg are any indication, there will likely be growing interest in targets and timetables over the next decade. This greater interest will likely lead to more such targets and timetables, and modification or elaboration of existing targets and timetables.

Fourth, the growing use of international targets and timetables needs to be replicated at the national level. While international targets and timetables can put pressure on national governments to adopt the same or similar objectives, national governments must ultimately make that decision. The national decision to ratify a treaty or protocol containing targets and timetables is effectively a decision to achieve those objectives. But the decision to vote for a nonbinding agreement may or may not indicate national commitment to meeting the targets and timetables it contains. The Johannesburg agreement that countries be implementing national sustainable development strategies by 2005 underscores the importance of national targets and timetables.

Fifth, the likelihood that many targets and timetables will continue to be not legally binding means that more creative and effective efforts are needed to induce compliance with such agreements. A global reporting effort on developed and developing country progress relevant to existing targets and timetables, similar to the UNDP's recent report on the Millennium Declaration goals, would be extremely helpful, and may be forthcoming after Johannesburg. Continued nongovernmental efforts at global<sup>283</sup> and national reporting<sup>284</sup> on progress are also necessary. All of these are useful, but they are probably not enough by themselves.

Sixth, the targets and timetables reached in Johannesburg will mean little in either the short or long term if people living in democratic

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<sup>283</sup> See, e.g., GLOBAL LEADERS OF TOMORROW ENVIRONMENT TASK FORCE, WORLD ECONOMIC FORUM, 2002 ENVIRONMENTAL SUSTAINABILITY INDEX, *available at* <http://www.ciesin.org/indicators/ESI/downloads.html> (comparative assessment of environmental sustainability in 142 countries).

<sup>284</sup> See, e.g., STUMBLING TOWARD SUSTAINABILITY, *supra* note 74 (assessment of U.S. sustainable development effort since 1992 Earth Summit).

countries throughout the world are unwilling or unable to communicate their support for these targets and timetables to their elected leaders. This is both obvious and difficult. Obvious, because this is how democracies are supposed to work. Difficult, because of widespread public skepticism about the effectiveness and responsiveness of national governments, enhanced in this case by skepticism about sustainable development itself.<sup>285</sup> While targets and timetables are a direct response to skepticism about sustainable development based on its claimed fuzziness, they may not be able to overcome skepticism based on the claim that it can't be done. The challenge for both the public and elected leaders is to recognize the self-fulfilling aspect to the claim that sustainable development cannot be achieved. If we believe that sustainable development cannot happen, then it will not; if we believe that sustainable development can happen, then it likely will. Targets and timetables focus the quest for sustainability on discrete, achievable tasks, and thus should—and hopefully will—provide a means of overcoming the claim that sustainable development cannot be done.

Finally, this Article indicates that the conceptual framework provided by sustainable development is not the same as the political commitment needed to achieve it. Nor does the merit of the framework depend on the extent to which it has been successful in persuading people and organizations over the past decade to adopt it. Like all major changes, sustainable development will require time and concerted effort to come to fruition in the real world. But this effort is essential because there is no alternative to addressing global poverty and environmental degradation. The challenge is not to simply identify the missing pieces in the framework; the challenge is to fill them in. Targets, timetables, and effective implementation mechanisms need to be part of this effort.

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<sup>285</sup> The war against terrorism is another distracting factor, even though sustainable development is based in part on peace and security.