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## Civil Society Contributions to Inclusive Climate Cooperation

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# Civil Society Contributions to Inclusive Climate Cooperation

Elizabeth Burleson

## **Abstract**

Engagement among States and decentralized, creative problem solvers can enhance the requisite cooperation to pick up the pace of solution implementation to match the rate of climate change. Global organizing capability, information sharing and innovation have enmeshed governments and civil society into new governance relationships. Technology has facilitated this process for many, but the hardware and software that has led to social networking is only a fraction of the story of dynamic, inclusive cooperation. Citizen sector actors hold both destructive and constructive capacity exceeding that of any previous era. While many remain overwhelmed by the scope of climate instability, members of civil society are responding with insight and charisma to coordinate public participation to implement climate solutions.

**KEYWORDS:** Climate, Human Rights, Climate Change, Recommendations, International Law

ARTICLE  
CIVIL SOCIETY CONTRIBUTIONS TO INCLUSIVE  
CLIMATE COOPERATION

*Elizabeth Burleson\**

*ABSTRACT*

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I. INTRODUCTION .....	1330
II. EVOLVING CLIMATE HUMAN RIGHTS RESPONSE .....	1331
A. Human Rights and Climate Integration: Dynamics of Sustainability .....	1333
B. Evolving Recognition of Human Agency .....	1339
III. CIVIL SOCIETY NORM DIFFUSION TO ADDRESS CLIMATE CHANGE .....	1343

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IV. CIVIL SOCIETY COOPERATION RECOMMENDATIONS	1355
A. Reduce Short Term Climate Forcers and Enhance Climate Understanding: .....	1357
B. Synergize Mitigation, Adaptation, Innovation, and Resilience Measures: .....	1358
C. Protect Human Rights Defenders and Enhance Procedural Rights: .....	1359
D. Innovate & Share Environmentally & Socially Sound Climate Technologies .....	1362
V. WAY FORWARD BUILT ON SHARED UNDERSTANDINGS .....	1366

### I. INTRODUCTION

Who decides how the global community will or will not respond to climate change? Global threats to the natural world have expensive consequences for human and other species survival. Climate change is already broadly adversely impacting the individual right to life as well as the full enjoyment of human rights generally, with disproportionate impacts on front-line communities such as indigenous peoples living close to the land. Other vulnerable sectors of society include youth, racial and ethnic minorities, and poor communities that often become hotspots.

Indigenous peoples not only live subsistence lifestyles to a much greater degree than the general population, but most indigenous cultures are place-based—with belief systems integrated into sustainability with the natural world. Globally, indigenous wisdom has shared a worldview that calls for deeply respecting ecosystem integrity and offers models for sustainable living. Increasing toxicity and decreasing biodiversity threaten humanity at large, but also impact front-line indigenous communities disproportionately. From many different geographical perspectives, the indigenous message is clear: modern industrial practices are erasing cultural diversity and destroying environmental sustainability.

It has never been useful to ignore the interrelationship among environmental, human rights, and other social and economic dynamics. Doing so has oversimplified and exacerbated human rights violations and the erosion of ecosystem health. State and non-state actors have yet to come to terms, effectively, with the sheer scope of

the sustainability challenge. Whether one focuses inter-generationally, intra-generationally, inter-culturally, or upon case-specific interactions between given human rights and environmental elements, the sustainability matrix is complex. Recent efforts to address the environmental, social, and economic dynamics of a sustainability matrix are increasingly being addressed with depth and expertise. It is heartening that experts from across the spectrum of international law, humanitarian development, government ministerial expertise, and research epistemic communities are working together to find a shared sustainability vision. While broader social and economic elements impact the protection of human rights and the environment, this Article will consider the core environmental and human rights dynamic, offering an overview of the challenges and opportunities to sustain human rights and environmental integrity.

This Article will focus on the core human right of public participation in climate consensus building. Part II will sketch emerging climate human rights provisions and enhanced human agency. Part III will address civil society norm diffusion to address climate change. Part IV will explain how innovation sharing and capacity building can expand human agency and environmental integrity through key recommendations. Part V will suggest a way forward via effective and equitable climate cooperation.

## II. *EVOLVING CLIMATE HUMAN RIGHTS RESPONSE*

Engagement among states and decentralized, creative problem solvers can enhance the requisite cooperation to pick up the pace of solution implementation to match the rate of climate change. Global organizing capability, information sharing and innovation have enmeshed governments and civil society into new governance relationships. Technology has facilitated this process for many, but the hardware and software that has led to social networking is only a fraction of the story of dynamic, inclusive cooperation. Citizen sector actors hold both destructive and constructive capacity exceeding any previous era. While many remain overwhelmed by the scope of climate instability, members of civil society are responding with insight and charisma to coordinate climate solutions.

Shining a spotlight on the innovative people who are finding practical models to expand climate networks can help other members of civil society from all walks of life with individual insights to implement solutions in teams sustained by the interests and expertise

of those involved. Bornstein and Davis point out that solution smithing has gone underreported. We know more about global problems than problem solvers that can adapt rapidly, on an ongoing basis, to ever-changing array of critical challenges.<sup>1</sup> Empathy and conflict resolution skills are as crucial as coding expertise.

Civil society not only has the capacity to pick government representatives, but the responsibility and collective expertise to partner in finding and implementing solutions to public interest challenges—including climate change. Oliver Houck explains, “ordinary citizens can, through legal process, make their governments protect the environment when that may be the last thing that their governments want to do.”<sup>2</sup> Linking accessible and straightforward data with a range of approaches and opening up the decision-making process for inclusive deliberation can enhance community buy-in and the implementation of climate mitigation and adaptation.<sup>3</sup> More importantly, engaging with civil society in insight generation and solution design can, through deliberation, weigh the criteria for identifying best practices. It can also not only legitimize, but optimize decisions so that the effort of implementing change involves the most likely chance to respond effectively and equitably to climate change.<sup>4</sup>

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1. DAVID BORNSTEIN & SUSAN DAVIS, *SOCIAL ENTREPRENEURSHIP: WHAT EVERYONE NEEDS TO KNOW XVIII* (Oxford University Press 2010). For a discussion of collective action problem resolution see also Garrett Hardin, *The Tragedy of the Commons*, 162 *SCIENCE* 1243 (1968); ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* (Cambridge University Press 1990) (encouraging resource appropriators to participate in decision-making); Anne-Marie Slaughter, *The Real New World Order*, 76 *FOREIGN AFF.* 183, 183-84 (1997).

2. OLIVER A. HOUCK, *TAKING BACK EDEN: EIGHT ENVIRONMENTAL CASES THAT CHANGED THE WORLD*, 176 (Island Press 2011); see also Gitanjali Nain Gill, *Human Rights and the Environment in India: Access Through Public Interest Litigation*, 14(3) *ENVTL. L. REV.* 158, 200-18 (2012) (discussing citizens standing in India's green jurisprudence).

3. Age Niels Holstein, *Participation in Climate Change Adaptation GRABS Expert Paper 2*, GREEN AND BLUE SPACE ADAPTATION FOR URBAN AREAS AND ECO TOWNS, 4-6 (October 2010), available at [http://www.grabs-eu.org/downloads/Expert\\_Paper\\_Climate\\_Participation\\_FULL\\_VERSION%28mk3%29.pdf](http://www.grabs-eu.org/downloads/Expert_Paper_Climate_Participation_FULL_VERSION%28mk3%29.pdf).

4. *Cf.* Alan Boyle, *Human Rights and the Environment: Where Next?*, 23(3) *E.J.I.L.* 613-42 (2012) (“But climate change is a global problem. It cannot easily be addressed by the simple process of giving existing human rights law transboundary effect. It affects many states and much of humanity. Its causes, and those responsible, are too numerous and too widely spread to respond usefully to individual human rights claims.”); *id.* at 642.

A. *Human Rights and Climate Integration: Dynamics of Sustainability*

As climate talks unfolded in Lima, Peru in the final days of 2014, human rights experts synthesized the following statement on Climate Change and Human Rights:

On the occasion of Human Rights Day, we, as human rights experts of the United Nations system, urge Member States to integrate human rights standards and principles in the climate change negotiations . . . . Climate change is one of the greatest challenges of our generation with consequences that transform life on earth and adversely impact the livelihood of many people. It poses great risks and threats to the environment, human health, accessibility and inclusion, access to water, sanitation and food, security, and economic and social development. These impacts of climate change interfere with the effective enjoyment of human rights. In particular, climate change has a disproportionate effect on many disadvantaged, marginalized, excluded and vulnerable individuals and groups, including those whose ways of life are inextricably linked to the environment. All individuals, without discrimination, should be considered as a resource for resilience and their equal participation in resilience building activities should also be recognised.<sup>5</sup>

These human rights experts squarely address the sticky issue that:

Human rights can also be threatened through mitigation and adaptation measures seeking to reduce, control and prevent climate change and its impacts. Where such measures are adopted without the full and effective participation of concerned individuals and communities, they can result in violations of human rights and may lead to the adoption of measures that are unsustainable and not responding to the needs of rights-holders.

To prevent such adverse impacts, States must incorporate their existing obligations under the human rights framework into the climate change negotiations. Applying human rights in the context of climate change brings many benefits. It moves the rights of affected individuals and communities centre stage in all response strategies. The human rights framework focuses our attention on the rights of the most vulnerable and marginalized

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5. Statement of the United Nations Special Procedures Mandate Holders on the occasion of the Human Rights Day Geneva, (Dec. 10, 2014), *available at* <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=15393&LangID=E>.

individuals and groups requiring adaptation policies and measures, inclusive disaster risk reduction planning and resilience strategies on the basis of non-discrimination and equality. Climate justice sees the effect and causes of climate change in relation to the concept of justice.<sup>6</sup>

The Lima conference involved greater human rights and climate negotiating than any previous conference of the participating parties. At issue was the means by which to address climate change equitably.

The International Bar Association recommends that, in order to meet concerns regarding the poor human rights record of certain Clean Development Mechanism (CDM) projects, the governing body of the Kyoto Protocol (the CMP):

should consider how best to recognise existing applicable human rights obligations for CDM projects, and adopt explicit and binding language to protect human rights during climate change-related activities . . . [and also] recommends the development of a dispute settlement mechanism or grievance procedure to address human rights contentions concerning the CDM approval process.<sup>7</sup>

This illustrates the manner in which the international community continues to map the contours of climate human rights co-benefits and conflicts. Designing trading programs in a manner that addresses equity can broaden the viability of linking cap-and-trade programs. Civil society participation in climate decision-making can and should help design carbon equivalency pricing and well-monitored and equitable offset approaches such as the Regional Greenhouse Gas Initiative (RGGI)'s reduction of landfill methane. This includes putting a price on carbon that reflects its social cost and the inherent value of watersheds, wildlife, and other natural systems, both for their modern ecosystem services and their innate value distinct from GDP calculations. Recognizing the value of ecosystem services can help communities adapt appropriately and sustain resilient societies that share evolving best practices.

No one can derogate the right to life, nor subject it to cost-benefit analyses. Understanding the cost of fossil fuel use and the benefit of advancing renewables, reducing flaring, and funding

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6. *Id.*

7. *Achieving Justice and Human Rights in an Era of Climate Disruption: Summary of Recommendations*, INTERNATIONAL BAR ASSOCIATION 31 (2014), available at <http://www.ibanet.org/PresidentialTaskForceClimateChangeJustice2014Report.aspx>.



adaptation/mitigation initiatives can have economic, social and environmental elements—none of which can wholesale disregard the challenge of sustainability balancing. Micro and macro elements of climate solutions need to be addressed. Creating flexibility in reducing greenhouse gases provides effective and potentially equitable civil society-based climate solution implementation options, provided that flexibility mechanisms are equitably designed and implemented. This baby (fledgling trading programs) does not look like the bathwater (the process of gaming environmental provisions to carry on maximizing social and environmental negative externalities such as pollution). Nuanced coordination of climate solutions must be carried out with the expertise of human rights, economic, environmental law, and other areas.

We already have a broad-brush framework climate convention. It is long overdue that state and non-state actor coordination result in a nuanced legal instrument that balances environmental, social, and economic elements of pricing the cost of climate change in a scientifically timely manner, rather than with the glacial pace at which other international treaty negotiations have dragged out consensus building. Time is not on our side. The human rights impacts of climate change are already becoming apparent to populations around the world. Human rights to life, health, and equal treatment among people and peoples are not on the table as bargaining chips for climate coordination. This presents a climate challenge in need of careful and detailed design that is difficult, but eminently within the capacity of the global community to achieve with integrity.

The human rights community has scrutinized the economic tool of trading units of climate responsibility (e.g. California, EU, and RGGI greenhouse gas emissions trading programs) for creating local hotspots that disproportionately impact vulnerable communities while offering broader climate mitigation benefits by reducing overall greenhouse gases. The struggle remains, since market text is not textually anchored to measures that would require market design to encompass human rights elements. While politically charged, it is well within the global community's capacity to honor, in carbon market design/implementation and generally, existing human rights frameworks that respect, protect, promote, and fulfill human rights in a manner that integrates human rights and climate response in order to effectively and equitably address climate change in a scientifically

sound timeframe.<sup>8</sup> Cap and trade as a means of putting a price on carbon remains an open question as an acceptable method of sharing climate responsibility. Human rights measures can and should be designed into trading approaches, whether local or linking legal language. Economic instruments have a powerful capacity to address climate change, and need not have a powerful capacity to decrease human rights if designed effectively and equitably to address the human rights implications of trading units of climate change responsibility (often shortened to “carbon” as in carbon markets or carbon price).

The 2010 Cancun Agreements to the Framework Convention on Climate Change highlighted the United Nations Human Rights Council’s recognition that “the adverse effects of climate change have a range of direct and indirect implications for the effective enjoyment of human rights.”<sup>9</sup> Key rights threatened by climate change include the rights to life and health;<sup>10</sup> food security;<sup>11</sup> and rights of groups in vulnerable situations.<sup>12</sup>

Public participation is enhancing the overall commitment to providing climate education and outreach called for by UNFCCC Article 6.<sup>13</sup> Similarly, UNFCCC Article 4(1) (f) calls upon states to minimize adverse effects on public health from projects or measures they take to mitigate or adapt to climate change. Similarly, the Cancun Agreements reflect broad agreement that adaptation measures should consider vulnerable groups, communities, and ecosystems.<sup>14</sup>

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8. Statement of the United Nations Special Procedures Mandate Holders on the occasion of the Human Rights Day Geneva, (Dec. 10, 2014), *available at* <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=15393&LangID=E>.

9. The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, Decision 1/CP.16, U.N. Doc. FCCC/CP/2010/7/Add.1 (Mar. 15, 2011) at 2 [hereinafter *The Cancun Agreements*].

10. *See* United Nations Framework Convention on Climate Change Article 1(1), stating that adverse effects of climate change have significant, deleterious effects on human health and welfare. United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 107 at 3, *available at* <http://unfccc.int/resource/docs/a/18p2a01.pdf> [hereinafter *UNFCCC*].

11. UNFCCC Article 2 sets forth the objective to ensure that food production is not threatened by climate change. *Id.* at 4.

12. The Cancun Agreements state “that the effects of climate change will be felt most acutely by those segments of the population that are already vulnerable owing to geography, gender, age, indigenous or minority status, or disability.” The Cancun Agreements, *supra* note 9.

13. UNFCCC, *supra* note 10, art. 6.

14. The Cancun Agreements, *supra* note 9.

The Cancun Agreements recognize that gender equality and the effective participation of women are important for effective action and that responses to climate change should be coordinated with social and economic development in an integrated manner mindful of vulnerable groups.<sup>15</sup> The Cancun Agreements specifically recognize the importance of indigenous peoples' participation in responding to climate change.

Taking seriously and fully resourcing the UNFCCC Article 4 and 6 mandates to facilitate broad public access to climate information and public participation can enhance the process of gathering an array of best practices. Doing so in good faith can build an effective, equitable, and inclusive means of sharing evolving climate understanding and innovations. The Cancun Agreements expand on the recognition of procedural rights by calling for the broad engagement of stakeholders at the global, regional, national and local levels, including governments, private businesses, and civil society.<sup>16</sup> Paragraph 8 also affirms that enhanced action on adaptation undertaken in accordance with the UNFCCC should follow a country-driven, gender-sensitive, participatory and fully transparent approach.

Effective and equitable climate coordination involves responding resiliently to climate instability. The UNFCCC calls for “measures to facilitate adequate adaptation to climate change.”<sup>17</sup> A comprehensive, cooperative adaptation framework can support national adaptation plans that facilitate climate-resilient development. Each country should implement early warning systems, disaster risk reduction strategies, and risk management plans. Adaptation measures will need to be based on emerging and traditional sound scientific and technological knowledge. Approaches to adaptation should also be environmentally sound, informed by the best science, as well as sensible from a financial and sustainability standpoint. On-the-ground results will come from predictable, sustainable, timely, adequate and stable financial resources on top of official development assistance. Parties will be asked to implement integrated best practices consistent with international law. Any reviews of national plans should assess and update measures for migration or relocation of climate refugees; increasing resilience through economic diversification; and creation or transfer of adaptation technologies. Like many other international

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15. The Cancun Agreements, *supra* note 9, ¶ 7.

16. The Cancun Agreements, *supra* note 9, ¶ 7.

17. UNFCCC, *supra* note 10.

cooperative initiatives, climate consensus has been a deliberative process not accomplished inside a day. That said, the global community must increase the pace at which robust, equitable climate responses are implemented. Thus far, public participation by civil society is enhancing the robust and equity elements of the outcome agreement text. Such contributions are occurring across the thematic mitigation, adaptation, innovation, and other themes underway.

While the threads of the climate talks form a complicated tapestry, it is worth noting a key climate decision-making process that is unfolding as this article goes to press. The UNFCCC Conference of the Parties (“COP”), by its decision 1/CP.19, invited all Parties to initiate or intensify Intended Nationally Determined Contributions (“INDCs”) in the context of adopting a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties.<sup>18</sup> Public participation continues to frame this process calling for robust, immediate commitments by each country. State and non-state actor involvement seeks to clarify: (1) level of proposed INDC contribution (e.g. target number), baseline, and commitment period (e.g. five-year plans) (2) types of INDC target (carbon budget, point target for a given year, deviation from target, other national plans); (3) accompanying information such as assumptions and forestry accounting; (4) forestry implications; (5) carbon market assumptions; (6) whether the INDC will include both unconditional and conditional components for developing countries; (7) release date for INDC; (8) information on policies and measures that will be used to support INDC goals; (9) types of greenhouse gases included and sectors affected; (10) aviation and maritime emissions policies; (11) inclusion of finance and adaptation; (12) statement summarizing why the INDC is equitable and robust.

The European Union has already pledged to cut its greenhouse gas emissions by 40 percent, compared with 1990 levels, by 2030. By 2025, the U.S. will cut by 26 to 28 percent, compared with 2005 levels. And China will ensure that its emissions peak by no later than 2030. Baselines differ, as do the scale of commitments, rendering it difficult to compare commitments. Yet, countries differ in scale and capacity and contribution to climate change. As this article goes to press, it remains an open question how rigorous and equitable the

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18. UNFCCC, Conference of the Parties, 19th Sess., Decision 1/CP.19, U.N. Doc. FCCC/CP/2013/10/Add.1 (Jan. 11, 2014).

emerging national commitments will be and whether the collective effort will match the scientific understanding of requisite greenhouse gas reduction. The challenging task at hand is within the capacity of the global community—coordination is the key element in greatest need of attention by states and non-state actors alike.

### B. *Evolving Recognition of Human Agency*

The United Nations member States set in motion the official process of inclusive environmental governance by adopting two instrumental General Assembly resolutions. The first culminated in the OUR COMMON FUTURE framing of sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”<sup>19</sup> UN member states went on to adopt a second resolution to hold the United Nations Conference on Environment and Development (“UNCED”)<sup>20</sup> to integrate efforts to halt/reverse harmful human impacts on the environment. The Framework Convention on Climate Change<sup>21</sup> emerged from this cooperative governance innovation. Building on the call to engage with civil society set forth in Article 71 of the UN Charter,<sup>22</sup> the dynamic network governance leading up to the 1992 Rio Conference culminated in unprecedented cooperation to agree upon climate, biodiversity, and desertification commitments.

Cognitive dissonance follows an inability to wrap individual minds around the sheer complexity at hand. Rather than losing perspective and learning helplessness, civil society can network dynamically to build climate-energy-water good governance coalitions with human rights and other public interest communities. Such energy-water-climate coordination through networks of

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19. Report of the World Commission on Environment and Development: Our Common Future (1987), available at <http://www.un-documents.net/our-common-future.pdf>; see generally United Nations, *UN Conference on Environment and Development (1992)*, (May 23, 1997), available at <http://www.un.org/geninfo/bp/enviro.html>; see also THE ROADS FROM RIO: LESSONS LEARNED FROM TWENTY YEARS OF MULTILATERAL ENVIRONMENTAL NEGOTIATIONS (Pamela Chasek and Lynn M. Wagner ed., Routledge, 2012).

20. G.A. Res. 44/228, U.N. GAOR, 44th Sess., (1990).

21. UNFCCC, *supra* note 10, art. 4(1)(i).

22. UN Charter Article 71 states, “The Economic and Social Council may make suitable arrangements for consultation with non-governmental organizations which are concerned with matters within its competence. Such arrangements may be made with international organizations and, where appropriate, with national organizations after consultation with the Member of the United Nations concerned.” U.N. Charter, art. 71.

governance need not exclude companies such as Patagonia and others that are forging new business models that combine social entrepreneurship, ecological integrity, and sound business practices.

While public entities are increasingly meshing with private entities, the legal system still recognizes the public-private dichotomy. In a forthcoming work, the Author conducts a substantive assessment of climate-energy-water synergies in such breakout technologies as offshore energy, considering how the renewables sector can play an important role in bridging the private-public governance gap. The social license to operate applies across the board in enmeshed climate-energy-water networks that hold network participants accountable to legitimacy standards that can impact the entire coalition. This Article concentrates on civil society participation in climate decision-making.<sup>23</sup>

We live in a complex adaptive system. By deepening cooperation going forward, the international community can increase its chances of averting extreme climate change. Remaining mindful of near, interim, and intergenerational temporal equity<sup>24</sup> remains key to calibrating behavior with the requisite level of energy-climate-water paradigm shifting.

Beyond the carbon footprint of participants (which can be offset), a more pernicious question remains how to deal effectively with regulatory capture when states and non-state actors gather in climate forums. This open question reemerges in many governance

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23. See Elizabeth Burleson, *The Polar Regions and Environmental Law*, in *ROUTLEDGE HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW*, (Shawkat Alam et al., ed., Routledge, 2012); Elizabeth Burleson, *Tribes as Essential Partners in Achieving Sustainable Governance*, in *LEGAL STRATEGIES FOR GREENING LOCAL GOVERNMENT*, (Keith H. Hirokawa & Patricia E. Salkin, ed., ABA, 2012); Elizabeth Burleson, *Dynamic Governance Innovation*, 24 *GEO. INT'L ENVTL. L. REV.* 477 (2013); International Law Association, Sofia Conference (2012), *Legal Principles Relating to Climate Change* (2012); Elizabeth Burleson & Winslow Burleson, *Innovation Cooperation: Energy Biosciences and Law*, 2011 *U. ILL. L. REV.* 651 (2011); Elizabeth Burleson, *From Coase to Collaborative Property Decision-making: Green Economy Innovation*, 14 *TUL. J. TECH. & INTELL. PROP.* 79 (2011); Elizabeth Burleson, *Making Sand Castles as the Tide Comes In: Legal Aspects Of Climate Justice*, 2 *J. OF ENERGY & ENVTL. L.* 42 (2011); Elizabeth Burleson, *Climate Change Consensus: Emerging International Law*, 34 *WM. & MARY ENVTL. L. & POL'Y REV.* 543 (2010); Elizabeth Burleson, *Collaborative Community-based Natural Resource Management*, 21 *FORDHAM ENVTL. L. REV.* 201 (2010); Elizabeth Burleson, *Emerging Law Addressing Climate Change and Water*, 5 *ENVTL & ENERGY L. & POL'Y J.* 489 (2010); Elizabeth Burleson, *Climate Change Displacement to Refuge*, 25 *J. OF ENVTL L. & LITIG.* 19 (2010).

24. See e.g., *Minors Oposa v. Secretary of the Environment and Natural Resources Fulgencio Factoran*, GR No. 101083, 30 July 1993, reprinted in (1994) 33 *I.L.M.* 173 (discussing intergenerational equity).

contexts. Public choice theory and cooperation theory can be complementary if public interest initiatives by civil society remain genuinely public interest in nature and the private sector does not render engagement in climate deliberations on par with chasing after windmills.

Public participation can contribute to insight generation, lowering uncertainty and shaping evolving legal norms. Rachel Carson helped usher in a Right to Know era characterized by scientific inquiry into the impacts of toxicity.<sup>25</sup> Thresholds are both scientific and legally relevant. In the former, scientific tipping points mark the outer limits of safe activity while in the governance context thresholds can help determine where balancing competing interests can result in tipping the cart on all stakeholders to no one's benefit.

Law and economics offers a frame with which to assess the effectiveness of legal institutions on behavior. While the Chicago School has occupied much of this discourse, so too have scholars from the London School of Economics tradition—characterized by Amartya Sen's Nobel Prize-winning advanced recognition of human agency.

Both economic traditions agree on the value of lowering transaction costs but diverge on the extent of self-interest as a driving force. Diffusion of ideas and norms occurs through markets to the benefit of some suppliers and some demanders (e.g. customers). Yet, epistemic community networks are not always easily summed up as customers, particularly in the environmental and public health context where economic inactivity can turn the notion of consumer on its head.

Whether a National Wildlife Federation calls to leave no child inside or a tribal call to climate participants that subsistence sustains cultural survival and human security—there are non-market needs and communities that impact supply and demand, but in ways not easily represented on traditional supply-demand curves. Models merely replicate reality and economic models more often than not ignore communities that do not represent markets.

Untethering decision-making from market modeling can help increase the scope of understanding and insight generation into how to balance sustainability – including how to equitably and efficiently address climate change. Economics can represent this larger frame

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25. RACHEL CARSON, *SILENT SPRING* (Houghton Mifflin Co., 1962).

through an expansion of public goods and externalities,<sup>26</sup> while cooperation theory can contribute to working through the international community's challenge to collectively address climate change. The climate negotiations collective action dilemma offers empiricists many iterations with which to analyze the lack of cooperation. Breakout solutions are long overdue.

From Kant to Tocqueville, Mill, and Rawls, to Sen, Slaughter, Fishkin, and others, the recognition of the value and interests of civil society continues to evolve. Recent Sustainable Development Goal initiatives may facilitate increased flow of climate dialogue and pace of cooperative climate initiative implementation. Sustainable development involves integrating environmental and human needs, engaging civil society rather than repressing people militarily or economically.<sup>27</sup> Traditionally, nation-states were subjects at international law. The international human rights legal regime in particular has recognized broad individual rights. Ordinary people are no longer seen as objects at international law, whose rights may or may not be advanced by given nation-states. Instead, individual people are subjects at international law, with increasingly recognized rights to information, public participation, and access to bring suits to protect individual rights as well as rights to participate in international decision-making. While fiscal barriers remain, civil society groups are emerging as public interest implementers of procedural human rights to a clean environment.

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26. Daniel Bodansky, *What's in a Concept? Global Public Goods, International Law, and Legitimacy*, 23 *E.J.I.L.* 3, 651, at 658 (2012) ("global public goods are externalities writ large. They create incentives to free ride. And in many cases, they require international governance to provide"). See also Gregory Shaffer, *International Law and Global Public Goods in a Legal Pluralist World*, 23 *E.J.I.L.* 3, 669, at 674 (2012) ("Nation states and other actors will not invest in global public goods if their independent action will have no impact, or if they can free ride on the investment of others. To produce global public goods often requires a sense of collective purpose based on mutual interests and understandings. To arrive at that collective purpose, we need (for economists) an alignment of incentives, and (for sociologists) socialization processes that lead to a common identity (such as national citizens). . . . For the production of many global public goods, legal pluralism, in which different legal orders interact with each other, works fine. There may be little need for international law, at least in its hard (mandatory) law variety, much less centralized international institutions.").

27. See generally JONAS EBBESSON ET AL., *ENVIRONMENTAL LAW AND JUSTICE IN CONTEXT* (2009); MICHAEL B. GERRARD & SHEILA R. FOSTER, *THE LAW OF ENVIRONMENTAL JUSTICE: THEORIES AND PROCEDURES TO ADDRESS DISPROPORTIONATE RISKS* (2008); M. SCOTT PECK, *THE DIFFERENT DRUM: COMMUNITY MAKING AND PEACE* (2d ed. 1998).



### III. CIVIL SOCIETY NORM DIFFUSION TO ADDRESS CLIMATE CHANGE

How can bottom-up and top-down approaches meet in the middle and address climate destabilization within a scientifically meaningful timeframe? UNFCCC Executive Secretary Figueres sums up the immediate climate challenge as a collective effort to ensure “agreement on an amendment to the Kyoto Protocol; a clear path on climate finance; effective review of the long-term global goal; an urgent response to the widening emissions gap; and a firm foundation for a long-term framework applicable to all, equitably instituted and responsive to science.”<sup>28</sup> This was the sandy Doha bucket list requisite upon competent, prudent governance.

A relevant question remains as to whether the climate dialogue is creating an arc to polycentric inclusive governance or is stranded out on a bridge to nowhere? This Article takes up the question, concluding that dynamic network governance that includes civil society in climate coordination can help span the gaping international climate governance gap.

International legal scholarship has focused on fragmentation, global legal pluralism, and scales of regulation. This Article seeks to contribute to the understudied climate cooperation field, building upon broader theories regarding why people cooperate and how governance approaches can facilitate cooperation. It considers law and economics to the degree that norm building is predicated on observing behaviors that are incentivized by legal decisions. Norm building and climate codification challenge the international community to solve a myriad of climate elements simultaneously and in a manner that does not overly burden economic and social sustainability going forward—no small task.

The new climate technology mechanism is critically positioned to provide coordinating leadership with broad civil society participation to develop specific technology road maps and technology needs assessments as well as broader climate innovation. For all of this to actually occur, it remains essential that both public and private financial communities facilitate implementation.

Mitigation, adaptation, technology transfer, and finance remain elusive shared understandings rather than concrete legally binding

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28. *Earth Negotiations Bulletin*, International Institute for Sustainable Development (IISD) (Dec. 5, 2012), available at <http://www.iisd.ca/download/pdf/enb12564e.pdf>.

commitments. Calls for funding developing countries' reduction of greenhouse gases and helping frontline communities to adapt to climate change are met with efforts to reframe the discussion towards measurable, reportable, and verifiable major emitter emissions targets.<sup>29</sup> A shared vision for detailed commitments that collectively address climate change remains vague while concrete implementation is long overdue.

From Rousseau, Kant, Mill, and Rawls down to recent contributions, the issue of governance beyond governments has created a vibrant legal philosophical dialogue. Robert Goodin points out that while representing every aspect of diversity at climate gatherings is unwieldy, diverse micro deliberations can be a powerful reminder of the need to recognize the elements of a diversity matrix as climate-energy-water solutions are designed and carried out.<sup>30</sup> Rosalyn Higgins highlights the evolution towards recognizing civil society participants in international law.<sup>31</sup> Similarly, Antonio Cassese counted on civil society rather than the media to sustain in-depth focus on human rights.<sup>32</sup> Philip Alston and Colin Gillespie summarize this process primarily by human rights NGOs as including information gathering and sharing through public education initiatives and in doing so articulating a moral perspective in international decision-making.<sup>33</sup> The pressure that such NGOs can exert on States has been substantial in the human rights context, particularly due to the information generation gap filling that NGOs have been able to accomplish in contrast to constrained states and international institutions composed of States.<sup>34</sup> NGOs can be at their most effective when they work in broad networks that value independent, impartial, proactive, and authoritative information sharing and participation in decision-making. Yet, Alston and Gillespie ask, "Are the methods of work on which they rely sufficiently collaborative,

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29. See Byrd-Hagel Resolution, S. Res. 98, 105th Cong., S. Rept. 105-54 (1997). On July 25, 1997, the US Senate passed the Byrd-Hagel Resolution by a margin of 95-0. The resolution expressed the view of the Senate that the United States should not be a signatory to any protocol that exempted developing countries from legally binding obligations.

30. See generally ROBERT E. GOODIN, *INNOVATING DEMOCRACY: DEMOCRATIC THEORY AND PRACTICE AFTER THE DELIBERATIVE TURN* (2008).

31. ROSALYN HIGGINS, *PROBLEMS AND PROCESS. INTERNATIONAL LAW AND HOW WE USE IT* 50 (1994).

32. See generally Philip Alston and Colin Gillespie, *Global Human Rights Monitoring, New Technologies, and the Politics of Information*, 23 *EUR. J. INT'L. L.* 1089 (2012).

33. See *id.*

34. See, e.g., Legal Response Initiative successes *available at* [legalresponseinitiative.org](http://legalresponseinitiative.org)

transparent, and self-correcting as to warrant such weight being placed upon them?”<sup>35</sup> At the same time that civil society groups increasingly compete for visibility and resources, they face ever-increasing challenges to transparency and organizational capacity-building.

Civil society climate participants can transcend the jockeying eddies of convention center branding through enhanced coalition building. The Climate Action Network, for instance, helps amplify and concentrate the civil society voice in UNFCCC gatherings.<sup>36</sup> Alston and Gillespie highlight that many networks “are peer-to-peer with minimal or no intermediation among the actors. They are characterized precisely by the extent to which they are decentralized and community driven.”<sup>37</sup> Members of civil society continue to play a powerful role by providing oversight so that the economic dimension of sustainability does not overwhelm social and environmental integrity. Sharing information is often key to such civil society check-and-balancing, particularly in the face of industry regulatory capture.<sup>38</sup>

Economic leaders, such as Stern, explain that addressing climate change is more efficient than not doing so. Stern calls for two percent of worldwide GDP to be invested annually in addressing climate change to protect the twenty percent of global GDP that is at risk if nothing is done.<sup>39</sup> Governance involving broad engagement in decision-making can facilitate deliberation that values rational debate as well as exchanging narratives that are more inclusive than economic charts and discount rates.<sup>40</sup> Whether one highlights good governance, sustainable development, and/or public good frames, each only reflects some useful elements of a broader reality that can never be fully represented by framing.

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35. See Alston, *supra* note 32, at 1089.

36. Climate Action Network materials are available at <http://www.climatenetwork.org/>.

37. Alston, *supra* note 32, at 1114.

38. Uzuazo Etemire, *Public Access to Environmental Information Held by Private Companies*, 14 ENV. L. REV. 2012, 7-25 (2012) (discussing why the public needs to be able to access environmental information directly from private companies and not just from government regulators).

39. Juliette Jowit and Patrick Wintour, *Cost of Tackling Global Climate Change Has Doubled, Warns Stern*, THE GUARDIAN (June 25, 2008), available at <http://www.guardian.co.uk/environment/2008/jun/26/climatechange.scienceofclimatechange>. Lord Stern explains that “[t]o get below 500ppm ... would cost around 2% of GDP.”

40. Elizabeth Burleson, *From Coase to Collaborative Property Decision-Making: Green Economy Innovation*, 14 TUL. J. TECH. AND INTELL. PROP. 79 (2011).

Adaptation can be recognized as a global, national, or local public good.<sup>41</sup> Each frame may influence the degree of resources and coordination capacity that flows toward adaptation initiatives. Incentivizing broader information generation, a public good in its own right, can lead to breakthrough climate solutions the implementation of which involves further public good dimensions. David Mathews explains that,

the public realm is older, more inclusive, and more fundamental than the world of government. The public is pro-governmental in that the work of the public in setting directions precedes steering or controlling. . . a public can be thought of as a group of diverse responsible human beings—a society of citizens. . . . People become a public when they acknowledge their interconnectedness and the consequences of their ties with others- over extended time.<sup>42</sup>

While individuals value privacy and often view the loss of privacy with loss of freedom, public goods and individual privacy are not mutually exclusive. The public disregards public goods such as a stable climate to the detriment of both public and private security.<sup>43</sup>

Climate insight generation through deliberation involves more than speeches repeating entrenched positions and signaling debate tactics. Inclusive deliberating helps the international community weigh whether - collectively or piecemeal- it is in a position to act to protect a public good and accept consequences of doing so. Climate deliberation has also involved working through implications of various climate approaches. Doing so involves exchanging perspectives rooted in both reason and values—evaluating the costs of action and inaction. Mathews concludes that “deliberation isn’t critical reasoning; it isn’t the exercise of pure reason and logic devoid of sentiment.”<sup>44</sup> Resilience involves becoming an art of knowing when to sustain traditions and when to embrace climate innovations.

It is easy to interact civilly while avoiding difficult decision-making, simply prolonging the need to engage until a shared vision for climate cooperation can be identified. Deliberating can be

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41. Elizabeth Burleson, *Multilateral Climate Change Mitigation*, 41 U.S.F. L. REV. 373 (2007).

42. DAVID MATHEWS, *POLITICS FOR PEOPLE: FINDING A RESPONSIBLE PUBLIC VOICE* 202-04 (2d. ed. 1999).

43. *Id.* at 205.

44. *Id.* at 228.

mistaken for arguing, also prolonging finding common ground upon which to coordinate climate mitigation and adaptation. Structure sometimes stultifies engagement—many climate participants can attest to some of the most insightful engagement occurring in hallways rather than official meetings. Climate participants may spontaneously join a discussion offering new insights on the implications of such an approach. In addition to random hallway gatherings, transport and food bring participants into smaller gatherings, often randomly as delegates plunk down next to strangers on buses or grab a quick bite to eat. Whether sharing a gridlocked shuttle ride, overcrowded café table, or reception nibble after a side event—the exchange of narratives lingers with participants and often is woven into broader dialogues over the coming days.

When these bits represent memes, the fundamental nature of their cultural core can offer climate forum building blocks with which to agree upon a climate initiative. As momentum for a new approach grows, participants with counter-arguments sometimes manage to have their signals heard amongst the throng and sometimes are left unheard. “Taking in diverse points of view, for instance, is a step towards marshaling a diverse array of civil capacities. Lateral communication is a step toward lateral cooperation. Finding or creating a shared sense of purpose is a step toward setting in motion self-directing, mutually reinforcing acting.”<sup>45</sup> Deliberating helps frame decision-making based on a public shared vision.

Climate decision-making is difficult not only because gathering climate insights has been unwieldy but also because impacts were perceived as not impacting short term political cycles and the host of implications for climate action versus inaction impact a daunting array of entities in complex ways. Why is this climate action so difficult to coordinate? Among the reasons is need for aggregate action on the part of almost 200 decision-making States that then must implement further collective action nationally. Free riding may be by design and may simply be for lack of ability to muster cooperative action. Front-runners are likely to face resistance as private economic powerhouses with corporate personhood not beholden to given nation-states may avert climate cooperation to maximize short-term shareholder profit through relocating to free riding jurisdictions.

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45. *Id.* at 248.

Deliberation can optimally direct climate participants to focus on collective decision-making, keep this decision-making on the table and gather personal climate and climate initiative impacts from participants—gathering information with which to make informed decisions that are both empirically and value driven.

Deliberative exchanges seek to include perspectives by those impacted by both action and inaction. Sharing information can lead to breakout coordination or can at least increase the capacity of participants to internalize each other's perspectives and relate to one another even if a given person does not alter his or her views on a given climate choice, he or she may better understand why another participant cannot similarly favor the given climate approach. This dialogue, for instance, has been unfolding with regard to climate solutions that are to be carried out on tribal land and thus impact tribal sovereignty. Sharing what trade-offs climate participants are and are not willing to make can either change who favors a given outlook or at least what participants think about each other's choices.

When a shared path emerges, it does not always reflect shared reasoning nor shared values. Delegates may not act out of agreement or compromise but rather out of a sufficient overlap in perspectives to open up an area upon which cooperation can thrive. Deliberation can help flesh out a range of actions—offering a scenario approach to decision-making rather than a more limited search for a magic bullet. Given that climate forums are iterative, each offers a closing stock-taking opportunity to identify what was left aside and what still needs to be addressed in the next round. This iterative process may be allowing those who favor climate inaction to use the deliberative experiment as a means of sustaining inaction.

When trust breaks down that genuine good faith is being exerted to reach decisions, participants will not stretch their deliberative capacities and put themselves in vulnerable positions as front runners hauling a free riding world behind them. Yet, civil society can deepen the climate dialogue.<sup>46</sup> Through sharing perspectives, individuals and civil society groups can step into the important timekeeper role of pointing out where the international community may have talked about a given element enough and are bordering on stalling the decision-making process. At the same time civil society generally,

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46. *Id.* at 232 (“People have to bring possibility into the room, the possibility of a shared sense of direction or of some cooperative action that wasn’t apparent when the deliberation began.”).

and highly visible NGOs in particular, can point out crosscutting issues and under-discussed elements of the climate challenge.

Effective climate deliberation can connect perspectives in a manner that assesses ramifications of a range of options. Climate trust building involves openly discussing uncertainties, conflicts and costs. Rarely linear and entirely agreeable, deliberation seeks not to gloss over differences but rather to map perspectives to better understand a bigger picture and from this vantage point find a shared direction. This can be done when civil society and state actors genuinely engage in something along the following lines:

Here are our experiences with this issue, here is what we see as the conflicts among the options, and here is how we have tried to resolve that tension. Now tell us what your experience is, how you see the conflicts and which direction you would take in light of them.<sup>47</sup>

Even if participants become adept at such deliberating, decision-making is not in and of itself self-implementing. Yet, when norm building evolves into self-directed customs transaction costs fall as a shared vision becomes natural. Deliberative communities can innovate climate customs and in doing so protect the global public good of a stable climate.

Global public goods often require collective effort on the part of many countries to sustain. Expanding fundamental scientific knowledge and ramping up climate change mitigation are two public goods arenas that have not been easy to carry out. As Scott Barrett explains, “failure to supply these global public goods exposes the world to great dangers. Providing them expands human capabilities.”<sup>48</sup>

Developing and diffusing breakthrough climate technologies could address climate change without substantially impacting economic growth. Multilateralism can lead to evolved institutional capacity to address climate change through greater country coordination and enhanced innovation incentives.

Unlike some public goods that can be sufficiently supplied by a single lead country, climate change requires substantial participation from major emitting economies and supply chain shifts. Mutual

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47. *Id.* at 232.

48. SCOTT BARRETT, WHY COOPERATE? THE INCENTIVE TO SUPPLY GLOBAL PUBLIC GOODS 1 (2007).

restraint in emitting greenhouse gases is in order but fortunately 100 percent participation is not required like it was for wiping out small pox. Weak links do however impact the cost of production and the willingness of the international community to commit to stringent greenhouse gas emission cuts.

Unlike a train, climate mitigation does not always require staying on a single track. Renewables, efficiency, protecting carbon sinks, etc. can involve smaller groups while working through challenges at a smaller scale and still be able to link to global climate mitigation initiatives, perhaps through coordinated cap and trade that is designed carefully so as not to create social and environmental externalities. Such non-State actor contribution is substantive and augmented by procedural public participation in climate decision-making that can help implement initiatives that can incentivize greater climate mitigation and adaptation coordination.

Public participation as an inclusive deliberative means of environmental decision-making gathers stakeholders' knowledge and insights to address complex cross-cutting issues rather than relying on managerialist approaches where professionals may have useful expertise and agency capacity but lack threshold information and implementation wherewithal.<sup>49</sup> It remains an open question whether public participation in decision-making empirically results in greater implementation of better practices as such governance is still understudied yet gaining recognition as a critical democratic enhancer of effective, legitimate governance.<sup>50</sup>

Considering public participation benefits and drawbacks, Irvin and Stansbury consider such benefits as increasing education, empowerment, and breaking through political gridlock.<sup>51</sup> Climate forum participants have the opportunity to increase their understanding of technically difficult dynamics of sustainability and contribute holistic, community insights and initiatives.<sup>52</sup>

Understanding the narratives behind given negotiation positions can help participants find common ground and breakthrough solutions

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49. See Roger Few, Katrina Brown, & Emma L. Tompkins, *Public Participation and Climate Change Adaptation: Avoiding the Illusion of Inclusion*, 7 *CLIMATE POL'Y* 46, 48 (2007).

50. Renée A. Irvin & John Stansbury, *Citizen Participation in Decision Making: Is it Worth the Effort?* 64 *PUB. ADMIN. REV.* 55 (2004).

51. *Id.* at 56-57.

52. *Id.* at 56.



if stakeholders approach climate gatherings as an opportunity to engage and learn from one another rather than a podium upon which to be Johnny One Note for a single thread of the climate tapestry and that thin thread alone. Webs and tapestries consist of threads of varying gages. Thick enmeshment is useful in some contexts and more independent endeavors more useful in other contexts. Climate forums arguably can accommodate both but core to the process is a sharing of information and genuine participation not a cacophony of unlike-minded entities simply tolerating each other as audiences for unwavering messages from limited perspectives. If such dynamics become entrenched than little is gained by gathering.

Public participation can empower civil society to share perspectives with states and other non-state actors.<sup>53</sup> Doing so optimally helps break through gridlock as “balanced input from [public] participants allows factions to compromise and find solutions to previously intractable problems.”<sup>54</sup> Climate change is a complex issue that requires an educated public and policy makers who understand how climate change is affecting local communities and the population in general. Climate complexities render it an ideal context in which to reduce scientific uncertainty through broad solution generation mindful of intergenerational climate impacts. Thus, while public participation can be complex in its own right,<sup>55</sup> done well it can lead to greater climate adaptation and mitigation understanding and implementation. A key insight that Few et. al. highlight with regard to the climate governance experiment underway is that engagement goes “beyond a minimalist ‘consultative’ approach of staging a meeting, presenting proposals and asking for comment. Stakeholders must have a genuine opportunity to construct, discuss and promote alternative options.”<sup>56</sup> Palerm acknowledges similar limitations of public participation in the Aarhus Convention context of information sharing, participation, and redress that codified Rio Principle 10. Palerm suggests using the Habermas theory of communicative action in order to analyze the effectiveness of public participation.<sup>57</sup>

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53. *Id.*

54. *Id.* at 57.

55. Few, *supra* note 49, at 55.

56. Few, *supra* note 49, at 56.

57. See Juan R. Palerm, *Public Participation in Environmental Decision Making: Examining the Aarhus Convention*, 1:2 J. ENVTL. ASSESSMENT POL’Y & MGMT. 229, 233 (1999); see also Convention on Access to Information, Public Participation in Decision-

Communities do not always share rights and responsibilities based on sheer power plays. There is a public recognition that beyond self interest, communal resilience depends upon pooling resources, looking to specialized competencies, gathering in ongoing governance forums, and genuinely caring for vulnerable community members.

Couching climate solution generation in the above framework, rather than a one-off contract negotiation, reflects the enmeshment that has developed in the global community. Dynamics of cooperation ebb and flow with issues presented and with the scarcity of given resources.<sup>58</sup> A myriad of other elements impacts the reverberation of the sustainability matrix—just as Chief Seattle spoke of a web of life connecting everything. Language evolves and communities grow but scientific thresholds can be surpassed. Irrespective of the resilience of individuals, communities, and natural systems boundaries exist (both scientifically and politically). In this world where global interactions have gotten out ahead of cultural cohesiveness, norm building can begin to bridge the gap.

Government norm building campaigns are not always as successful as those that are more integrated into the fabric of communities. It is not the same thing to be told by a public service announcement to avoid an environmental or health behavior as opposed to spreading useful advice among networks of family and friends. Implementation of sound policies can utilize non-state actor expertise and a personal touch. Yet, this is only one thread of public participation in decision-making.

International decision-making has become a patchwork of knowledge and strategy that often advantages developed countries and well resourced private sectors. While mention of capacity building is frequent in international gatherings, actual engagement is still embryonic *vis a vis* already powerful agents. Current policy-making processes tend to disadvantage small resource constrained entities and individuals. Coalition building can help when resource constraints impact oversight capacity and collective solution generation. Such coalitions can diversify deliberations, broadening insight sharing and deepening collective understanding of conflicting

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Making and Access to Justice in Environmental Matters 1998, Oct. 30 2001, available at <http://www.unece.org/env/pp/documents/cep43e.pdf> [hereinafter *Aarhus Convention*].

58. See Symposium, *On Six Advances in Cooperation Theory*, *Analyse & Kritik* 22, 130-151 (2000); see also R.L. Trivers, *The Evolution of Reciprocal Altruism* *THE QUARTERLY REVIEW OF BIOLOGY* 46 (1), 35-57 (1971).

and synergistic co-benefits across environmental, social, and economic dimensions of the sustainability matrix.

Done badly, a brainteaser knot can result rather than an intricate tapestry. Global environmental forums can feel like knot-tying exercises where the game of Twister looks like child's play. Once deeply held beliefs are twisted beyond recognition in an effort to meet in the middle, and then the collapse of inter-tangled body parts seeking to keep one foot on a green space, another on a red, and a hand on a blue space can dislocate joints physically and figuratively. All night sessions and hurried scrambling between forums is neither good for focused deliberation nor for the health of those participating. More than antidotal war stories, the systemic lack of capacity to contribute insights, information, approaches to resolving complex dynamics of climate mitigation and adaptation in culturally and geographically appropriate ways—all this adds up to disenfranchisement of civil society and smaller country delegations.

Climate decision-making processes are generally complex and a moving target not only with regard to country positions but involving evolving language and new understandings of the dimensions of the issues under discussion. Stamina and intellectual capacity are often needed to stay abreast of even one element of international climate coordination, let alone human rights, intellectual property, engineering, science, geopolitical, and other eddies. Under staffed delegations simply cannot be in all the rooms necessary to participate in the ongoing working groups leading up to outcome document generation. Capacity building can involve augmenting government officials on delegations with non-state actors that have adequate training, knowledge, experience, and diplomacy skills with which to swim the synchronized routine yet still add value with insight generation and out of the box solutions.

Civil society actors and less powerful country delegations sometimes experience similar disenfranchisement in climate forums and can network to build capacity as well as legitimacy. Done in a manner mindful of economic, social, and environmental conflicts and synergies—such coalitions can add value to climate coordination. Done in a manner exclusive of key stakeholder concerns then public choice rent seeking behavior not conducive to lasting trust and genuine climate cooperation unfolds. Public choice theory recognizes potentially coercive elements of state and non-state interactions. Inclusive coordination to design and implement climate-energy-water

solutions is susceptible to capture by powerful non-state actor interests. This renders the decision-making process illegitimate and opaque and increases the strain of implementation if broad swaths of civil society and the private sector lack respect for the ends and means of decision-making. Both process and substantive law are integral to robust, respected rule of law. Pitfalls include decisions and discourse that is over-narrow or over broad. Vague binding language that neither results from shared definitions nor detailed programs of action can be as disheartening as provisions that ignore negative externalities impacting interrelated elements. Depth and breadth in design and implementation sustain the kind of trust that enhances ongoing coordination. Detail oriented specialists and generalists alike can contribute to the balance of emphasis on the big picture and its nuances.

Informally constituted grassroots organizations are often so small that they lack capacity to field the breadth of climate elements. Established Northern NGOs have become adept at policy-making processes and may be in a position to offer capacity building to state and non-state actors. Doing so in genuine collaborative networks is more effective than having insights hidden in an effort to unify behind a given banner.

As a participant observer in the climate negotiations in particular and sustainable development generally since the mid-1980s, this Author cannot help lamenting the degree to which branding efforts can impact cooperation. Parades involve distinct entities that may carry a banner, chant a slogan, collectively contribute through visible presence—but lack collaborative insight sharing capacity. This Author prefers drafting working groups to parades, while recognizing that the latter has a different impact on the media and general public. There is only so much that one can state on a banner and frankly the climate-energy-water challenge brings with it a degree of complexity requiring the exchange of thoughtful ideas and solutions, the shaping of these into initiatives that can be implemented—all more nuanced than the branding process permits. When the hallways were organic meeting spaces where breakout solutions were crafted, networks emerged and thrived. Now that many groups are granted a booth or room, fewer such interactions generate genuine collaboration and many more participants' remains scripted. Positions do not budge and needed years are lost.

In contrast, when a diverse range of stakeholders interact in flexible gatherings, legally binding commitments can ensue from the combination of a broad social license to act, insights as to optimal actions to undertake, and implementation networks that make legal actions viable. As capacity grows more options become available. Informal workshops can often narrow differences through finding common ground and broader contexts in which to cooperate in a manner that address concerns.

#### IV. CIVIL SOCIETY COOPERATION RECOMMENDATIONS

Amartya Sen focused on people as agents with values that could be shared and collectively guide development and whose energies should be facilitated to engage in public interest work. This capability building approach broadens the notion of value well beyond that of economic utility or the production of given commodities. Together people can overcome capability contractions, human rights violations, and systemic inequity.<sup>59</sup> Sen emphasized that, “individual agency is, ultimately, central to addressing these deprivations. On the other hand, the freedom of agency that we individually have is inescapably qualified and constrained by the social, political and economic opportunities that are available to us.”<sup>60</sup> Equity and efficiency are plural principles of assessment, and development is as equally about expanding people’s freedoms and capabilities as with expanding economies. The Center for International Environmental Law explains, “by facilitating participation and transparency, grievance mechanisms . . . help to ensure that projects are legitimate and effective, and promote sustainable development.” In addition to establishing grievance processes for such elements as the Clean Development Mechanism and Green Climate Fund, a new loss and damage mechanism should also enable civil society to submit relevant information, impacts of climate change, and make requests for compensation. The Center for International Environmental Law emphasizes the power of a rights-based approach to climate change to facilitate mitigation and adaptation policies that promote both human

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59. Amartya Sen, *DEVELOPMENT, RIGHTS AND HUMAN SECURITY*, Human Security Now; Commission on Human Security, United Nations, at 8-9 (2003).

60. AMARTYA SEN, *DEVELOPMENT AS FREEDOM*, xi-xii (1999).

rights and environmental integrity—including climate impacts on substantive rights to life, food, water and culture.<sup>61</sup>

Environmental Sustainability Indexing is affordable when a long-term sustainability matrix is used as the framework for action. This requires thinking beyond short-term policy timeframes. Civil society participation generally and youth insights in particular can help stretch perspectives to resolve long-term challenges.

Civil society participation in climate decision-making reinforces Article 6 of the UNFCCC and Rio Declaration Principle 10. This principle has reached its most codified form in the Aarhus Convention recognition of rights of access to information, full and effective participation, and access to justice. Collectively there is great potential for enhancing civil society climate cooperation.

Innovative and resilient resource capacity building should be fleshed out in inclusive governance forums going forward. The following unranked key and integrated recommendations seek to advance human rights and climate solution implementation:

1. Reduce Short Term Climate Forcers and Enhance Climate Understanding
2. Synergize Mitigation, Adaptation, Innovation, and Resilience Measures
3. Protect Human Rights Defenders and Enhance Procedural Rights
4. Innovate & Share Environmentally & Socially Sound Climate Technologies

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61. Alyssa Johl & Sébastien Duyck, *Promoting Human Rights in the Future Climate Regime Open Peer Commentary*, Vol. 15, No.3 Ethics, Policy and Environment, 298–302 (October 2012), available at [http://www.ciel.org/Publications/PromotingHumanRights\\_Jan2013.pdf](http://www.ciel.org/Publications/PromotingHumanRights_Jan2013.pdf) (“Participatory and transparent procedures governing the work of these institutions could minimize the potential impacts of the decisions of these bodies on the rights of indigenous peoples and local communities. Such procedures could also provide a remedy to the individuals, peoples or communities whose rights may be affected by climate change impacts or response measures, and improve the quality of decisions adopted under the climate change framework.”); Leanne Simpson, *The Legacy of Deskahehe: Decolonising Indigenous Participation in Sustainable Development Governance*, *THE POLITICS OF PARTICIPATION IN SUSTAINABLE DEVELOPMENT GOVERNANCE*, 110 (Jessica F. Green and W. Bradnee Chambers eds., 2006) (asserting that indigenous peoples have been most successful in influencing the global agenda on environmental policy when these strategies are combined in a multifaceted approach).

A. *Reduce Short Term Climate Forcers and Enhance Climate Understanding:*

Reducing black carbon and methane, two powerful short-term climate forcers, can quickly and equitably advance our global climate response. Enhanced pre-2020 climate action has little time and among the greatest opportunity to reduce the force of climate change. China and India produce 25 to 35 percent of global Black Carbon emissions,<sup>62</sup> providing a substantial opportunity to innovate heating and cooking options for civil society. Doing so provides the public health co-benefit of reducing lethal indoor air pollution as well as greenhouse gases contributing to climate change. Our best chance of sustaining life, as we know it, in the near term is to launch a substantial short-term climate forcer reduction initiative globally. Despite the urgency to reduce methane, black carbon and other short lived climate forcers, understanding of the ease and imperative with which it can be done remain back burner topics for lack of state and non-state coordination to prioritize effective and equitable rapid response measures.

That said, civil society experts have helped frame the climate crisis through ongoing scientific information sharing and assessment. In addition to increasing climate research and development across the board, the International Panel on Climate Change (“IPCC”) state and non-state actor drafting process can become more transparent, timely, and inclusive. The World Meteorological Organization (“WMO”) and UN Environmental Programme (“UNEP”) helped spearhead intensive climate information sharing that launched the largely non-State actor international network of scientists who identify, frame and evaluate climate ramifications for diplomats. IPCC reports offer an authoritative climate consensus, constrained by remaining scientific uncertainty on such issues as ocean currents; limited resources with which to carry out sufficient climate monitoring; and inconsistent political willingness to shock civil society with the devastating scale of scientific climate instability projections.

While climate solutions generally require substantial investment and implementation capacity, addressing short-term climate forcers by broadly transitioning to renewable, efficiency, and full combustion

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62. V. Ramanathan and G. Carmichael, *Global and Regional Climate Changes Due to Black Carbon*, NATURE GEOSCIENCE, Mar. 23, 2008, at 226, available at <http://www.nature.com/ngeo/journal/v1/n4/pdf/ngeo156.pdf> (the study was funded by NSF, NOAA and NASA).

innovations can substantially and affordably reduce the full blow that climate change is already delivering. It is eminently achievable and imperative that the global community coordinates rapid responses to such short-term climate forcers. This needs to be done in an inclusive manner, mindful of cultural traditions, innovation sharing best practices, and resilient lives and livelihoods.

B. *Synergize Mitigation, Adaptation, Innovation, and Resilience Measures:*

Full life cycle analysis should be ongoing. Coordination can facilitate breakthroughs in economic, social, and environment relations and build upon best practices. Sustaining coastal wetlands, adapting water sharing within a watershed framework, enhancing energy efficiency, and greening infrastructure through green building/restoration evolving best practices are but a few examples of win-win endeavors that both mitigate and enhance climate adaptation.

In transitioning to sound energy-water-climate policies, it is important to recognize where the obstacles are scientific, where there are political eddies, and what role the legal system has and can play in addressing climate change. Zoning and building codes in particular can have an enormous impact in this area and at the very least should not prevent environmentally sound improvements to be undertaken at all scales.<sup>63</sup>

Given the reality that poor people in developed countries construct their own homes, the international community can facilitate capacity building in the form of model homes that can be copied by people building their own homes, emphasizing resilience to disasters that may impact the given region. This effort can combine local traditional knowledge with structural engineering developments to achieve safe, affordable, sustainable living spaces throughout the world.

For instance, in addition to reducing greenhouse gas emissions, green roofs can absorb water on site that otherwise would contribute to increased storm water flooding.<sup>64</sup> The New York City Panel on Climate Change explains that,

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63. Edna Sussman et al, *Climate Change Adaptation: Fostering Progress Through Law and Regulation*, 18 N.Y.U. ENVTL. L.J. 55, 103 (2010).

64. *Id.* at 57, 66 (“New zoning regulations can improve storm water management and reduce flooding on privately owned property. To reduce flooding and decrease the incidence of combined sewer overflow events and related pollution, best practices for on-site storm water



Greening buildings can minimize the strain on energy and water resources projected to result from climate change impacts and diminish the likelihood or magnitude of system overloads, brown-outs/black-outs, and flooding. The benefits of improving building performance can be achieved with actual cost savings or in some cases at minimal additional cost, even on a first-cost basis and certainly on a lifecycle basis. Green buildings are a crucial sector to address in fostering adaptation measures, since they are designed to be more energy efficient, thus relieving stress on the electricity systems that would be occasioned by climate change's increased temperatures. They can also be designed to conserve water, thus reducing the impacts of a drought, and to retain more water on site thus reducing the flooding consequences of climate change.<sup>65</sup>

New York exemplifies a city that has incentivized green roofs by offering tax abatements.<sup>66</sup> Greening infrastructure combines adaptation and mitigation—it requires state and non-state actor cooperation to transition to evolving best practices that sustain social and environmental integrity. Similarly, nascent disaster planning can harmonize the roles of various layers of the public sector, fleshing out the means by which human security will be addressed, as climate risks become better understood.<sup>67</sup> This can be an adaptive process informed by new scientific and civil society contributions to the understanding of how best to respond to climate disruption patterns with innovation and resilience.

*C. Protect Human Rights Defenders and Enhance Procedural Rights:*

Human rights and environmental integrity should be clarified throughout environmental, social, and economic instruments and policy. Meaningful participation of UNFCCC observers and civil society in broader contexts can be integrated into sustainability decision-making across the board. Approaches can include submitting questions through electronic means concerning the INDCs and

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management could be incorporated throughout the Zoning Resolution as well as in the Building Code.”).

65. *Id.* at 98.

66. N.Y. Real Prop. Tax Law § 499-aaa-ggg (McKinney 2009) (such tax abatement programs promoting green roofs can lowering grid load and raising on-site stormwater retention).

67. Sussman, *supra* note 63, at 127.

involving non-state actors in enhanced pre-2020 climate action. Clarifying procedural rights to access to information, public participation, and access to justice in sustainability decision-making can enhance substantive human and environmental protections.

Inclusive societies involve trust, which in turn involves respect. This respect is often built upon sharing understandings and observations that contribute meaningfully to solution generation at micro and macro levels. It takes resources to facilitate inclusive decision-making—an investment that provides substantial returns in broad commitment to the solutions being generated.

If everyone is doing the heavy lifting at the same time, the challenge of curbing climate change becomes plausible in a manner currently not well understood in many contexts. As climate decision-making in international forums such as the UNFCCC continues to provide examples of state and non-state actor consensus building, the practices underway can be resized and innovated to work well in other contexts. There are implementation economies of scale that are enhanced when civil society participation occurs in the decision-making process. When voices are heard in forums such as the UNFCCC, the nuanced elements of climate solution-smithing can occur more effectively than when voices are reduced to protest slogans in street demonstrations. The September 2014 United Nations gathering of heads of state combined with several thousand people showing solidarity on the streets of NYC (and elsewhere around the world) reinforced the need for state and non-state actor multi-forum climate cooperation. It takes a global community to sustain such a core global public good as a habitable climate. It does not require seven billion people to draft a climate agreement but it has proven to require civil society observer participation to sustain robust and equitable climate commitments in negotiations over line-item legal text.

Multilateral climate coordination benefits from broad civil society license to operate and legitimacy in representing constituency interests. When minority interests are disproportionately impacted, as is occurring with frontline community climate crises globally, courageous change agents have stepped forward and spoken truth to power and sometimes paid with their lives to raise awareness of elements of climate destabilization and other sustainability challenges. IUCN's Justice Antonio Benjamin (Brazil) explains that it

is important to climatize a wide range of governance areas.<sup>68</sup> At the climate talks in Lima, he emphasized that constitutions around the world protect a right to life and that climate change increasingly jeopardizes that core human right. Human rights implications permeate the climate agenda, both substantively and procedurally.

Including Human rights metrics in keeping with evolving scientific understanding of tipping points and nature-based solutions can help address the climate challenge. Human rights defenders require protection in order to participate in climate change decision-making. The global community can resolve incongruence between the high level commitment to public participation under the UNFCCC Article 6 and the continued persecution of environmental human rights defenders when they attempt to publicly participate on environmental issues.<sup>69</sup> The killing of Ecuadorian tribal leader José Isidro Tendetza Antún once again highlights that human rights abuse and structural power inequalities continue to impact front line community participation in environmental decision-making. Participants at forthcoming climate talks have an opportunity to strengthen human rights language through UNFCCC Article 6, through the substantive articles of pending instruments, and through inclusive state and non-state actor cooperation. The means are the ends with regard to sustaining climate cooperation. Integrating human rights and environmental integrity language into climate decision-making can increase the urgency and commitment to commit to a cumulative carbon budget that includes more stringent regulation of global fossil fuel reserves, protects human rights, and that responds effectively to climate change.

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68. IUCN Presentation at the UNFCCC Climate Talks, Lima (2014).

69. UNFCCC, *supra* note 10 (Art 6 states that “In carrying out their commitments under Article 4, paragraph 1(i), the Parties shall: (a) Promote and facilitate at the national and, as appropriate, subregional and regional levels, and in accordance with national laws and regulations, and within their respective capacities: (i) The development and implementation of educational and public awareness programmes on climate change and its effects; (ii) Public access to information on climate change and its effects; (iii) Public participation in addressing climate change and its effects and developing adequate responses. . .”).

D. *Innovate & Share Environmentally & Socially Sound Climate Technologies*

Doing so can help solve climate change through public participation. Innovation has achieved remarkable shifts in the human condition and has expanded human agency. Distributive equity issues are crucial in choosing effective economic tools with which to protect natural resources. Inclusive decision-maker deliberation can be guided by considerations of micro and macro: natural conditions, socio-economic needs, demographics, effects of utilizing a resource, existing and potential use, conservation, and availability of comparable alternatives. Equitable and sustainable management of natural resources requires multidisciplinary involvement on the part of stakeholders. Civil society is helping find breakout climate solutions through inclusive innovation hubs. UNEP's longstanding commitment to civil society participation bodes well for the first round of UNFCCC Technology Mechanism hosting by a UNEP-led consortium. Building on technology transfer commitments from UNFCCC combined with capacity building coordination, non-State actor participants, including this author, are providing detailed innovation and capacity building expertise in response to specific developing country requests in concert with civil society implementation cooperation.

Gathering in such interdisciplinary, multilateral forums can help develop more richly and fully the laws and policies with which jurisdictions at different scales can implement best practices that are locally viable. Sustainable climate innovation networking can help solve the collective action problem paralyzing multilateral climate cooperation. The United Nations Development Programme ("UNDP") explains that innovation involves research, deployment and diffusion:

Deployment of a technology into a market is a difficult process where a technology may be unknown to users. A period of awareness building of the technology, its capabilities and applicability as well as trial- ability with development of back-up services for maintenance and support is useful. The market 'pull' for these technologies is also important in terms of their affordability, demand, availability of finance, and commercial presence of entities able to deploy the technologies. The practicalities of deployment must recognize that transfers will be enacted through private sector agents and include consideration

of facilitation of the process for investors and users. 3. Diffusion: The diffusion of a technology or measure within the market refers to the process of widespread adoption of a technology or measure to the point where sufficient numbers are deployed to make the manufacture and sale of a technology commercially competitive or the use of a measure widespread. . . . In practice, the above stages form a continuum where phase boundaries are blurred depending on the technology and circumstances.<sup>70</sup>

Understanding from whence we came can be helpful for building on common ground. Several decades ago, we defined environmentally sound technologies. This Agenda 21 Chapter 34 definition states:

Environmentally sound technologies protect the environment, are less polluting, use all resources in a more sustainable manner, recycle more of their wastes and products, and handle residual wastes in a more acceptable manner than the technologies for which they were substitutes.<sup>71</sup>

While innovation was held back in the climate talks as a bargaining chip to broker difficult deals, the climate mechanism has come into being and is stretching its wings. Within this Climate Technology Centre and Network (“CTCN”), the Author’s Burleson Institute focuses on environmentally sound technology as a bridge to climate cooperation and sustainability. Through technical assistance, intentional learning networks, and educational outreach, we are building a culture of best practice sharing where sustainability stakeholders are equal partners, working together toward substantive and procedural good governance. Innovation is at the core of this endeavor, as is regional coordination to implement existing and emerging best practices. We provide timely, insightful, impartial analysis to government officials, nongovernmental organizations, tribal communities, business leaders, and individual members of civil society globally. Our role is to provide key research and analysis that advances environmental effectiveness, social justice and economic efficiency. As a non-profit organization, committed to advancing the global public interest through legal/policy recommendations,

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70. UNDP, HANDBOOK FOR CONDUCTING TECHNOLOGY NEEDS ASSESSMENT FOR CLIMATE CHANGE, 71 (2010), *available at* [http://content.undp.org/go/cms-service/stream/asset/?asset\\_id=2972062](http://content.undp.org/go/cms-service/stream/asset/?asset_id=2972062).

71. U.N. Dep’t of Econ. & Soc. Affairs Div. for Sustainable Dev., AGENDA 21: Earth Summit—The United Nations Programme of Action from Rio (Apr. 1993), *available at* <http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter34.htm>.

education, and capacity building, we are a leading advocate for a (1) robust, (2) global, (3) long-term climate regime.

We network to enhance engagement among energy, climate, water, public health, human rights and related communities. We contribute insights for solution generation in light of environmental, cultural, and economic interrelationships. Blending interactive learning, mentoring, and fieldwork—we seek to contribute to evolving research, analysis and innovation. We share information and analysis on emerging best practices and solutions. Participants help address human rights, energy, and environmental concerns - engaging in gatherings that range from local to global initiatives. The Burleson Institute's mission is to create and share ideas, contributing to public interest cooperation. Among its areas of focus are interrelationships among human rights and environmental integrity. We facilitate dialogue on green governance, restoration, building, efficiency, and sound energy use—considering water and other life cycle analysis factors across a range of energy-climate-water dynamics. We offer comparative analyses that seek to highlight evolving best practices. We identify problems, potential theories, and policies with which to address these challenges. We contribute to scenario analyses that propose a range of plausible outcomes. These depend on initial ingredients of cooperation and willingness to pursue polycentric and global cooperation. The variability in outcomes also depends on such destabilizers as conflict resource impacts upon economic stability and human rights.

We facilitate the work of exceptional research fellows, capable of responding to high expectations and committed to scholarly analysis and educational outreach. Senior, mid-career and post-doctoral experts continue to contribute to work on emerging sustainability challenges. Institute representatives are available to speak on a range of energy-climate-water-governance themes and our available collection of books, treatises, and journals cover a broad range of subjects related to human rights and environmental integrity. We hold research forums through our Public Interest Network (“PIN”) – facilitating dynamic and inclusive energy-water-climate community capacity building. PIN Grant recipients gain first-hand experience addressing public interest challenges and responding to Gandhi's challenge to be the change that we wish to see through enhancing state and non-state actor climate engagement. The following values and goals guide our work:

**Innovation:** design/implement sustainability problem-solving tools and solutions

**Diversity/Integrity:** sustain biodiversity, broad perspective sharing, commitment to rigorous analysis, and ethical action

**Embrace Challenges with Optimism:** understanding real-world dynamics, and wholeheartedly working towards solutions

**Results:** Contribute to solutions that have a lasting local and global benefit

**Goal 1:** Ensure robust research that informs and inspires evolving best practices

**Goal 2:** Respond to climate change and its human and environmental impacts

**Goal 3:** Accelerate climate-water-energy transition to a sustainable path

**Goal 4:** Advance watershed and wildlife revival

**Goal 5:** Governance - realizing the right to climate-energy-water security

Through technical assistance, intentional learning networks, and educational outreach, we are building a culture of best practice sharing where sustainability stakeholders are equal partners. With inclusive field capabilities that span legal, scientific and technical expertise—we organize our work around interrelated, core goals that the world must achieve this decade in order to secure a sustainable future:

**Climate:** Help communities and natural ecosystems to enhance mitigation, adaptation, innovation, and sharing resources to respond to climate change effectively and equitably.

**Energy:** contribute to catalyzing a global energy transition that expands energy access in a way that is environmentally, socially, and economically sustainable.

**Water:** Advance water security through coordinated life cycle analysis measuring and contributing to reducing global water instability and working towards a water-secure future.

We work with a public interest network of civil society including indigenous peoples, local communities, NGOs, youth, government officials, business leaders, and educational institutions. Our methodologies include rigorous analysis that lead to original

contributions across our program areas in recognizing new uses for law that achieve environmentally and socially sound objectives.

Having been involved in climate agreement drafting since 1990, this case study provides but one example of the catalytic civil society participation towards effective and equitable climate solution implementation.

#### V. *WAY FORWARD BUILT ON SHARED UNDERSTANDINGS*

From weather satellites to solar cookers, innovation requires both governance and substantive insights and implementation. Aldo Leopold's thinking like a mountain might lead to the equanimity with which to be skillful participants in increasing climate resilience. When the mountain is being washed away into the sea, the pace of deliberation should match the pace of the need for a meaningful response to loss of life and land. Being grounded is relative and often profoundly personal. Gandhi began with salt for good reason. It was illegal to produce salt in a subsistence manner and yet culturally core to freedom. It grounded a human rights movement: Thoreau's efforts to live deliberately and share his legal philosophy with others profoundly impacted Gandhi, Martin Luther King, Jr., and in turn the evolution of humanity. In 1994, the Author wrote the following from conflicted Chiapas, Mexico:

Life has a way of burying inspiration with experience. It is hard to retain who you are and what you want for yourself and the world. Grinding engines, clouds of exhaust, and silent stares sustain a tension that drains the soul. You can see it in the eyes of a person (of any age) crumpled on a street corner. It's a contagious hollowness that is as disturbing as the soldier's gun. My mind has been juggling all these thoughts, trying to come to terms with the dependency that peace has on a whole range of factors out of my control.

Two decades later, it remains a global struggle to integrate human rights protection and environmental integrity, using international tools crafted for armed conflict and ill equipped to address climate change. When the ground moves and change is the only constant, perhaps grounded is an elusive goal. The dynamic power of public interest networks can enhance inclusive, meaningful solution generation. Involving civil society expands human agency. People and peoples venture out into the world to share evolving understandings, innovations and resilience expertise.



Sustainability can become more than the sum of its parts by transcending its literal meaning to becoming the synergistic trampoline for environmental, economic, and social resilience and coherence. From sustainability of forests and fish stocks to sustainability of future generations and to a call for fusion of ethical, economic, and environmental understandings, complex systems are increasingly challenging humanity to adapt both language and governance.

The diplomacy that emerged from Rio in 1992 sought to bind a mindfulness of ecological carrying capacity with equitable utilization of resources to alleviate poverty. While environmental and development communities find sustainable development lacking, time is running out to rename policy approaches without genuine follow through in the form of environmental and human security. We have the capacity to embrace sustainability as an overarching framework for coordinated ethical, economic, and environmental decision-making. It is not the only means by which to proceed but represents one plausible response to increasingly disconnected fields that impact one another. A sensible first step down this coherence path is to recognize governance as crucial to achieving sustainability generally and climate cooperation in particular.

How do we calibrate efforts to build a sustainability arc that can enhance human and environmental integrity? High-level forums for inclusive meaningful dialog can enhance network creation and expansion into new public-private, local-regional-international, and a myriad of interdisciplinary patterns of cooperation. Complex adaptive systems and good governance principles can inform decision-making that result in rule of law enhancing predictable, efficient, and fair outcomes. The rule of law depends upon accessible, independent, and efficient decision-making. None of these processes are rapid or inexpensive. Yet, they can be rightly called investments and folded into respected economic climate-energy-water recommendations when decision-makers use sensibly long term time horizons for efficiency analysis and recognize the value of equity, ecosystems, and other important yet not easily measured public and private goods.

As Dan Taylor explains, the answer still is Gandhi's enhancing people's wellbeing occurs through enhancing individual human agency. Gandhi's vision proved powerful: begin simply, be true to process, the means are the ends, grow capacity in the partnership. Sharing human and environmental integrity best practices provide a

synergistic sustainability catalyst. Decisions informed by a commitment to climate justice can bring together dialogue from development, human rights, environment, trade, and business communities. Energy-food-water-climate security can be discussed as the interwoven crisis that threatens humanity rather than unrelated dilemmas. What appear to be fragmented trade, environment, and human rights regimes can alternatively be seen as sustainability building blocks.

We still live in challenging times. To be clear, challenges to transitioning to greater efficiency and renewable energy use include the degree to which fossil fuel is deeply embedded in the economy and the degree to which putting a price on carbon is a prerequisite for substantial private sector investment in environmentally sound innovation and participation in diffusion. A good starting point would be for trade and environment regimes to set clear criteria for what constitutes environmentally sound innovation based upon ongoing life cycle analysis that is mindful of science and equity. The IPCC has published a full report upon which to begin to provide decision-makers with a comparative lifecycle analysis. Full life cycle analysis that genuinely values macro and micro social and environmental integrity should be ongoing. It is our collective transformative challenge to bring about effective and equitable energy-climate-water solutions that enhance overall social, environmental, and economic sustainability while squarely following through with the climate crisis that is unfolding. State and non-state actor inclusive coordination can facilitate breakthroughs in economic, social, and environment balancing and broadly bring about known evolving best practices.

International climate negotiations have been slow, but legitimate, democratic processes. Inclusive stakeholder participation brings new perspectives to problem solving as well as trust and support for implementation. Game theory suggests that indefinite future interactions lead to cooperation. Forums that increase the frequency of interactions build trust and form stable expectations. International institutions, governments, businesses, non-governmental organizations, and civil society can transcend politics to address climate change. Climate volatility, rapid population growth, technological innovation, and conflict can be considered in an integrated manner. Collaboration on environmentally sound technology transfer, energy efficiency, and diversity can achieve genuine sustainable development that results in economic growth and

social wellbeing that does not impede future economic growth and social wellbeing. Cost, pace, and risk are key elements in crafting international instruments that both create stable expectations and effectively address climate, water, food and energy security.

Identifying key elements of good governance will enhance the legal community's ability to enact equitable and reasonable laws. State and non-state actor research and best practice sharing can provide a scientific basis on which to recommend policies to address transnational concerns on the scale of climate change. Facilitating broadly enhanced scientific understanding of law as well as the legal understanding of science can substantially advance achieving a shared climate vision and begin solution generation that is both within a scientifically meaningful timeframe and legally plausible given the energy geodynamics of the international community.

The means impact the ends of any deliberative process. How decisions are achieved continues to impact what substantive provisions are enacted. Inclusive state and non-state actor interactions at the climate talks can inform global understanding of effective and equitable codification of international law. Ongoing innovation sharing and implementation can help address ways in which varying legal frameworks can increase or decrease sustainable development.

This climate cooperation involves individuals reaching out beyond traditional interactions to expand new networks, work with others to spot patterns, and take initiative to learn new complex systems; adapt these shared insights into new solutions; develop empathy, patience, and cultural diplomacy in implementing solutions among strangers with conflicting cultural values. Civil society climate participation can facilitate dynamic governance through processes where empathy brings people into gatherings where they increase their individual and group capacity to identify with one another to implement shared climate-energy-water solutions. Such solution follow-through requires long-term shared understandings, norm building, engagement rather than mere tolerance of diversity, and a willingness to implement changes that can sustain effective, equitable climate solutions.

Individuals have gained subject status at international law and civil society voices are not only being heard but responded to. The quiet desperation of humanity that Thoreau spoke of has become a powerful force—capable of incentivizing climate coordination. Irrespective of the rhetoric with which we converse, we need to figure

out how to come together as a global community that feels its collective loss enough to cooperate (both quickly and effectively) to achieve a sustainability arc that enhances ethical, economic, and environmental cooperation.