

## **Sustainable Commons Governance and Climate Justice: Ecofeminist Insights and Indigenous Traditions**

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**ABSTRACT:** This paper brings together North American and global examples of traditional and new forms of “commons” which help to meet local subsistence needs and develop communities’ social, political and economic resilience in the face of climate change. Commons governance represents a dynamic means of risk-reduction which addresses the shortcomings of both market and state-oriented governance and is becoming increasingly relevant as climate change threatens human subsistence worldwide. Indigenous traditions and leadership are central to this (re-)emergent phenomenon. Drawing on the literatures of ecological economics, political ecology, and ecofeminism as well as the work of Elinor Ostrom to situate these ideas, this paper sets out a framework for assessing communities’ climate resilience from an equity standpoint, in terms of their commons-readiness. Some of the indicators involved in this framework include each community’s openness/boundaries, historical experiences and aptitudes with commons, indigenous leaders and integration of indigenous culture, social networks and social learning, political and economic autonomy, income distribution, and women’s empowerment. Climate justice -- improving the local and global equity of climate change impacts and procedures – advances in parallel with commons development; this paper also discusses scale issues related to local, regional, watershed-based, international and global commons and climate justice.

**KEYWORDS:** climate justice, community resilience, commons, community development, climate risk reduction, extreme weather events, social capital, participatory governance, ecological economics, political ecology, ecofeminism, indigenous governance, social learning, subsistence

# **Sustainable Commons Governance and Climate Justice: Ecofeminist Insights and Indigenous Traditions**

## **I. Introduction**

A major challenge in times of global climate change and material throughput constraints is how to meet human needs and achieve well-being for most without transgressing ecosystem boundaries or damaging Earth systems, in order to provide opportunities for nearly everyone to live and meaningfully contribute to society in a sustainable manner.

The human species is fumbling toward a society and governance system which will be able to re-equilibrate to accommodate ecological and social fluctuations and still sustainably meet the basic needs of all, including the need for safe political participation.

In this paper, I bring together ecofeminist ideas about commons and climate justice, inspired by indigenous legacies and leadership on sustainable collective governance. My intention is to highlight some potential pathways toward that governance system which has its own internal self-equilibrating processes, and would be capable of providing equitable, sustainable human livelihoods.

## **II. Commons and Ecofeminist Priorities**

Under capitalism, the tendency for the powerful to keep coming out better off and for exploitation of less-powerful people and of nature to accelerate is seen by many as the prime driver of climate change (Klein 2014, Douthwaite 1999, Korten 2006, Latouche 2012). There are not enough negative feedbacks on the tendency of the capitalist economy to keep growing, at the expense of “nature” and marginalized people, for it to be either socially, politically, or ecologically sustainable.

Ecofeminists, in particular, have long considered these issues (Mellor 1987; Mellor 1993; Kuiper and Perkins 2005; Shiva 1988; Shiva and Mies 1994; Federici 2012). Undervalued economic factors subject to super-exploitation include women’s work (and indeed all under- and unpaid work), as well as non-monetized services and material inputs from ‘nature’ which, as they become economically significant, are incorporated into the economic sphere virtually for free. Whenever they are estimated e.g. Robert Costanza (1997), Hilikka Pietilä (1997), Giacomo d’Alisa (2009) -- these unpaid or ‘free’ services and goods generally dwarf the measured economy in value, yet they are usually not central to policy deliberations and they are often ignored entirely. Women’s work and “nature” are crucial and irreplaceable foundations of the economy. Maria Mies has shown how capitalism was founded and continues to depend for its existence on the unpaid and underpaid work of women; Mary Mellor and Ariel Salleh and many other theorists have traced the material links between women’s work and what economists call “ecosystem

services”; these issues of underpayment and inequality based in social injustice and environmental degradation, and the predictable ways in which they create economic winners and losers, are grounded in colonialism, patriarchy, underdevelopment, and race and class discrimination both within countries and globally. There are historical, power-based reasons for these injustices, and they are not easy to uproot.

The ‘first enclosure’ of the commons in 16<sup>th</sup>-century Europe and its colonies was fundamental to both the establishment of capitalism and the deepening of patriarchy (Federici 2014:68-75). Women, who “suffered most when the land was lost and the village community fell apart” (Ibid.:73), actively fought to protect the commons; “women holding pitchforks and scythes resisted the fencing of the land or the draining of the fens when their livelihood was threatened” (Ibid.). The European enclosures led to social crisis, misogyny and violence against women, reducing their employment options and confining them to the home and unpaid reproductive work. In this transition from feudalism to capitalism, “women suffered a unique process of social degradation that was fundamental to the accumulation of capital and has remained so ever since” (Ibid.: 75). Meanwhile, in the colonies, where European conquests imposed the same exploitative systems, women’s resistance to enclosures preserved traditional commons-based religions and cultural practices. In Latin America, women “directed or counseled all the great anti-colonial revolts” (Ibid.: 232, quoting A. de Leon 1985:vol. 1:76).

Institutional economists such as Douglass North “have long contended that property rights lie at the core of the economic growth that has dominated the last 300 years of world history” (Evans 2005:86), which is to say that the ‘first enclosure’ of the commons made possible the exponential growth of agrarian and then industrial capitalist economies. “Both the rate of technological change and its impact on well-being depend in turn on the prevailing system of property rights” (Ibid.). Peter Evans believes there is a chance that open-access intellectual property can create a “‘new commons’ of productive tools which allows for both a more egalitarian redistribution of intangible assets and a wider, more effective engagement of human ingenuity for creating innovative solutions” (Ibid.). “Redefining ‘ownership’ to focus on the right to distribute, rather than the right to exclude, creates the new commons” (Ibid.:87), and Evans believes this could even include redistribution from the global North to the South because it would shift returns to existing owners of intellectual property, expand returns to human capital, and thus shift assets and incomes from North to South (Ibid.). But he acknowledges the potential and scale of these effects remains unclear (Ibid.: 93), and he does not mention gender.

In the face of climate change, movements in the Global South and North, largely led by women, are resisting ongoing enclosures for extraction and fossil fuel industries and, in the process, reclaiming commons. “To the extent that the capitalist energy system is seized and redirected towards commoning, actors within it have reduced dangerous emissions and elaborated an alternative system premised on sustainable energy.... This ‘actually existing’ movement of commoners is the result of the

exploited taking over some of the organizations of capital and using them to (a) undermine profit and at the same time (b) negotiate and construct means for satisfying universal needs” (Brownhill and Turner 2008:16). For example, La Via Campesina’s Declaration at the International Forum for Agroecology stated, “Collective rights and access to the commons are a fundamental pillar of agroecology. We share access to territories that are the home to many different peer groups, and we have sophisticated customary systems for regulating access and avoiding conflicts that we want to preserve and to strengthen” (Giacomini 2014:98). La Via Campesina also notes, “As savers of seed and living libraries of knowledge about local biodiversity and food systems, women are often more closely connected to the commons than men” (Ibid.). Turner and Brownhill’s definition of “civil commons” is “the organized provision of the essentials of life to all” (2001:806).

Terran Giacomini summarizes the process of fundamental re-commoning that is bringing about system change in the face of the climate crisis:

*“Women activists’ and their networks’ statements claim that ecofeminist action and system change are inextricable. That is, a transformation in gender power is essential for system change. System change requires a fundamental shift in power from the one percent class, who monopolize the means of life, to the 99 percent class, who face dispossession or who must sell their labour power in order to survive. Because capitalists organize nature and labour within a global racialized and gendered hierarchy of labour power, with racialized and Indigenous women at the bottom, bringing about system change requires transformative ecofeminist actions that prioritize the interests and initiatives of the most exploited or threatened women.... The insight that system change and ecofeminism are inseparable calls for strategic action: the formation of alliances between women at the bottom of the capitalist hierarchy and other social groups to under mine capitalist relations (including sexism, racism, and colonialism) and to promote commoning. This commoning can be viewed as the process through which the 99 percent becomes a global class not merely in itself but consciously ‘for itself’.... Alliances with commoning women build on the recognition that such women have the knowledge, skills, land, seeds and community networks to ‘live better without oil’” (Giacomini 2014:99-100).*

For Mies and Bennholdt-Thomsen, necessary steps in this process include: “defending and reclaiming of public space, and opposition to further privatization of common resources and spaces; .... (localized) production, exchange, and consumption;.... decentralization; reciprocity (instead of ) mechanical mass solidarity; .... policy from below, as a living process, instead of policy from above;.... (and) manifold ways of realizing a community and a multiplicity of communities” (Mies and Bennholdt-Thomsen 2001:1021-1022).

In much recent work on ecological economics and the transition to more sustainable socio-economic systems, ‘commons’ is emerging as a paradigm for future economic

institutions. Traditional common-pool resources and common property have a formal or informal system of property rights, and enforced governance that effectively allows those with shared access to exclude others. Common property allocates certain rights to members of a group: access, extraction, management, exclusion, and/or alienation rights (Hess 2008:34). “New commons” include a wide range of types of connections between groups of humans and natural resources, goods, property, or cultural assets. Charlotte Hess, whose 2008 literature review surveys hundreds of books and articles on ‘new commons,’ defines the term this way: “The new commons literature focuses on collective action, voluntary associations, and collaboration. While property rights and the nature of the good may still be important, there is a growing emphasis on questions of governance, participatory processes, and trust; and there is a groundswell of interest in shared values and moral responsibility.... *A commons is a resource shared by a group where the resource is vulnerable to enclosure, overuse and social dilemmas. Unlike a public good, it requires management and protection in order to sustain it*” (Hess 2008:37).

A ‘commons’ starts out more overtly oppositional to capitalism than other sometimes-vague terms like ‘sustainability’ or ‘development’, focusing as it does on ownership and property, land, resources, and assets that are explicitly NOT privately owned (Linebaugh 2009).

Preventing the so-called ‘tragedy of the commons’ by controlling open access through strong social institutions requires a high level of general civic consciousness, co-operation, the ability to listen and mediate differing goals, conflict resolution, flexibility and good will throughout society, especially in the context of social dynamism and diversity. As 2009 Nobel Economics laureate Elinor Ostrom and others have demonstrated through meticulous research, this does not always happen, but it is possible.

The community attributes for successful commons governance that Ostrom identified in her research include things like mutual knowledge and respect, a bounded system so that people recognize what the limits of the resource are, a history of regulations developed in a participatory way with enforcement so that people know that you can’t violate the norms with impunity, and non-interference by higher orders of government in the local community’s own governance system (Ostrom 1990).

This focus on participatory commons governance decenters degrowth as a goal: Degrowth is mostly a means to an end, which is a just, peaceful quality of life for all. In comparison with current realities, income redistribution is more central than degrowth per se as a step in a good direction. More progressive wealth taxation policy including inheritance taxes and ceilings that favour wealth distribution; crackdowns on tax havens and tax flight; and anti-corruption policies in general are examples of ways to advocate and move towards this goal even within current political structures by building political will for transparency and redistribution. More fundamental reconstruction of commons in the Western/European dominated

world, however, will involve deep restructuring of livelihoods, rights, and culture (see Appendix 2).

### III. Indigenous Commons Traditions

Synergies between sustainable ecological practices, communal wealth-sharing, and cultural quality of life are apparent in many indigenous governance systems. In Canada, indigenous leadership, especially by young women, is generating a new impetus for settler-allies to learn about these long-obscured stories and the history and pernicious legacies of colonialism.

Summarizing international legal scholar Shawkat Alam: “Collective rights are often affiliated with Indigenous people, as they are defined as rights held by groups – ‘a collection of persons that one would identify as the same group even under some conditions in which some or all of the individual persons in the group changed’ (Xanthaki 2007:13). It follows that collective rights are connected to a community or group, which is often of minority status. However, it has been argued that the ‘recognition of collectivities and collective rights is one of the most contested in international law and politics’. Indeed.... this concept of collective rights can be seen to conflict with Western ideas of individual freedom and liberty.... Collective rights have been seen to foster tolerance, and diversity of culture and knowledge. To this end, many Indigenous peoples view the recognition of their cultural rights as ‘of paramount importance’ or ‘as a token of respect towards their identity and communities as well as the only way for their survival and development’ (Xanthaki 2007:13). (Alam 2012:588).

Indigenous legal scholar John Borrows has demonstrated the extent to which First Nations governance traditions have provided a foundation for current Canadian law, as part of a living, resilient legal system which ‘works’ in the modern world (Borrows 2010). Carol Rose, in a very thorough 1986 study, demonstrated that the legal status of commons is well-represented, understood and respected in modern Western legal traditions, and in fact that there are so many types and advantages of collective property rights that their benefits remain unambiguous; “the commons was not tragic, but comedic, in the sense of a story with a happy outcome” (Rose 1986:723).

The Iroquois or Haudenosaunee confederacy among the Seneca, Cayuga, Onondaga, Oneida, Mohawk, and Tuscarora peoples was “probably the greatest indigenous polity north of the Rio Grande in the two centuries before Columbus and definitely the greatest in the two centuries after” (Mann 2005:330). The Haudenosaunee ‘Great Law of Peace,’ with its 117 codicils setting out ways of achieving political balance, requiring subsidiarity, and setting checks on authority, has been cited as the direct inspiration for the U.S. Constitution (Ibid.:333). However, while they adopted Haudenosaunee protections for liberty and individual rights going far beyond European standards of the time, the U.S. constitutional ‘framers’ failed to incorporate Haudenosaunee traditions of communal property ownership (Ibid.:

333-336). Arguably, they thus missed out on a crucial piece of the overall system's traditional, well-evolved constraints on individual wealth-accumulation and, thus, political power.

Indigenous worldviews provide rich insights into ways of organizing society to prioritize resilience, interdependence, trust, and ecological respect (Leroy 2016). Aboriginal traditions of hospitality, sharing, potlatch (or giving away material wealth as a sign of moral and community standing, thus trading off material wealth for leadership and respect), humility, and reverence for the earth and its creatures and life systems are central to locally-appropriate commons governance processes. First Nations also had nested governance hierarchies which seem to me to correspond with what Elinor Ostrom has cited as successful 'polycentric' ways to govern large-scale commons (Ostrom 2009a, 2010, 2014).

The active suppression of the potlatch by the Canadian government between 1884 and 1951, on penalty of 2 to 6 month jail terms, shows the extent to which gift-giving and generosity were inimical to the selfishness and violence of capitalist expansionism. During the potlatch, guests are named and given gifts with the words, "you are recognized." In The Principles of Tsawalk: An Indigenous Approach to Global Crisis, E. Richard Atleo (Umeek) says,

*"Over time it was learned that gift giving and recognition promoted balance and harmony between beings, that it obeyed what might be called the laws of the positive side of polarity. To neglect the promotion of balance and harmony between beings promoted what might be referred to as the laws of the negative side of polarity. These are not new ideas. Indeed they are commonly held both by Western and Eastern morality (generosity begets generosity) and by the laws of physics (to every action there is a reaction). When two neighbouring nations shared the same resources, whether cedar, salmon, or human, then it was obvious to the ancient Nuu-chah-nulth that to neglect the act of recognition would open the way to conflict, while to observe the act of recognition, through what I refer to as 'mutual concern,' would open the way to balance and harmony."*  
(Atleo 2011:ch. 4).

Indigenous forms of resource management prior to colonization included burning forests to create grasslands for common hunting grounds and areas where medicinal herbs could be harvested by visitors of many nations (First Story 2016); Shasta and Hupa management of salmon fisheries through a combination of ritual, ceremony, taboos, respect for elders, and astute observation of the fish over many years (Berkes and Folke 2002:126-127); Cree oral history to transmit knowledge of long-term cycles in caribou herd fluctuations (Ibid.:140); and Nishinaabeg myths and stories to convey knowledge about interrelated natural phenomena, along with human dependence and humility (Simpson 2011:18). All these practices depend upon shared cultures, resource use by groups for the benefit of the whole collectivity, and limitations not just on individual consumption and wealth

accumulation but on overall human consumption when necessary to preserve the natural resource – in other words, effective and sustainable commons governance.

Balanced gender roles and social domains (e.g. Haudenosaunee women were clan heads; they chose the male sachems or chiefs) were and are the norm in indigenous societies. Aboriginal women, as those responsible for water and life-transmission, lead the most powerful grassroots environmental movements in Canada today (Perkins 2017). Indigenous chief and activist Arthur Manuel comments in his book Unsettling Canada: A National Wake-Up Call that women have long held leading roles in indigenous activism on land, rights and the environment. He says that the majority of young indigenous activists today are women (Manuel and Derrickson 2015:211). Indigenous authors have pointed out that, besides gendered economic and social roles in a patriarchal society, cultural factors also lead indigenous women to assert their voices and leadership on matters related to water, health, education and livelihoods (Gorecki 2015; Nixon 2015; Awadalia 2015; Ellis 2015).

At the September 2014 Peoples' Climate March in New York City, headed by indigenous leaders including Melina Laboucan-Massimo, she commented, "Violence against the earth begets violence against women. I think when we don't deal with both of them we're not ever really going to resolve the issue of the colonial mind and the colonial mentality and the values of patriarchy and the values of capitalism that essentially exploit the land and exploit our women" (Gorecki 2014). Says the FeministWire website, "....Indigenous women activists and academics have shown how the foundation of contemporary capitalism was contingent on industrial resource extraction of Indigenous people's land, which was also simultaneously fully reliant on disempowering any positive ethic towards nature and women. This was achieved by installing European forms of gender relations and dismantling women's power, aided by the appropriation of Indigenous women's bodies. Residential schools were perhaps the strongest tools in reinscribing balanced gender relations of North American Indigenous matrilineal societies into the unequal ones of patriarchal models imposed by European colonizers and settlers. For the women's contingency in NYC, the centrality of resisting the colonization of Mother Earth, Terra Madre, and Pachamama is paramount" (Gorecki 2014).

Indigenous women see very clearly the connection between environmental and gender justice. Said Laboucan-Massimo, "People don't realize that violence against the land is violence against women, which is an issue we have in Canada specifically with missing Indigenous women, my sister being one of them" (Gorecki 2014). Kanehsatà:ke Mohawk activist Ellen Gabriel stated, "Indigenous women were targets of the Indian Act because they (European colonizers) knew that the power rested with the women. And right now it's a man's world. In fact, it's a rape culture because in Canada, rape of Indigenous women has gone on with impunity and the government of Canada refuses to have a national action, refuses to have an inquiry because it profits them to continue to oppress Indigenous People...and it's another form of genocide as far as I'm concerned" (Gorecki 2014).



At least 1,200 indigenous women, and perhaps far more, have been murdered or reported missing since 1980 in Canada. Bella Laboucan-Massimo, Melina's sister, who died July 20, 2013, is one of them. Indigenous women are eight times more likely to be killed than non-indigenous women in Canada (Narine 2015; Kirkup 2016; Inter-American Commission on Human Rights 2014:11). Calls for a federal inquiry into this problem long went unheeded by the Harper government; indigenous women started their own lists (It Starts With Us; Walk4Justice) and continued to call for official investigations.

Says Idle No More activist Cherri Foytlin, who lives in the fossil fuel "sacrifice zone" in southern Louisiana, "We need to understand extractivism as a form of violence toward women and children. It is part of rape culture and it is a continuation of colonization. It is the commodification of the natural world, and it is destroying us" (Giacomini 2014:97).

#### IV. Commons, Ecofeminism, and Climate Justice

The central call of feminist ecological economics and ecofeminism for recognition of collective, unpaid, taken-for-granted foundational contributions of "nature" and "women's work" to socio-economic processes, and the exploitation involved in perpetuating this, also speaks to the importance of redistribution and common, shared provisioning in human societies. As Carol Rose pointed out decades ago, commons of many kinds are 'hidden in plain sight.' Commons are everywhere (Hess 2008); they remain foundational supports for the capitalist economy, just like unpaid work and 'nature;' and they also act as flywheels, maintaining and undergirding otherwise-unsustainable economic systems.

Climate activist Bill McKibben calls for a renewal of commons worldwide, as the basis of local and community economic health (Hess 2008:31). In my view and in the view of a growing number of scholars who are working on climate change and climate justice, this commons-type approach is very hopeful. It revives and underscores the importance of participatory democracy and local responsibility for standing up to capital and preventing the commodification of water, mineral resources, forests, fisheries, etc. Commons governance is fundamentally different from allowing markets to run things. It is also different from centralized state control and planning. It is different from the kind of hybrid system we now have in most places, with government intervention into market-based economic systems to nudge them in various directions, usually designed to help the interests of the powerful. "Free markets" have never been a realistic description of how political economy really operates anyway, as feminist ecological economists are well aware; unpaid work and "free" inputs from "nature", made possible by control over women and marginalized peoples, have always undergirded capitalist economies (Mies 1986; Mellor 1992). The market economy is just the tip of the iceberg; it's supported by unpaid work, natural systems, ecosystem services; all much larger than the economy that we are trained to 'see.'

Co-operatives and commons, too, are more prevalent and more important in assuring people's livelihoods globally than many may realize. The United Nations has estimated that the livelihood of half the world's population is made secure by co-operative enterprises (COPAC 1999:1). Mutual aid, utopian communities, grassroots collaborative economic initiatives and co-ops allowed Black Americans to persevere in "finding alternative economic strategies to promote economic stability and economic independence in the face of fierce competition, racial discrimination, and White supremacist violence and sabotage" while building leadership and community stability (Gordon Nembhard 2014:28).

I believe there are cracks in the current unsustainable, crisis-ridden political and economic systems; through those cracks people's awareness is growing about the importance of alternative livelihood systems like commons, and how we can build and transmit the collective skills to regenerate and preserve them.

Dene activist Glen Coulthard, in his book Red Skin White Masks, speaks about this hope and the promise of commons.

*"What must be recognized by those inclined to advocate a blanket 'return to the commons' as a redistributive counterstrategy to the neoliberal state's new round of enclosures, is that, in liberal settler states such as Canada, the 'commons' not only belong to somebody – the First Peoples of this land – they also deeply inform and sustain Indigenous modes of thought and behaviour that harbour profound insights into the maintenance of relationships within and between human beings and the natural world built on principles of reciprocity, nonexploitation and respectful coexistence. By ignoring or downplaying the injustice of colonial dispossession, critical theory and left political strategy not only risks becoming complicit in the very structures and processes of domination that it ought to oppose, but it also risks overlooking what could prove to be invaluable glimpses into the ethical practices and preconditions required for the construction of a more just and sustainable world order" (Coulthard 2014:12).*

He is pointing out that we cannot just take indigenous ideas and apply them to what's basically a colonial system. What is required is to uproot settler understandings, and educate ourselves about what that colonial past has meant. By 'colonial,' I mean industrial, fossil-fuel based; the idea that we all (or some people) have a right to a personal transportation pod that burns fossil fuels and spews carbon into the air. We can create different, healthy, durable and equitable ways of living on the Earth. We settlers do need to help each other see how change is positive, not just scary, in order to make sure that the changes don't unfairly hurt the most vulnerable. For feminists, this is particularly important, and particularly challenging.

*“Indigenous feminists know that mainstream feminism predominantly represents white settler feminists who, more often than not, choose to ignore the ongoing processes of colonialism from which they actually benefit..... Ecofeminism that appropriates Indigenous environmental knowledges often fails to fully represent what environmental justice means to Indigenous communities. What is often ignored within these analyses is how neocolonial state violence, compounded by exposure to environmental contaminants, is embodied in very specific ways for Indigenous women and Two-Spirit peoples. It’s true that Indigenous communities are disproportionately affected by environmental exposure, as their communities often share close proximity to mining sites, military bases, the release of pesticides, and other sites of environmental contamination (Hoover et al. 2012, 1645). However, Indigenous peoples have again and again described how solutions to the effects of environmental contamination need to extend far beyond the return of land which often streamlines settler solidarity movements. .... If eco-feminists truly want to engage with Indigenous feminism to legitimize their own movements, they must first engage with their own positionality and privilege as settlers: a positionality on which the continuation of settler-colonialism and the ongoing genocide of Indigenous peoples are prefaced. Furthermore, Indigenous peoples don’t need saviour feminists defining what strategies must be used to address environmental contamination within Indigenous communities. Environmental violence has far reaching consequences including those that can be seen in the reproductive lives of Indigenous peoples. What Indigenous feminists want from eco-feminists is simple: Sit down, be quiet, and listen” (Nixon 2015).*

## V. Conclusion

As noted in climate justice theory, it is those on the front lines of climate change -- both extreme weather events and extraction -- who are most aware of its impacts and most knowledgeable about how they should be addressed; this puts women at the forefront of climate justice struggles (Buechler and Hanson 2015:228). It is no surprise that indigenous women, facing health and livelihood crises due to fossil fuel extraction on their territories, are leading movements to address this issue at its source. Their activism highlights a key distinction in how gender justice and climate justice are linked in Canada (and likely in other countries that both produce and consume fossil fuels). It is the toxic effects of fossil fuel *production* itself – water and air pollution, ecosystem impacts on fish, wildlife, soils, and particularly in Alberta the huge scale of government-subsidized tarsands operations, trampling on local governance processes and indigenous land rights – that first and most clearly demonstrate the deathly problematic nature of the economic system that produces climate change. The impacts of fossil fuel *consumption* – greenhouse gas emissions leading to extreme weather events, weather variability, etc. – while global in their implications, are longer-incubating and more easily obfuscated by that same system.

The crisis we are now living is related to our not knowing how to replace the current, globalized economic system that is driving the world towards environmental disaster with another kind of aware, collective politics that can lead to regeneration of our home, the Earth. This is related to the crisis of making the energy transition beyond fossil fuels. These crises overlap but they are not exactly the same. They share aspects of fear, denial, guilt, shame, all negative emotions on the part of those of us who know we consume too much (as did our ancestors), and are responsible for the worst aspects of the crises, and must try to turn the canoe around.

As teachers and activists, we have a responsibility to show some glimmers of hope and possible ways of moving forward to resolve these crises, since we are all in this situation together. One of those glimmers for me was when Elinor Ostrom was awarded the Nobel prize in economics, in 2009, for her academic empirical work on the conditions under which people can develop sustainable governance systems that prevent open access to the common-pool resources used by many, thus preventing the 'tragedy of the commons.'

These are ideas that fly in the face of, and actually contradict, many of the basic tenets of economics. But in my view and in the view of a growing number of scholars who are working on climate change and climate justice, among other topics, this commons-type approach is very hopeful. It revives and underscores the importance of participatory democracy and local responsibility for standing up to capital and preventing the commodification of water, mineral resources, forests, fisheries, etc. Commons governance is fundamentally different from allowing markets to run things. It is also different from centralized state control and planning. It is different from the kind of hybrid system we now have in most places, with government intervention into market-based economic systems to nudge them in various directions, usually designed to help the interests of the powerful.

Ostrom also developed the concept of 'polycentricity,' which explains how different levels of authority and different kinds of skills can interact with each other to make the governance system work better, with more resilience. She showed that a polycentric system is not inefficient even though it has overlapping functions; instead it is stronger and more sustainable (Ostrom 2009b, 2010, 2014).

Specifically in reference to climate change, Ostrom said:

*"Instead of presuming that cooperation related to social dilemmas is an impossibility, the presumption should be that **cooperation will occur** in settings with several broad characteristics. These include the following:*

- 1. Many of those affected have agreed on the need for changes in behavior and see themselves as jointly sharing responsibility for future outcomes.*
- 2. The reliability and frequency of information about the phenomena of concern are relatively high.*

3. *Participants know who else has agreed to change behavior and that their conformance is being monitored.*
4. *Communication occurs among at least subsets of participants.*

*.... The crucial factor is that a combination of structural features leads many of those affected to trust one another and to be willing to do an agreed-upon action that adds to their own short-term costs because they do see a long-term benefit for themselves and others and they believe that most others are complying.*

*..... Many of the policy analyses recommending “solutions” at an international level to be implemented by national governments are based on a fear that unless global solutions are made for global problems, these problems will continue unabated....*

*Yet extensive research on institutions related to environmental policies has repeatedly shown that creative, effective, and efficient policies, as well as disasters, have been implemented at all scales..... It is important that we recognize that devising policies related to complex environmental processes is a grand challenge and that reliance on one scale to solve these problems is naïve.... The benefits from reduced greenhouse gas emissions are not just global in scope. The benefits are distributed across scales—from the household to the globe.*

*..... Rather than only a global effort, it would be better to self-consciously adopt a polycentric approach to the problem of climate change in order to gain the benefits at multiple scales as well as to encourage experimentation and learning from diverse policies adopted at multiple scales.”*  
(Ostrom 2009a:13-14, 27-28, 31).

Polycentric commons-building at multiple scales IS climate action, and also builds movements and institutions that challenge, destabilize, and create alternatives to capitalism.

In other words, starting where we are and continuing to do research, educate, organize, advocate for transparency and democratic governance, attack cronyism and corruption, and build broad, respectful, inclusive political alliances is exactly the way forward. Inspired by ecofeminist insights and indigenous traditions, we can work to dismantle colonialism; build skills for sustainable commons governance at the local level, including conflict resolution, facilitation, and participatory knowledge production; recognize and expand existing ‘new commons;’ and foster the many synergies among equity, redistribution, social networking, diversity, shared provisioning, and human and ecological care.

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