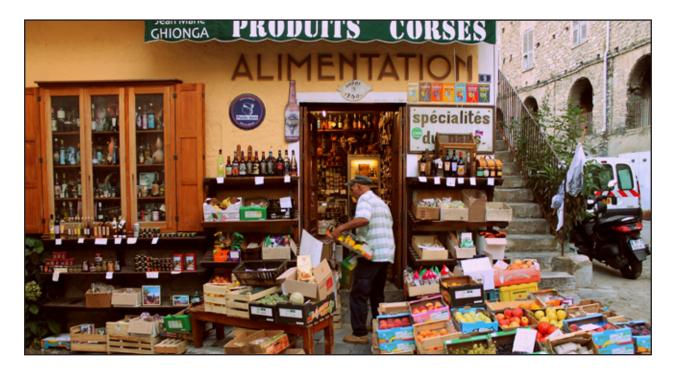
CLIMATE CHANGE or SYSTEM CHANGE?



A Local Futures Action Paper





"If we are going to limit warming to the 2-degree Celsius benchmark, there will need to be a fundamental shift in the economy: away from growth-at-any-cost globalization towards more diversified, localized economies that serve the real needs of people and the planet."

Many people were understandably encouraged by the tone of the climate negotiations in Paris: governments are finally taking climate change seriously, and even expressing a willingness to take concrete steps. Nonetheless, they once again failed to take the necessary action to prevent catastrophic climate change. In fact, the most effective steps to reduce CO₂ emissions were never discussed in Paris. Instead, delegates quibbled over piecemeal quasi-solutions while leaving the systemic root causes of the problem unchallenged.

If we are going to limit warming to the 2-degree Celsius benchmark (much less the 1.5 degree limit demanded by the group of "most vulnerable" countries), there will need to be a fundamental shift in the economy: away from growth-at-any cost globalization – a system that is heavily tilted in favor of the biggest

corporations and financial institutions – towards more diversified, localized economies that serve the real needs of people and the planet.

Such a shift would not only substantially reduce greenhouse gas (GHG) emissions, it would bring a range of other benefits too. It would help to create more jobs; limit the power of global corporations; reverse the erosion of democracy; and reduce fundamentalism, ethnic conflict and even terrorism. And this is its great strength. Here is an opportunity to unite diverse single-issue campaigns across the social and environmental divide: to create a movement powerful enough to bring about a fundamental economic shift. (This argument is more fully fleshed out in *Localization: Essential Steps to an Economics of Happiness*, Local Futures 2015).



"Promoting climate change denial is only the most obvious way in which corporations have managed and limited the climate debate."

n the media and even among climate activists, insufficient attention has been Lpaid to the ways in which multinational corporations have distorted the climate debate from the beginning. It's not just the use of corporate-friendly scientists to muddy the waters about the causes – if not the very existence - of climate change, although that has certainly happened. Recent headlines, for example, revealed how Exxon-Mobil steadfastly denied the reality of global warming even though internal memos reveal that the company was aware of the problem in 1981 - seven years before it became a public issue - and formulated strategies to respond to and even profit from it. Along with other fossil fuel corporations, Exxon spent millions funding scientists willing to argue that global warming is an unproven and "controversial" theory unsupported by the evidence.

But this represents only the most obvious way in which the climate debate has been managed and limited. Corporate think tanks, lobbyists and PR firms have used more subtle and insidious strategies, many of which remain deeply ingrained in the public discourse:

Strategy 1 Blame the individual

In use for many years now, this strategy involves shifting blame for climate change – and thus our responses to it – away from industry and onto individuals. A poster that accompanied Al Gore's 2006 documentary film, *An Inconvenient Truth*, listed "things you can do now" in response to the climate change threat (see below).

People were told to change their light bulbs, use less hot water, inflate their tires properly, etc. – reasonable steps to be sure, but even in the aggregate hardly enough to make a dent in overall greenhouse gas emissions. By implicitly blaming individual consumers for the climate crisis – and handing them responsibility for fixing it –this framing deflected attention from its systemic causes and obscured the role of industrial emitters of greenhouse gases.¹

There was no mention of the advertising pressures that turn children into mindless over-consumers. There was no mention of the way the government focus on GDP encourages growth through overconsumption, nor the way our taxes are used to subsidize fossil fuels and global trade. And citizens, relegated to the role of passive consumers, were not encouraged to do anything that would challenge the corporate-dominated status quo.

thingsyoucandonow

Want to help stop global warming? Here are a dozen simple things you can do, plus the amount of carbon dioxide you'll save.

Change a light Replacing one regular light bulb with a compact fluorescent light bulb will save 150 pounds of carbon dioxide a year.

Drive less Walk, blee, carpool or take mass transit more often. You'll save one pound of carbon dioxide for every mile you don't drive!

Recycle more You can save 2,400 pounds of carbon dioxide per year by recycling just half of your household waste.

Check your tires Keeping your tires inflated properly can improve gas mileage by more than 3%. Every gallon of gasoline saved keeps 20 pounds of carbon dioxide out of the atmosphere!

Use less hot water it takes a lot of energy to heat water. Use less hot water by installing a low-flow showerhead (350 pounds of CO2 saved per year) and working your cotobes in cold or warm water (500 pounds saved per year).

Avoid products with a lot of packaging You can save 1,200 pounds of carbon dioxide if you cut down your garbage by 10%. Adjust your thermostat The simple adjustment of moving your thermostat down just 2 degrees in winter and up 2 degrees in summer could save you about 2,000 pounds of carbon dioxide a year.

Plant a tree A single tree will absorb one ton of carbon dioxide over its lifetime.

Turn off electronic devices Simply turning off your television, DVD player, stereo and computer when you're not using them will save you thousands of pounds of carbon dioxide a year.

Try Meatless Mondays Skipping meat one day per week would help save over 35,000 gallons of water. Custing meat out of your det entirely would help save 5,000 lbs of carbon emissions per year.

Unplug Unplugging hair dryers, phone charges, toaster ovens and power cords when not in use can save up to 20% on home energy use.

Spread the word! Encourage your friends to buy An Inconvenient Truth

aninconvenienttruth

available on DVD

ww.climatecrisis.net

Strategy 2 Promote market-based solutions

Corporations have been very successful at convincing the public that free-market transactions, rather than global regulation, are the best means of reducing carbon emissions. This approach not only preserves the power of TNCs, it augments it. Carbon trading, for example, essentially gives industries the right to pollute, for a price – making the atmosphere on which all life depends a commodity that can be sold to the highest bidder, at a time when the biggest transnational corporations are wealthier than entire countries.

Similar market-based approaches have been suggested for "protecting" the planet's remaining rainforests. But as Brazilian activist Camila Moreno points out, proposals like these promote the privatization and commodification of what has always been common land. She asks, "Is that what we want as an international public policy, that the last public forests and public lands on earth – where there is biodiversity, where there are indigenous people – be from now on connected to financial markets?"²

Another arena in which market-based strategies have taken root is in the promotion of renewable energy. While there's no question that renewable energy must replace fossil fuels as the primary source of global energy needs, those energy needs must be greatly reduced in order for that to be feasible. Nonetheless, renewables are often portrayed as a means to maintain the current structures of the global economy – changing little but the fuel that runs it. Thus, a headline on the website EcoWatch proclaims, "Renewable energy and economic growth go hand in hand".³

Thanks to billions of dollars in government subsidies, the renewable energy field has already attracted the interest of large corporations. For example, the Spanish energy multinational Iberdrola - the fourth largest electric power provider in the UK and a major player in US, South American, and European energy markets - is also one of the world's biggest wind energy companies; Canadian natural gas corporation Gaz Metro (co-owned by tar sands giant Enbridge) also has major investments in industrial wind projects. The renewable energy projects that these and other global corporations invest in are largescale and centralized, thus keeping the energy supply tightly in corporate hands.

In the end, depending on market-based solutions means relying on a marketplace that is heavily tilted in favor of the biggest players.

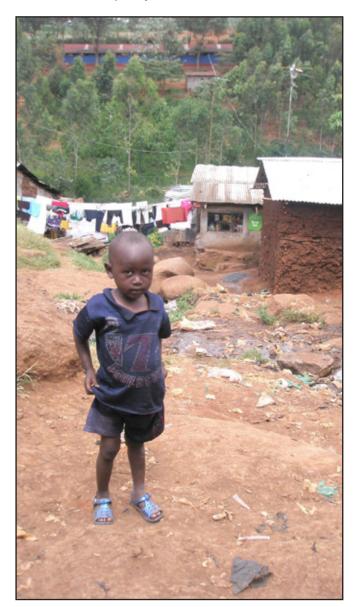


Strategy 3 Use North-South divisions to block agreements

Past failures to forge climate agreements have often been blamed on disputes between rich and poor countries: the wealthy industrialized countries are largely responsible for the current excess of atmospheric CO₂; the poorer countries have contributed relatively little to climate change, and want to continue burning fossil fuels to fuel their own development.

This framing uses poverty as an excuse to increase both CO₂ emissions and the corporate exploitation of less industrialized countries. Thanks to "free trade" treaties, corporations are now producing where labor is cheapest in other words in poor countries. When the Barbie dolls and barbecue grills sold in the Wal-Marts of America come from polluting factories in the global South, who benefits from allowing those factories to continue polluting? Giving the poor countries the right to emit more GHGs is little more than a back-door ploy to allow global corporations to continue producing, marketing and profiting from trade in goods whose manufacture entailed the burning of massive amounts of fossil fuels.

But what about the poor countries' need to develop? Implicit in this question is that there is only one way for the countries of the South to alleviate poverty, which is to follow the same development path trodden by the North. Not only is it impossible for the planet to support such a scenario (see below), the reality is that conventional development hasn't meant improved lives for the majority. The usual yardstick of living standards is per capita GDP, which rises when resources are unsustainably extracted and exported, when freely-provided community and family activities become monetized, when self-reliant farmers are pulled into urban slums, and when a handful of billionaires are created even as millions of others fall deeper into poverty. In many parts of the global South, growth and development have led to a declining quality of life for the majority even as GDP has risen.



e need to resist the corporate spin and focus on the real driver of rising greenhouse gas emissions: the corporate-led globalization of the economy. Globalization is a process by which international trade and investment are deregulated, primarily through a series of "free trade" treaties and agreements. These agreements give corporations and foreign investors the freedom to move in and out of national economies in search of cheap labor and resources, low taxes, high subsidies, and lax (or non-existent) measures to protect the environment and workers. Any national policies that are perceived to be "barriers" to trade or foreign investment - including rules that limit pollution of air and water – can be struck down under these treaties.

In the nearly 20 years since the Kyoto Protocol was drafted, governments have negotiated and ratified more than 400 bi-lateral and multilateral trade agreements, the prime drivers of globalization.⁴ Globalization, in turn, has not only fueled the growth of global corporations, it is also responsible for much of the atmospheric CO₂ that is destabilizing the climate.

Here are five ways that globalization leads to increased greenhouse gas emissions:

1. Globalization promotes unnecessary transport

huge supermarket chains contract with commensurately large farms to supply all their stores – in the process ignoring the many smaller farms located nearby. This is one reason why Britain, for example, imports and exports 15,000 tons of waffles annually, and exchanges 20 tons of bottled water with Australia; it's why supermarkets on the Citrus Coast of Spain carry imported lemons while local lemons rot on the ground;⁵ and it's why Canada simultaneously imports and exports greenhouse tomatoes.⁶ Similar examples can be cited for almost every country.

In some cases foods are shipped to the other side of the world just to shave a few cents off the cost of production or to add a few cents to the sales price. The US seafood company Trident is typical: to save on labor costs it ships about 30 million pounds of fish annually to China for filleting, and then ships the fish back to the US for sale.⁷

Trade in manufactured goods is not as likely to be redundant as trade in food, but globalization has increased transport distances in this sector as well. With industry steadily migrating to the global South, many products consumed in Northern countries – from clothing and toys to pots and pans – are no longer manufactured locally or regionally, but in the global South. As many Americans have noticed, almost every manufactured product – even those that are branded with the name of a nominally "American" corporation – has been

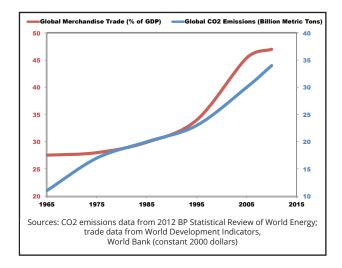
In today's global economy, trade is no longer about obtaining goods that can't be produced locally or regionally, nor is it about exchanging surpluses. Instead, a lot of today's "redundant", trade is goods sourced with from thousands of miles away when an identical product is available next door. This is particularly the true in global food system, where



produced in China, and has traveled halfway around the world.

It is not surprising, then, that the globalization-driven increases in international trade have led to parallel increases in greenhouse gas emissions (see graph below). What's more, globalization makes it harder for climate negotiators to assign responsibility for those emissions. One researcher put it this way: "Consider a ship that is registered in Liberia, operated by a Danish shipping line, and making a voyage from Shanghai to Los Angeles carrying products made in China by a European firm for sale in North America. How and to whom should the emissions from this voyage be allocated, and who should be assigned responsibility for reducing them? Questions such as these have proven to be politically intractable."8

When the stability of the climate is pitted against international trade, trade usually comes out on top: the commitments made by nations under the Kyoto Protocol, for example, don't include emissions from international aviation and shipping.⁹ As a result, the economic benefits of needless transport flow to the trading corporations, while its costs are shifted to the environment and the climate.



2. Globalization promotes rampant consumerism

High levels of per capita consumption in the rich countries are a major factor not only in greenhouse gas emissions but in many other forms of pollution, as well as in resource depletion. The environment is telling us that those consumption levels must be reduced, but the economic models on which the global economy is based require constant growth, which means increased consumption even in the rich countries. Whenever there is an economic slowdown, in fact, governments typically intervene by lowering interest rates, cutting taxes, or taking other steps to "stimulate consumer spending".

In the "less developed" parts of the world, it is presumed that economic growth will eventually enable standards of living to approach the levels found in Europe and North America. But those countries are already using far more than their share of resources, and are over-burdening the planet with wastes like greenhouse gases: for the rest of the world to consume and pollute at the same pace would require almost four additional planets.¹⁰

Economic globalization increases consumption in part by imposing a consumer monoculture - inducing people in diverse cultures to adopt the same values, preferences, and buying habits. Every day, people around the world are bombarded with media images that present the modern, Western consumer lifestyle as the ideal, while implicitly denigrating local traditions and landbased ways of life. The message is that the urban is sophisticated and the rural is backward; that imports of processed food and manufactured goods are superior to local products; that "imported is good, local is crap," in the words of an advertising executive in China.¹¹

As a result, millions of people are rejecting their own culture in an attempt to emulate the American dream. They are abandoning traditional local foods for McDonald's hamburgers and packaged ramen noodles, and giving up local wool, flax and cotton for imported designer jeans and polyester. In the process, the use of energy-intensive resources is going up, along with pollution and greenhouse gas emissions. Even in the North, cradle-to-grave advertising and planned obsolescence enable marketers and technological "innovators" to create a neverending stream of new needs among people who already have more "stuff" than the vast majority of the global population. In the long run, this consumption treadmill goes nowhere: studies have shown that once basic needs are met – a condition long ago reached in the global North – further increments of consumption don't actually leave people any happier.¹²

Who does benefit from the globalization of the consumer culture? Global corporations and banks, whose own growth imperatives are met through the excessive consumption – and consequent pollution – of hundreds of millions of people.

3. Globalization is making the food system a major climate-changer

Overall, estimates of the food sector's contribution to greenhouse gas emissions range from 19-29 percent.¹³ Globalization is responsible for a large and growing portion of that total, because:

a) Globalization leads to redundant trade in food, as described above, with thousands of miles of needless transport added to food miles and GHG emissions.

b) The global food economy requires far more processing and packaging than local food systems: in the US for example, more than one-third of the energy used by the food system is used for packaging and processing.¹⁴



c) Globalization is structurally linked to agricultural monoculture. Global marketers need massive amounts of the few globallytraded food commodities, and it is far easier to source those foods from one or two giant monocultural farms than from hundreds or thousands of diversified farms. Monocultures rely heavily on agrochemicals and mechanized equipment – both of which result in significant GHG emissions. They also degrade soil, depleting it of its ability to sequester carbon.

d) Globalization is leading to dietary changes that exacerbate GHG emissions. Thanks to the mimicking of Western patterns of consumption, global meat consumption is expected to double by 2050.15 Most of that meat will be raised on factory farms that are major contributors to climate change: factory-farmed broiler chickens, for example, produce seven times more GHG emissions than backyard chickens.¹⁶ At the same time, Northern consumers are no longer content to eat food seasonally: supermarkets routinely carry out-of-season foods grown thousands of miles away. Many of these perishable foods are not only produced on monocultural farms, but require refrigeration and air transport, adding to their climate change impact.



e) The global food system destroys rainforests and other wild ecosystems. Many of the planet's carbon-sequestering natural ecosystems are being destroyed to make way for large-scale monocultural farms producing globallytraded commodities: Brazil, for example, is converting large swaths of the Amazon to soybean production, while Indonesia's rainforests are being displaced by palm oil plantations. As Camila Moreno points out, "If you really want a mechanism to avoid deforestation, dismantle agribusiness. This is the main driver of deforestation in the entire South".¹⁷

4. Globalization replaces human labor with energy-intensive technologies

Globalization is both scaling up and speeding up the economy – two trends that combine to put a premium on energy-intensive high technology, while devaluing human labor. Supply chains now routinely involve dozens of countries, and markets are even larger. Robots are increasingly relied upon to do factory work that was once done by people. Banks and other financial institutions deal in dozens of currencies and hundreds of stock and commodity markets all over the world, relying on computer algorithms to direct massive flows of money.

The corporate spin on these changes is that they are all products of efficiencies of scale. However, energy-intensive technologies are not more efficient when all the costs are taken into account. Because the price of energy doesn't include its ecological costs - including greenhouse gas emissions - it becomes artificially cheap to use more and more of it. At the same time, governments provide a wide range of subsidies, many of them hidden, for both energy and technology. Tax breaks, tax credits, accelerated depreciation and other subsidies are provided to companies that invest in technology; hiring workers, on the other hand, means paying expensive payroll taxes that make human labor more expensive.

Many of the subsidies for high-tech are hidden. From grade schools to PhD programs, for example, educational institutions use public tax money to train young people for jobs in the high-tech sector. The media, meanwhile, continually reinforces the notion that a "good" job involves sitting in front of a computer, while manual work of any kind, even artisan work, is primitive and backward. As a result, many parents push their children onto computers before they are able to walk.

There is a pervasive myth that computers are a "clean" technology, unlike the steel mills and factories that have been shunted off to the global South. But the tens of thousands of data centers on which much of the hightech world relies require vast amounts of energy: a single data center can use as much electricity as a medium-sized town; globally, they use an amount equivalent to the output of 30 nuclear power plants.¹⁸ Most of that energy is simply wasted: it is used to keep the servers ready in case of a surge in activity that could slow operations or cause the server to crash. "This is an industry dirty secret," said one senior industry executive. "If we were a manufacturing industry, we'd be out of business straightaway." In order to avoid a shutdown in the event of power loss, many internet-based companies, including Google and Facebook, also run banks of diesel generators at their data centers, earning them citations for violating clean air laws.¹⁹



What's more, toxic e–waste – the residue of the constant "innovation" that makes last year's smartphone obsolete – is the world's fastest growing waste stream, expected to grow by a third in the next four years. The US alone produces 10 million tons of e-waste annually, most of it dumped in poor communities in the global South.²⁰ In the end, the scaled-up and sped-up global economy systematically replaces jobs for people with subsidized, polluting technologies. This is not more efficient: it is using taxpayer money to subsidize the destruction of jobs, pollution of the environment, and a significant increase in greenhouse gas emissions.

5. Globalization promotes energyintensive urbanization

The consumer culture that globalization promotes is increasingly urban. At first glance high-density urban living might appear to reduce per capita use of resources. But this is only true when compared with life in the grossly inefficient suburbs, which are themselves a product of urbanization. Compared to the genuinely decentralized towns and villages that still exist in the less-industrialized world, urbanization is extremely resource-intensive. One reason is that virtually every material need of highly-urbanized populations must be brought in from elsewhere, requiring vast energy-intensive infrastructures to do so. For example, almost all the food consumed by city dwellers must be grown for them, typically on giant, chemical- and energy-intensive farms;

all this food must then be brought into the cities on roads purpose-built to accommodate huge trucks. Similarly, providing water involves enormous dams, man-made reservoirs, and aqueducts stretching into distant hills and mountains. Energy production means huge, centralized power plants, coal and uranium mines, and thousands of miles of transmission lines.

In the global South, the current trend towards rapid urbanization is linked to significant increases in per capita resource use. As Vandana Shiva points out, "The moment a person moves into the city, the energy use shoots up, the water use shoots up. The infrastructure to run a city per capita is much bigger than the infrastructure to produce a high quality of life in a village."²¹

Statistics that purport to show the energy-efficiency of urban living are skewed in much the same way that nation-by-nation comparisons of GHG emissions are: since almost all of the food and resource needs of urban zones come from rural areas, the energy required for their production is tacked on to the rural total, even though the end products are consumed in the cities.



Because of the obsessive pursuit of global growth, thousands of species are becoming extinct, and – if climate change accelerates – the planet may soon be unlivable for humans as well. Attempts to reduce GHG emissions while continuing to scale up the economy are, in the end, an exercise in futility.

The ongoing push to further deregulate trade is a case in point. Not only does trade deregulation accelerate climate change by the mechanisms outlined above, it makes it more difficult for governments to enact policies that would reduce GHG emissions. For example, most 'free trade' treaties include investorstate dispute settlement (ISDS) provisions that allow corporations to challenge local and national laws that might reduce their profits. Such cases are heard in unaccountable private tribunals composed of three trade lawyers.

Corporations have already used ISDS provisions more than 500 times to challenge government laws and regulations - including environmental laws. Citing NAFTA, for instance, the US company Lone Pine Resources, Inc. sued Canada for \$250 million because the province of Quebec placed a moratorium on natural gas 'fracking';22 the Swedish energy giant Vattenfall recently sued Germany for 3.7 billion euros over the German government's decision to phase out nuclear power; five years earlier, Vattenfall sued Germany for \$1.5 billion to avoid environmental rules around construction of a coal-fired power plant.²³ Laws designed to reduce GHG emissions would not be exempt from ISDS rules.

Nonetheless, political leaders have been pushing for still more trade deals, including the Trans-Pacific Partnership (TPP) and the Trans-Atlantic Trade and Investment Partnership (TTIP) – even while pontificating about the urgent need to curb GHG emissions. According to a recent report, "the TPP investment chapter gives foreign investors, including some of the world's largest fossil fuel corporations, expansive new rights to challenge climate protections." These new treaties greatly expand the negative impacts of trade deregulation, in part by extending ISDS provisions to resources like coal, oil, and natural gas on federal lands and territorial waters.



Moving towards the Local

To address the climate problem effectively, governments need to stop subsidizing globalization, and to begin pursuing a localization agenda instead. Localization is a process of economic de-centralization that enables communities, regions, and nations to take more control over their own affairs. It does not mean encouraging every community to be entirely self-reliant; it simply means shortening the distance between producers and consumers wherever possible, and striking a healthier balance between local markets and a monopoly-dominated global market.

This translates into more community gardens, more farmers' markets, more local shops, more local finance and investment. Localization does not mean that people in cold climates are denied oranges or avocados, but that their wheat, rice or milk – in short, their basic food needs – do not travel thousands of miles when they can be produced within a fifty-mile radius. Rather than ending all longdistance trade, steps towards localization reduce unnecessary transport while strengthening and diversifying economies at the community as well as national level. Ultimately, the degree of diversification, the goods produced, and the amount of trade will naturally vary from region to region.

A Solution Multiplier

By encouraging more local and regional production of basic needs, localization reduces transport, packaging and processing, and eliminates redundant trade – all of which translates into a smaller carbon footprint. By shrinking the scale of the economy, localization also reduces the power of global corporations and banks, helping to halt the erosion of democracy and reducing the pressures for economic growth that result in needless and wasteful consumption.

Localization also leads to improved living conditions in the global South. Poverty in those countries is the product of centuries of colonialism, development, debt, and the dismantling of local economies in favor of production for export.

Improved conditions for the majority will not be achieved by continuing down this path, but from greater self-reliance, food sovereignty, and the right to protect resources from predation by global corporations. Nor will the majority benefit from attempts to mimic the energy path taken by the economies of the global North. Because the energy infrastructure in the global South is not as developed as in the North, it would be cheaper and more ecologically sensible in those countries to build up a decentralized renewable energy infrastructure instead.

As for greenhouse gas emissions, it does no favor to the people of the South to allow global corporations operating in those countries to profit from the pollution of local environments while adding to the problem of climate change.

Linking Hands for Change

A shift in direction from global to local is not only the most effective response to climate change, it would simultaneously address the many other social, environmental and economic problems we face. As a result, a global-to-local strategy can unite a wide range of existing campaigns and enable people to link hands across many divides – North and South, left and right, economic and environmental, urban and rural. A much stronger movement would emerge – strong enough, even, to overthrow the de facto government of corporations and banks.

Fortunately, there are already moves afoot in this direction. Naomi Klein's book This Changes Everything makes the link between neoliberal economic policies an climate chaos, and many NGOs and activists – particularly those in the new economy movement - have moved beyond single-issue campaigning towards a more holistic view of the problems we face. Most encouraging is the emergence of a worldwide localization movement, which especially in the area of local food – has grown exponentially in recent years. The seeds for change have been planted at the grassroots. If governments can be persuaded to re-regulate global trade and finance, those seeds can grow, flourish and spread.

Around the world, the pressure on policymakers is building. The task may seem monumental, but it's not impossible. Globalization is actively promoted by less than 1 % of the world's population – the free marketeers. The remaining 99% are ready for change.

This is not only about the climate, it is about our livelihoods, our health, our children's future.



	GLOBALIZATION	LOCALIZATION
TRANSPORT	 Separates producers and consumers, so almost all goods travel further Promotes redundant trade 	 Shortens distance between producers and consumers, so less transport needed
CONSUMERISM	 Requires endless growth, fueled by endless consumption Pulls people away from self- reliance Creates new "needs" and planned obsolescence 	 Reduces consumption by answering real psychological and spiritual needs for community and connection Reduces artificial needs, advertising, and corporate influence
FOOD AND FARMING	 Requires monocultural production, which is chemical and energy-intensive Increases GHG footprint through factory animal farms Promotes redundant trade, multiplies food miles, and increases need for processing, packaging and refrigeration Encourages dietary changes in global South, including new emphasis on meat Encourages expectation of out-of-season foods year-round in rich countries 	 Encourages agro-ecological, diversified production, which is less energy- and chemical- dependent, and provides carbon sinks Integrates livestock in a productive and sustainable way Reduces need for packaging, refrigeration, and transport Encourages diets that are locally-adapted and seasonal, making use of what grows best in particular ecosystems and microclimates
ENERGY	 Replaces human labor with energy-intensive technology, thereby adding to both unemployment and pollution 	 Makes more use of human labor and knowledge, with less need for energy-intensive technology
URBANIZATION	 Promotes the growth of megacities and suburban sprawl Requires huge energy- intensive infrastructures Centralizes production and job opportunities, encouraging rural populations to abandon low-impact lifestyles 	 Promotes more decentralized living patterns Brings people closer to the sources of their basic needs, so less need for huge infrastructures Decentralizes production and job opportunities, revitalizing villages, towns and smaller cities, where energy needs and consumption pressures are lower

Making it Happen

What can we do at a practical level to begin the move from global to local? Above all, we need to see the benefit in joined-up thinking and action: forming alliances across conventional boundaries – both in our heads and in our activism – to form grand coalitions. The underlying root cause behind all of our social and ecological problems is the global economy. Whether our primary concern is climate change, or animal welfare, or nuclear weapons, or poverty and unemployment, the central issue is the same: who is in charge, and whose interests are being served? And what about Nature? Who stands up for her?

The conventional economy measures, in Bobby Kennedy's words, "everything except that which is worthwhile". We need to cultivate a very different kind of economy: one based not on endless growth and the enrichment of a tiny minority, but on the sustainable wellbeing of people (all people) and the planet.

© Education as activism. There's a natural tendency to want to get on with hands-on activism right now. But let's take a deep breath first. We are talking about movement-building, and that requires a critical mass of people who are on the same page. We all need to educate ourselves more fully both about what's going on in the name of economics-as-usual and about the alternatives. Share books, websites, articles and films, set up study circles with friends and neighbors, and "cross-pollinate" with people who have different primary concerns.

 Resistance. Add your voice in whatever ways you can to the growing chorus of opposition to economic globalization. In particular, sign petitions, write letters to the media, and harangue your political representatives about the international trade treaties. Demand an end to further corporate de-regulation, and insist that corporations be place-based: in other words, subject to the laws and taxes of individual nation states.

Renewal. Join with others to set up initiatives in service of community and the Earth, with a particular emphasis on the role of food: farmers' markets, local food cooperatives, community gardens. Establish tool repair workshops and seed-sharing projects. Support community energy and finance schemes. Put pressure on the local administration to build up public transport, cycleways and pedestrianized zones.

International Alliance for Localization. Become a member of our new alliance: a crosscultural network of thinkers, activists and NGOs dedicated to exploring radically new visions of development and progress. www.localfutures.org/internationalalliancefor-localization-member-sign-up

Together we can make a difference!



Local Futures is a non-profit organization dedicated to the revitalization of cultural and biological diversity, and the strengthening of local communities and economies worldwide. Our emphasis is on education for action: moving beyond single issues to look at the more fundamental influences that shape our lives.

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References

1 Nearly two-thirds of all the carbon emitted into the atmosphere during the industrial era is the product of just 90 corporations and state-owned companies and industries. Carbon Majors, "New Study Traces Two-Thirds of Industrial Emissions to Just 90 Institutions", November 21, 2013, http://carbonmajors.org/ carbon-majors-press-release. Accessed October 18, 2014.

2 Moreno, Camila, interviewed on Democracy Now, December 18, 2009, "Environmental and Indigenous Activists Criticize Proposed Deal to Save Rainforests", http://www.democracynow.org/2009/12/18/environmental_and_indigenous_activists_criticize_proposed. Accessed November 4, 2015

3 Batistelli, Paul, "Renewable Energy and Economic Growth Go Hand in Hand in Massachusetts", EcoWatch, Sept. 20, 2013, http://ecowatch.com/2013/09/20/renewableenergy-economic-growth-massachusetts/. Accessed November 10, 2015.

4 World Trade Organization, "Regional Trade Agreements: Facts and Figures", https://www.wto.org/ english/tratop_e/region_e/regfac_e.htm. Accessed October 27, 2015.

5 "The Problem with Redundant Trade", Deconstructing Dinner, October 9, 2013, http://deconstructing-dinner.ichannel.ca/the-problem-with-redundant-trade-2/. Accessed November 13, 2015.

6 Ibid.

7 Yeoung, Choy Leng, "NW salmon sent to China before reaching U.S. tables", The Seattle Times, July 16 2005, http://www.seattletimes.com/business/nw-salmon-sent-to-china-beforereaching-us-tables/. Accessed November 10, 2015.

8 Vaishnav, Parth and Iddo K. Wernick, "Greenhouse Gas Emissions from International Transport", Issues in Science and Technology, Vol. XXX, issue 2, winter 2014, http://issues.org/30-2/parth/. Accessed November 20, 2015.

9 United Nations Pan-European Programme (PEP), http://www.thepep.org/chwebsite/chviewer. aspx?cat=d10. Accessed November 13, 2015.

10 Global Footprint Network, "Living Planet Report 2014 Facts", http://www.footprintnetwork.org/en/index.php/GFN/page/living_planet_report_2014_facts/. Accessed 23 September 2015.

11 "Where the Admen Are", Newsweek, March 14, 1994, p. 34.

12 Simms, Andrew, Victoria Johnson and Peter Chowda, "Growth isn't possible: Why we need a new economic direction", Schumacher College and New Economics Foundation, 2010, http://www.neweco-nomics.org/publications/entry/growth-isnt-possible. Accessed November 23, 2015.

13 Vermeulen, Sonja J. et al, "Climate Change and Food Systems", Annual Review of Environment and Resources, Vol. 37: 195-222, November 2012, http://www.annualreviews.org/doi/abs/10.1146/annurev-environ-020411-130608. Accessed November 23, 2015.

14 Pimentel, David. August 2006. Impacts of Organic Farming on the Efficiency of Energy Use in Agriculture. An Organic Center State of Science Review, http://www.organiccenter.org/reportfiles/ENERGY_SSR. pdf.

```
15 GRAIN, "Trade Deals – Boosting Climate Change: the Food Factor", October 2015, https://www.grain.
org/article/entries/5317-trade-deals-boosting-climate-change-the-foodfactor. Accessed Nov 1, 2015.
```

16 ibid.

17 Moreno, Camila, op. cit.

18 Glanz, James, "Power, Pollution, and the Internet", New York Times, Sept. 22, 2012, http://www.nytimes.com/2012/09/23/technology/data-centers-waste-vast-amounts-ofenergy-belying-industry-image. html?_r=0. Accessed November 20, 2015.

19 Ibid.

20 Vidal, John, "Toxic 'e-Waste' dumped in poor nations, says United Nations", The Guardian, Dec. 14, 2013. http://www.theguardian.com/global-development/2013/dec/14/toxic-ewasteillegal-dumping-developing-countries. Accessed Nov. 20, 2015.

21 Shiva, Vandana, interviewed in The Economics of Happiness, Local Futures/ISEC 2011.

22 Corporate Europe Observatory/ Council of Canadians/ Transnational Institute (2013) The right to say no. EU- Canada trade agreement threatens fracking bans, http://corporateeurope.org/publications/right-say-no-eu-canada-trade- agreementthreatens-fracking-bans . Accessed May15, 2013.

23 Solomon, Ilana, and Ben Beach, Sierra Club, A Dirty Deal: How the Trans-Pacific Partnership Threatens our Climate, December 2015.

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