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False Solutions to Climate Change

RISING TIDE NORTH AMERICA

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This booklet was produced by Rising Tide North America, an international all-volunteer grassroots network of groups and individuals who promote local, community-based solutions to the climate crisis and take direct action to confront the root causes of climate change

We organize through decentralized local groups, which have the freedom to choose what to work on, and support one another through shared resources, ideas, fundraising and training. The international Rising Tide network now spans countries on four continents. If you like what we have to say here, you should join our network! To learn more about Rising Tide, to find or start a local group, get in touch–we'd love to hear from you!

Rising Tide North America
503.438.4697
www.risingtidenorthamerica.org
contact@risingtidenorthamerica.org

Acknowledgments

This book borrows from and would not have been possible without the extensive research of Corporate Watch and the World Development Movement (both used with permissions).

The World Development Movement is www.wdm.org.uk
Corporate Watch is www.corporatewatch.org.uk

Additional contributors include: The World Rainforest Movement, International Rivers, Rachel Smolker, Rory Cox, the Transnational Institute, Oscar Reyes and AlterEco.

All other text by Rising Tide North America.
Cover Design: Amber Stauss; Layout: Juan Martinez and Sakura Saunders

Photographic and art contributors include: Ben Powless, Tamra Gilbertson, Mike Wells, Appalachian Voices, Jorge Alcoreza, Art Not Oil, Andy Singer and the Beehive Design Collective.

A special thanks also to Eddie, Maya, Abigail, David, Erin, Kim, Chris, Trip, Monica, Jeremy, Jasmine, Brian, Tom, Debbie, and Laini as well as Carbon Trade Watch, the Energy Justice Network, and the UofO Student Insurgent.

Hoodwinked in the Hothouse

Only a few years ago, some companies were saying climate change wasn't a problem. Now, as its impacts becomes apparent, corporations are suddenly scrambling to claim leadership on the issue. Desperate to avoid regulation that may hit their profits, they present a dizzying array of "false solutions," quick fixes that perpetuate inequalities in our society and attempt to cash in on the crisis.

Our fear of change and the unknown, and the widely held belief that technological progress can solve all problems make these techno-fixes and market-based solutions extremely seductive.

In most cases it's an easy sell. Since the 1980's, global politics have been dominated by a model of corporate globalization: An entire generation has grown up in a world in where little has been possible without corporate assent. Economic growth and increased consumption are society's implicit goals and to achieve this, multinational corporations must be given free reign.

Yet upon closer examination, the choices they have presented are false ones, dangerous detours on the road to a just, livable planet, distracting us from the root causes of the crisis.

Meanwhile, climate change is already effecting the planet, and it's the poorest who are hardest hit. Flooding from severe storms, rise in sea levels and melting glaciers affect millions in Asia and Latin America, while sub-Saharan Africa is experiencing sustained droughts. Death and increasing poverty result.

Consider: half the world's annual CO_2 emissions come from the Global North*, making up only 15% of the global population. The path is clear: for humanity's survival, for justice, and for sustainability, we must reduce our emissions and consumption here at home.

To do so, we must educate ourselves about bogus climate change solutions we are given and act to restructure our relationships to the earth and its peoples to achieve a zero carbon society; short cuts are clearly insufficient.

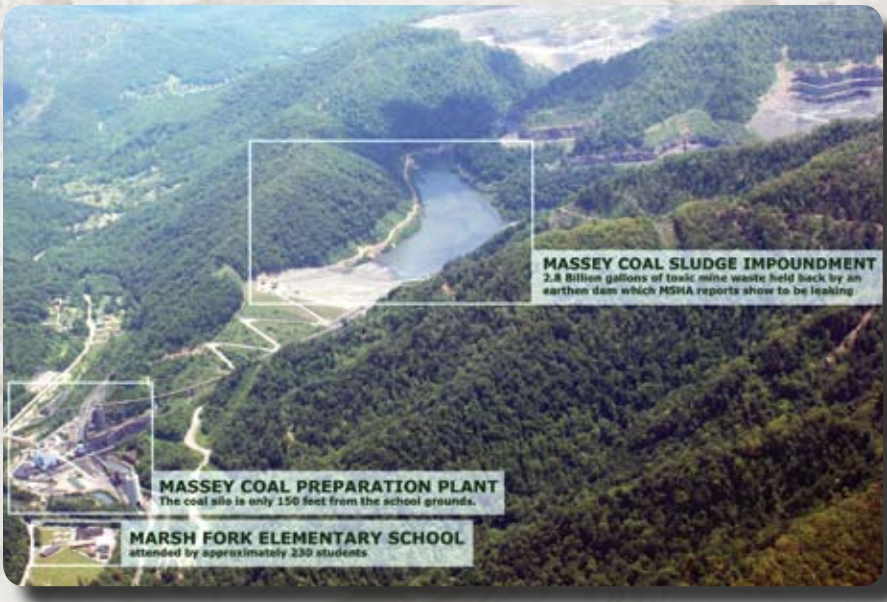
** Throughout this booklet, the rich countries, aka the developed world or the First World, are referred to as the "Global North." The poorer countries, aka the developing world or the Third World, are referred to as the "Global South."*

Clean Coal and Carbon Capture and Storage

Carbon capture and storage (CCS) is a major departure from other climate mitigation strategies. Rather than stopping pollution or replacing a fossil fuel, it allows current activities to continue but captures the carbon emissions and buries them under the ground. This "carbon sequestration" is primarily considered for coal power plants—it's a key component of the "clean coal" myth—although its use for other fossil fuels has also been proposed.

Even proponents recognize that CCS is unlikely to be widely operational until at least 2030, a bit late if we want quick action on climate change! Methods for determining how much carbon can be stored in an underground site or how to indicate technological failure—such as leaking toxic concentrations of CO_2—have yet to be developed. The infrastructure necessary to widely implement CCS would be extraordinary and highly controversial. CSS would demand thousands of miles of pipelines and hundreds of untested underground storage sites. Most troubling, it would require new "CCS-ready" coal-fired power plants, hundreds of which are already on the drawing board despite the embryonic state of the technology.

Coal country, West Virginia. Photo: Appalachian Voices



By far the greatest concern is that CCS legitimates the continued dominance and expansion of the coal industry under the notion that coal can someday be clean. The impurities flushed from one stage of the coal "cleaning" process are stored behind over 600 earthen-sludge dams throughout the United States. Residents nearby these sites are exposed to heavy metals as the reservoirs leak into drinking water. Dams can rupture from age or poor construction, as was tragically demonstrated by the toxic coal ash spill in Tennessee on Christmas Eve 2008, which buried homes and rivers in more than a billion gallons of sludge.

Coal power plants are responsible for an estimated 24,000+ premature deaths in the United States each year caused by the fine particulate matter they release into the air. In contradiction to the "clean" propaganda, mercury emissions are actually higher in "clean" coal plants than conventional ones.

Even if coal could somehow be prepared and burned safely, there is no way to repair the damage of coal extraction, which has devastated communities and ecosystems from Bangladesh to Black Mesa, Arizona. The worst forms of mining—termed "mountain top removal"—can level up to 10 square miles of landscape in a single operation. West Virginia alone has seen well over 500 square miles of mountains and 1,500 miles of rivers destroyed by mountain top removal coal extraction.

Many environmentalists agree that "clean" coal is too dirty for the Global North, but, vacating any notions of global human rights or international solidarity amongst environmental activists, contend that it should be deployed for the Global South's energy needs.

Natural Gas and Liquefied Natural Gas

By Rory Cox

Speaking of fossil fuels masquerading as clean energy, for decades natural gas from North American fields has been touted as a "bridge fuel" to a renewable future. Decades later, we are no closer to the other side of that bridge. Instead, oil and gas multinationals are trying to sell us another bridge: Imported Liquefied Natural Gas (LNG). LNG is simply natural gas supercooled to a -260 Fahrenheit liquid, which allows it to be shipped overseas on tankers. LNG technology allows natural gas extracted from sources in the Middle East, Russia, and Nigeria to be imported into North America.

While natural gas—which often requires devastating mining operations and thousands of miles of pipelines—is the "least dirty" of the fossil fuels, the process of shipping natural gas overseas adds 15 and 25% to its CO_2 emissions. In some cases, emissions generated from LNG use can be as harmful as emissions generated from the use of coal.

Agrofuels

Agrofuels (or "biofuels" as they are known by their proponents) rely on industrial scale agriculture, which has long been dependent on deforestation and cheap fossil fuels. In many countries, rainforests are being plowed under for the expansion of agrofuel plantations, destroying carbon stores vital to regulation of ecosystems.

Across the United States and European Union, governments announced steadily increasing targets for the inclusion of agrofuels in the fuel that runs our cars. In response, the agricultural market made a wholly predictable shift toward fuel production, contributing to the skyrocketing price of grain around the world.

Just with these preliminary agrofuel targets, staple foods are becoming less affordable for the poorest people, and thousands have protested in Indonesia, Mexico and in many African countries over price hikes. Agrofuel production inevitably outcompetes food production, since the buying power of rich northern agrofuel consumers is greater than the buying power of poor southern food consumers. For countries with a strong car culture, most arable land would need to be converted to agrofuels to keep the gas flowing. The reality, however, is that most agrofuel consumption in the Global North does not come from domestic industry, but is based on importation from the Global South, just as oil is imported today.

"2nd Generation" Agrofuels

"We are told that corn and sugar ethanol is merely a stepping stone to advanced 'second generation' fuels. This next generation is to be made from the inedible parts of plants, grown on marginal and idle lands and won't compete with food. Unfortunately, all forms of agriculture require land, soil, water and fertilizers—all of which are dwindling resources. The removal of wastes and residues from agricultural and forested lands for fuel production will deprive soils of organic matter required by healthy ecosystems. Energy demand is too huge to use plants for fuel sustainably and the efficiency of plant growth and conversion to fuels is too poor. The intensifying scramble for land is causing the displacement of people, often violently, from their traditional lands. Stripping the land bare, planting monocultures, and using every scrap of plant life for fuel is a clear path to catastrophe."

– Rachel Smolker, PhD, Research Biologist

Furthermore, recent scientific reports have suggested that biofuels made from corn, sugar cane and soy are having a worse impact on the climate than burning fossil fuels. Most agrofuels are grown on large monoculture plantations. Such plantations require large scale deforestation that actually contributes to climate change, as do the nitrous oxide emissions from chemical fertilizers. Emissions from oil are merely shifted to emissions from wasteful agricultural land use.

Agrofuel targets in climate and energy policies have one source: lobbying by companies with investments in agrofuels. The beneficiaries of the rush to agrofuels are neither the climate nor farmers, but multinational agricultural corporations.

Biofuels and Communities

Exploitation of workers on plantations. In the Brazilian sugar-cane industry, cutters receive only a fraction of a dollar per ton of sugar cane cut, and many people have died in sugar cane plants and plantations.

Unemployment and the destruction of the rural economy. Actual employment generated by agrofuel production is very low. The spread of agrofuel plantations weakens rural economies, increases poverty, and pushes people into the cities where they swell the slums.

Human rights violations. In Tanzania, more than 11,000 people have been evicted from one agrofuel plantation alone. Oil palm plantations in Indonesia have been imposed on communities with adverse effects on their livelihoods while agrofuel companies have a history of violations of human rights.

Water stress. In India it takes nearly a thousand gallons of water to produce 4 cups of sugar-cane derived ethanol. Scarce water resources could be further depleted.

Indonesia's massive Sawit (palm fruit) agrofuel plantations in Sumatra, Indonesia. Photos: Tamra Gilbertson

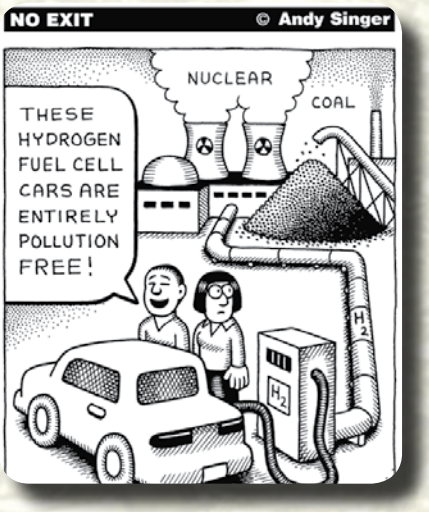
The Nuclear Option

The nuclear industry has latched onto the climate crisis in a last ditch attempt to survive in the face of long-term public opposition.

Nuclear power is presented as clean energy because no carbon dioxide is emitted during the electricity generation process. Yet huge amounts of energy are required for every other stage in the process, including the mining, milling and transportation of the uranium; the construction and decommissioning of the power plants; and the reprocessing, storage and disposal of nuclear waste. At present, most of this energy comes from fossil fuels.

Uranium is mainly mined in vast open-cast pits. In some hard-to-reach seams uranium is removed through in situ leaching, where sulfuric acid, nitrous acid and ammonia are injected into the seam and pumped up again years later. Typical-grade uranium ore requires a thousand tons of rock to be ground up to produce one ton of useful fuel. The other 999 tons of rock is radioactive indefinitely and is left in the environment where its radioactive products are free to be leached out.

The economics of nuclear power are highly uncertain, particularly with the new generation of "safe" designs. The first of these "third generation" plants is under construction in Finland. In August 2007, after 27 months of construction, the project was declared to be between 24 and 30 months behind schedule and $2,230 million over budget.



Nuclear power plants take far longer to build than almost any other energy source and–when the lifecycle costs are taken into account–are far more expensive then most every other climate solution under consideration. It is only through the tax-payers covering nuclear waste disposal, reprocessing, storage and plant decommissioning costs–and frequently subsidizing the intial construction as well–that nuclear power remains an energy option at all.

Carbon Trading

Part 1: Cap and Trade

The practice of carbon trading was implemented by the Kyoto Protocol as another strategy for tackling climate change, while allowing "business as usual" in many industries that profit most from the use of fossil fuels. Essentially, governments create a market commodity out of carbon pollution by issuing a finite amount of tradable pollution permits each year. As the theory goes, the amount of permits issued would decrease year to year and carbon emissions would be reduced. Because the permits are tradable, and emissions cuts are easier and cheaper for some businesses to make than others, the "invisible hand" of the market will cut overall emissions as efficiently as possible, at the lowest possible cost to the economy.

Established by the Kyoto Protocol, a cap and trade system is up and running in Europe, but it has been an unmitigated failure, beset by fraud and market manipulation. Known as "The European Emissions Trading Scheme," (ETS) the market includes within its scope large industrial plants including power stations and factories—entities that comprise just under half of Europe's total CO_2 emissions. Some power companies were issued the permits free of charge, yet have raised prices to "compensate" for the costs of the scheme, resulting in windfall profits. At the same time, other companies overestimated their emissions upon entering the scheme, miscalculations that lead to bottom-basement prices for the remaining permits and reduced incentives to limit emissions.

A sponge iron facility expanded after receiving offset credits for reducing its CO_2 emissions. Residents of Charenga, India have blockaded roads in an attempt to stop this company from growing, as it has been poisoning their rice crops and cattle. Photo: Tamra Gilbertson

Worse, monitoring of emissions is inadequate. The levels of greenhouse gases that individual countries emit cannot be precisely quantified—studies claim the level of uncertainty is as high as 30%—and nearly half the emissions sites that purchase carbon credits in Europe are not satisfactorily monitored. Furthermore, enforcement of penalties for exceeding limits is almost nonexistent.

Demonstration during the 2007 UN climate meetings against the inclusion of forest offset credits in a post-Kyoto agreement. Photo: Ben Powless

Is there any wonder that Europe's CO_2 emissions are rising despite their commitments under Kyoto?

Proponents say these problems can be fixed, but there are more fundamental issues. Carbon trading seeks reductions on the cheap–sometimes you get what you pay for. While short term reductions in carbon emissions may be less expensive in carbon trading markets, there is no incentive toward crucial long term changes and investments that will be necessary to move us into a post-carbon society. Furthermore, as exemplified by the US sulfur dioxide trading market, communities with less political clout—typically low income communities and communities of color—can see increases in pollution under permit trading regimes, as neighborhoods and towns with more political clout demand more rigorous enforcement of pollution limits.

Perhaps the most troubling aspect of cap-and-trade is that it creates an experimental new system of private property rights. Permits are accounted for in corporate balance sheets and recorded in legal statutes the same way as patents or land grants from the government. When property rights are created and given to the most powerful actors in society, their ability to shape future privileges is only further entrenched. The level of the cap and the rules associated with the trading become the product of endless lobbying by companies trying to retain their high allowances, not scientific understandings of ecosystem and biosphere health. This power dynamic also exists on a global level as the countries and companies of the Global North fight to retain their high share of rights to emit.

At a time when poorly understood, experimental markets dominated by powerful interests have thrust millions of households into foreclosure and the world into the worst global recession in decades, do we really want another opaque commodity trading market?

Europe says it intends to fill some of the holes in the ETS—for instance, by auctioning some permits instead of giving them away. But the EU has no intention of removing one of the biggest problems with carbon trading—the fact that carbon credits (popularly referred to as "carbon offsets") can simply be bought from the Global South to substitute for emissions reductions at home.

Carbon Trading Part II: Carbon Offsets

The UN's "Clean Development Mechanism" (CDM) is the largest generator of carbon offset credits. Perversely, factories in India and China have sold offset credits for implementing modest clean ups required by law throughout the Global North, and then have used their "emissions reduction" revenue to expand the same, highly-polluting industries. As a result, local communities have suffered from exposure to pollutants (like arsenic, acid rain, and mercury) while greenhouse gas emissions have continued to rise.

Tragically, environmentally conscious individuals have been hoodwinked by the "carbon neutral" mentality, priming the pump for the global offset industry. We are told that we can "offset" our emissions from a particularly polluting activity for a small fee. The fee is used to plant trees to soak up CO_2, or to help people in the Global South reduce their emissions.

Tree planting has been widely discredited as an offset because the polluting activities take place immediately even though the tree plantations only soak up carbon emissions over a period of decades. Furthermore, release the stored CO_2 back into the atmosphere after they die. The creation of offset tree plantations has frequently stripped communities of control of common lands often used for subsistence agriculture.

Offsetting encourages us to think we can buy our way out of the changes we need to make to the way we live, but the reality is that the vast majority of offset projects are either scientifically dubious or minor tweaks that distract us from the large changes we need to make in our own backyard. In order to tackle climate change we need to support community-led sustainable development in the Global South as well as reductions in CO_2 emissions in the Global North, not instead of them!

Outside the offices of the Carbon Neutral Company in London, as it was being occupied by activists with London Rising Tide in February 2007. Photo: Mike Wells

Seeing REDD:
The World Bank's Anti-Solutions

By AlterEco, the Transnational Institute, and Rising Tide North America

Tragically, the World Bank is a central agent for delivering "green" development within the UN's climate treaties. The Bank, a powerful and deeply undemocratic international institution, has a long and controversial history of assisting large corporations in "developing" poor countries.

The Bank manages the massive Prototype Carbon Fund (PCF), a corporate and government investment pool that claims to "pioneer the market for project-based greenhouse gas emission reductions while promoting sustainable development," making the Bank a kingmaker within the offset market.

Despite the stated goal of the PCF, less than a quarter of its offset projects are linked to development and a mere 6% of funds are set aside to promote sustainable development. More than 80% of the funds released have gone to heavily polluting industries in the oil, gas, cement, iron and steel production and industrial gases sectors. Communities living in the wake of these projects have been devastated by their environmental and health impacts.

Will the UN Help Us?

Activists from Climate Justice Now! described the atmosphere during the 2008 UN climate meetings in Poland: "Private investors are circling like vultures, swooping in on every opportunity for creating new profits. Business and corporate lobbyists expanded their influence and monopolized conference space at Poznan. At least 1,500 industry lobbyists were present either as observers or as members of government delegations."

The UN process on climate has been blighted and continually sidetracked by an all-encompassing focus on the inner working of carbon markets. This approach was introduced when the United States, under Al Gore's tenure as lead negotiator, stated it would not ratify the Kyoto protocol without a central role for carbon markets within the plan. More then ten years after weakening the protocol, the US has still declined to sign on.

The Bank's latest scheme, called "Reducing Emissions from Deforestation and Degradation" (REDD) is part of the "Bali Roadmap" established by the UN in 2007, and is slated to be a key component of any post-Kyoto climate treaty. This new plan offers a means for rich countries to avoid responsibility for over-consumption and evade emissions cuts by buying offsets.

The logic underpinning REDD is fairly simple: at present, the short-term economic gains from deforestation outweigh the long-term benefits of forest conservation. The Bank argues that investing up to $10 billion globally per year into saving forests will change the economic balance in favor of conservation. This money would be paid in the form of carbon credits–the more trees a country or company saves or pays to save, the more it earns the right to pollute.

The Bank's record of failed forest conservation projects is worse than its efforts at green development. During the 1980s, human rights activists and environmentalists worldwide campaigned against the Bank's funding of logging projects, mega-dams and road building programs. Recently, in massive logging and agrofuels projects in the volatile Democratic Republic of Congo, in Indonesia, and in the Amazon Basin, the Bank has been harshly criticized for funding environmental destruction and encouraging social unrest.

Given the Bank's past record, there are other reasons to be concerned as well. In many tropical countries, governments have attempted to legally define remaining forests as leaseable state lands, so that indigenous peoples who have lived in forests for millennia are being evicted from their homes. With the World Bank and their corporate partners' interests in protecting lucrative forest carbon "reservoirs," the risks to forest-dwelling people will surely grow.

Indigenous peoples and supporters protest REDD and the exclusion of indigenous rights from the final agreements of the UN's 2008 climate meetings in Poznan, Poland. Photo: Ben Powless

Megadams

From writings by the World Rainforest Movement and International Rivers

While hydroelectric dams do not require combustion to generate electricity, they have deep ecological and social footprints and they still produce greenhouse gases. The flooding created by dam construction has forced thousands of people worldwide out of their homes. Protesting communities are often brutalized during violent evictions of villages and cities to make way for dam construction. In the Pacific Northwest, salmon are on the brink of extinction due in large part to dams blocking their annual migration and the higher temperature of stagnant water behind them.

Newly-built dams flood thousands of acres of forests, killing trees and starting the decomposition of massive amounts of organic material. This accelerated decomposition releases tons of methane and CO_2 into the atmosphere. One study found that the net release of CO_2 from hydroelectric dams in tropical regions are as high as the greenhouse gas emissions of a coal plant producing an equal amount of electricity.

The CDM (detailed in the "Carbon Offsets" section) is increasing subsidies to hydropower developers while allowing major fossil fuel emitters to carry on polluting. By the beginning of 2008, 654 such projects had received or had applied to receive status as UN sanctioned carbon offsets. Hydro is now the most common technology in the CDM, representing a quarter of all projects.

Like many other offset projects, the great majority of hydroelectric projects in the CDM were in the works long before they applied for carbon credits. Absurdly, more than a third of the dam projects that have been approved for credits by the UN committee in charge of the CDM were built before CDM approval!

The large dams now angling for CDM certification also impose significant environmental and social damage. The massive 880 Megawatt Campos Novos Dam in Brazil (completed in 2005, yet applied for credits in 2007) displaced 3,000 people, many of whom were never granted their promised compensation. In addition to this injustice, local project opponents were subjected to arbitrary arrests and police violence.

Geoengineering

The term geoengineering refers to the large scale manipulation of the environment to bring about specific environmental change, particularly to counteract the undesirable side effects of other human activities. Geoengineering rests on the assumption that humans are masters of the universe and the natural world, and have the ability to control and engineer its systems. Climate change has shown that humans do not and probably never will understand the planet's systems well enough to try to artificially engineer a rebalancing of the scales that over-consumption has tipped.

Once any of these geoengineering schemes is embarked upon, it must be maintained for as long as the carbon dioxide emissions that it aimed to counteract remain in the atmosphere regardless of any negative impact the scheme turns out to have. Some of the very worst and most absurd of these false solutions are described here:

Sulphates in the Stratosphere

When volcanoes erupt they release sulfates which are known to have a cooling effect on global temperatures by reflecting solar energy back into space. Some scientists are proposing to increase levels of (banned) sulfate aerosols to simulate this effect. However, a dramatic increase in sulfates would have serious impacts on ecosystems, including acid rain and localized climatic disruptions, such as droughts. Nobel prize winner Paul Crutzen, who advocated research into sulfate aerosols as a last ditch solution to global warming, predicted around half a million deaths as a result of increased particulate pollution.

Heavy battleship guns could be used to fire shells containing sulphurous gases into the stratosphere to create a reflective haze, screening the earth from the sun.

Sunshades in Space

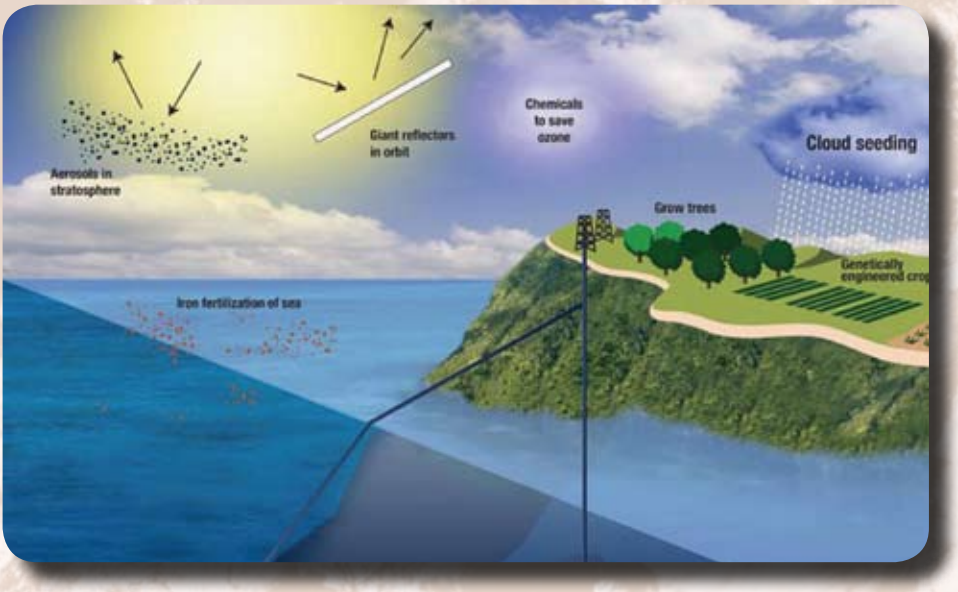
This scheme involves a set of 16 trillion transparent, sunlight-refracting shades installed in space about 1.5 million km from Earth. The project would require 20 launchers each positioning 800,000 screens every five minutes for ten years to initiate and would cost trillions of dollars to deploy.

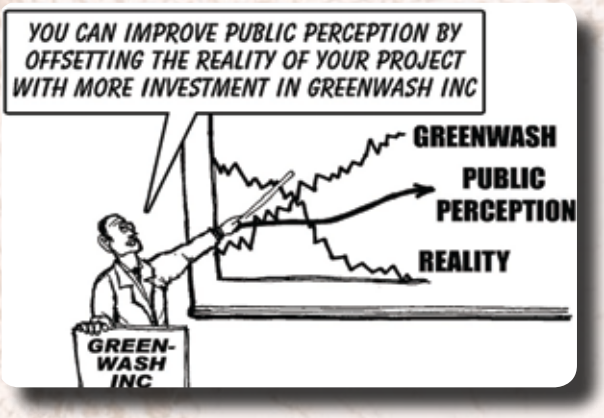
Genetically Engineered Trees

Some believe we can create unlimited quantities of "renewable" carbon neutral wood energy using genetically engineered trees. Some consider burning wood "carbon neutral" due to the notion that the CO_2 released during burning would have been released anyway as the tree died and decomposed. Towards that end, companies like Arborgen are developing trees with resistance to drought, freezing, diseases and insects, as well as reduced lignin. (Lignin is a structural material that gives trees strength and flexibility but "gets in the way" of industrial processes.) Since trees spread pollen and seeds over hundreds of miles, contamination of native forests by GE trees is virtually inevitable and once it occurs could devastate native forest ecosystems globally.

Ocean Fertilization

This idea centers on encouraging the growth of phytoplankton in the oceans, which take up carbon dioxide as they photosynthesize. In theory, some of this carbon dioxide might not return immediately to the carbon cycle.





Exactly how much carbon dioxide is sequestered, and for how long, has not been quantified. Ocean scientists have warned that this technology is potentially dangerous to ocean ecosystems, unlikely to sequester much carbon dioxide, and has the potential to increase levels of other dangerous greenhouse gases such as nitrous oxide and methane. In addition, expanding phytoplankton populations could amplify ocean acidification in deep ocean waters and deplete nutrient loading in surface waters (potentially leading to the creation of "dead zones").

Plastic Coated Deserts

In this plan, 67,000 square miles of desert would be coated in shiny plastic each year for 60 years to reflect sunlight. The plastic sheeting would have to be maintained, and periodically replaced, for a century or two. Premature removal would have a rapid global warming effect.

Burning Trees to Cool the Planet

Another strange idea is using charcoal (marketed as "biochar" to make it sound more appealing) to save the planet. The idea is to plant over half a billion hectares of tree plantations and burn them using a pyrolysis (low oxygen) process to make charcoal. The charcoal is then tilled into the ground, so that the carbon in the charcoal is safely sequestered in soil, away from the atmosphere.

"Ladies and gentlemen, I have the answer! Incredible as it might seem, I have stumbled across the single technology which will save us from runaway climate change! From the goodness of my heart I offer it to you for free. No patents, no small print, no hidden clauses. Already this technology, a radical new kind of carbon capture and storage, is causing a stir among scientists. It is cheap, it is efficient and it can be deployed straight away. It is called . . . leaving fossil fuels in the ground."

– George Monbiot, Columnist with the Guardian UK

Demanding Climate Justice

"The economic logic behind dumping a load of toxic waste in the lowest wage country is impeccable and we should face up to that... I've always thought that under-populated countries in Africa are vastly UNDER-polluted"

– Larry Summers, director of Obama's National Economic Council, former chief economist at the World Bank

Environmental and social justice activists in the Global South are demanding that the world's wealthiest nations assume responsibility for the disaster they have created rather than perpetuate carbon colonialism in the developing world. Social movements and grassroots organizations rooted in the Global South have long realized the futility of certain "solutions" and remind us that any old action won't do.

Our Southern allies believe we should respond to climate change through commitments to reduced consumption and by payment of the ecological debt from the Global North to the Global South owed from decades of resource extraction. Investment in community-led renewable energy initiatives and sustainable, small-scale agriculture infrastructure geared to meeting the right of all people to healthy food are supported, corporate development is rejected.

The climate crisis demands that we, as residents of the Global North, ask what kind of world we want to live in, and recognize that the answer is as much a social issue as it is an environmental one. Climate Justice is more than a theoretical goal—it is a practice in the movement against climate chaos. No effort to create a livable climate future will succeed without the empowerment of marginalized communities. No justice will be found without an end to policies long-pursued by the wealthy countries which treat communities—from Iraq's oil fields to Indonesia's palm oil plantations to Appalachia's coal fields—merely as resource colonies.

Real Solutions

An evaluation of climate solutions must start with basic, yet rarely asked, questions: Who owns, controls, and profits from each technology? Who loses? Beyond measuring carbon impact, how does each proposal affect communities and other aspects of ecosystem health?

While technologies—micro-hydro, organic agriculture, public transit, passive solar home heating and many others—will be important in making a just transition to a post-carbon world, it's imperative to recognize that great problems have always been met by great social changes, not merely by technological shifts. Changes in technology are only a fraction of the climate solution, yet they consume nearly the entirety of the policy debate.

Growth of the whole global economy means consumption of an ever-increasing amount of goods, using an ever-increasing amount of energy, mineral, agricultural and forest resources. Replacing "growth" as the main objective of the economy is a fundamental change that must be made to address climate change. Building a new paradigm, rooted in meeting human needs equitably and sustainably, is as big a challenge as climate change itself. But if human society is to survive as we presently know it, the two must be inseparable.

Effective and just solutions to climate change require decision-making that incorporates all who are affected by the results of the decisions—not just deals between those who stand to profit. The hold that corporate interests and centuries-old colonial mindsets have over political decision-making must be broken. Only then can we begin creating a new, more just society in the shell of the old.

"If we hold up banners saying climate change kills and we want more government action, the very power groups driving the destruction will cheer and might give us even more carbon finance or agrofuels. Instead, we need to mobilize against the false solutions and for real, meaningful actions that will actually cut emissions and deliver climate justice...The time for marching for 'global action on climate change' without denouncing the false solutions and the drivers of climate change is over."

-Simone Lovera, activist with Friends of the Earth Paraguay and the Global Forest Coalition

"Fruits for Whom" by Jorge Alcoreza, courtesy of Art Not Oil

"Farming communities are more threatened now by the so-called solutions to climate change promoted by corporate interests, G8 countries, the World Trade Organization and the World Bank, than by climate change in itself. Industrial agrofuels, climate-ready seeds, fertilization of oceans and carbon-trading schemes, both deepen and widen the privatization of all natural resources on Earth and thus exclude local communities from access to those resources which where once called the Commons: land, water, seeds and now, perhaps, even the air we breathe."

– La Via Campesina

"Not only does the carbon trading mechanism not work, it makes the greedy north feel like they have done something meaningful while we keep drowning. Using the market to solve a problem the market created seems little short of insanity."

-Sandy Gauntlett, Pacific People's Environment Coalition

"We are taking away food from poor people's tables and putting it into rich people's cars."

-Annie Sugrue, southern African sustainability campaigner