### Cap K

#### Capitalism is at the core of solar and wind technology development. Corporations use “environmental destruction” as an opportunity for growth. The impact is continual environmental crises and endless corporate growth.

Harris 10 (Jerry, Network for Critical Studies of Global Capitalism, Oct-Dec, Going Green to Stay in the Black: Transnational Capitalism and Renewable Energy, Race & Class, Vol. 52 #2, http://netglobalcapitalism.wordpress.com/articles/going-green-to-stay-in-the-black-transnational-capitalism-and-renewable-energy/)

Is the future of capitalism green? And will the country that leads in green technology dominate the global economy? That is certainly the outlook of important sectors of the capitalist class, both among long established corporations as well as new entrepreneurs. But **the green economy, particularly the energy sector, is already taking a globalized path of development under the control of the transnational capitalist class** (TCC). While **innovative corporations may emerge as dominant players,** it will be **as transnational corporations** (TNS), not as national champions of nation-states. In the U.S. the green revolution is promoted as the way to maintain world economic supremacy. In President Obama’s state of the union speech he said, “the nation that leads the clean-energy economy will be the nation that leads the global economy, and America must be that nation.” (1) Environmentalist Hunter Lovins calls on the U.S. to lead the world in green innovation because “they’ll rule the world, economically, politically, and probably militarily.” (2) Thomas Friedman wraps green technology in red, white and blue calling it the new currency of power. “**It’s all about national power…what could be more patriotic, capitalistic and geostrategic than that?”** (3). But these dreams of national greatest are already outdated. **Green energy** can indeed **extend the life of capitalism, but not within the confines of nation-centric logic and power**. Major wind and solar **corporations already operate on a global scale, with innovations and research ongoing** in Europe, India,¶ Japan, China and the U.S. Furthermore, the scale of the environmental crisis is beyond any one country to solve. It calls for a global response and advanced sectors of the TCC understand these world dimensions. The environmental crisis actually offers an opportunity for capitalism to begin a new cycle of accumulation. A way to end the repeating failures of financial speculation with a renewal of productive capital. As Muller and Passadakis explain, “the point about the ecological crisis…is that it is neither solved nor ignored in a green capitalist regime, but rather placed at the heart of its growth strategy.”(4) By creating new systems of energy, transportation, architectural design and reengineering productive processes, capitalism can greatly reduce its abuse of the environment. This would free capital from environmentally harmful industries for new areas of investment and create profitable opportunities in dynamic new markets. Such a strategic shift will not only solve the current crisis but legitimize a new political regime and lay the foundation for a hegemonic bloc with a global social base. Nonetheless, this transformation will not solve the contradiction between capital and labor, and the TCC may lack the political resolve to move fast and far enough to avoid major environmental disasters. But if the transformation does occur over the coming decades, it may solve the most pressing problems between finite environmental resources and the need of capitalism to grow and profit. With global warming widely accepted as an existential crisis capitalists have seized upon alternative and sustainable energy as a major transformative technology. United Nations Secretary General Ban Ki Moon has called for a worldwide “Green New Deal” that would be a “wholesale reconfiguration of global industry.” (5) A study published by Scientific American argues for a $100 trillion dollar program, projecting that ”100 percent of the world’s energy, for all purposes, could be supplied by wind, water and solar resources by 2030.” (6) That is a fair amount of money, but Fatih Birol, chief economist at the International Energy Agency points out that, “Each year without an international agreement adds $500 billion to the costs – estimated at $10 trillion¶ annually — of cleaning up the power sector to help keep temperatures within a range that would avoid unstoppable climate changes.” (7) Given the scale of the problem $100 trillion over 20 years sounds feasible. But dedicating $5 trillion a year from a world GDP of $54 trillion (2007) seems impossible without a political revolution.Although still a very small part of energy consumption, wind and solar power are rapidly expanding and total clean energy investments in 2008 were $155 billion and $145 billion in 2009. (8) Eventually renewable energy may play an economic role similar to the digital, computer and telecommunications revolution of the past 30 years. These technologies laid the basis for globalization and vastly expanded access to knowledge and information. (9) Economically there was innovation, dynamic emerging corporations and new cycles of accumulation. The technologies were also used by progressive activists across the world for organizing and education. Just as the digital revolution spearheaded a new era of capitalist globalization, so too can green technology open the door to the next era of growth while promoting important progressive changes.While these possibilities exist, they will develop within historic capitalist patterns that continually reassert themselves. Digital technologies became centralized into a handful of transnational corporations, both old and new, that today dominate the market and consume innovations through constant buy-outs. That pattern is already appearing in the green energy field, except there will be no singular leading location such as Silicon Valley. Solar and wind technologies are global and being consolidated by a small number of competitive TNCs. This does not necessarily undercut their environmental benefits. But **it does undercut the democratic possibilities for a decentralized system of energy, and fails to solve the problems between capital and labor**. By examining the major wind and solar TNCs below, we can begin to uncover the character of the new green economy.

#### The affirmative commodifies an essentialized notion of race to frame inequality, replicating racism and shattering class-based coalitions, ensuring the capitalist social relations that build the ghettoes and favells that imprison racialized populations become inevitable, turning the case

Darder and Torres 99 (Antonia Darder, Professor of Educational Policy Studies and Latino/a Studies at the University of Illinois at Urbana-Champaign, and Rodolpho D. Torres, Professor of Planning, Policy & Design and Political Science at UC Irvine, “Shattering the ‘Race’ Lens: Toward a Critical Theory of Racism”, Chapter 7 of the book “Critical Ethnicity: Countering the Waves of Identity Politics”, edited by Robert H. Tai and Mary L. Kenyatta, p. 174-176)

Over the last three decades, there has been an overwhelming tendency among social science scholars to focus on notions of “race.” Over the last three decades, there has been an overwhelming tendency among a variety of critical scholars to focus on the concept of "race" as a central category of analysis for interpreting the social conditions of inequality and marginalization.’ As a consequence, much of the literature on subordinate cultural populations, with its emphasis on such issues as "racial inequality," "racial segregation," "racial identity," has utilized the construct of "race" as a central category of analysis for interpreting the social conditions of inequality and marginalization. ln turn, this literature has reinforced a racialized politics of identity and representation, with its problematic emphasis on "racial" identity as the overwhelming impulse for political action. This theoretical practice has led to serious analytical weaknesses and absence of depth in much of the historical and contemporary writings on racialized populations in this country. The politics of busing in the early 1970s provides an excellent example that illustrates this phenomenon. Social scientists studying "race relations" concluded that contact among "Black" and "White" students would improve "race relations" and the educational conditions of "Black" students if they were bused to "White" (better) schools outside their neighborhoods!” Thirty years later, many parents and educators adamantly denounce the busing solution (a solution based on a discourse of ”race") as not only fundamentally problematic to the fabric of African American and Chicano communities, but an erroneous social policy experiment that failed to substantially improve the overall academic performance of students in these communities. Given this legacy, it is not surprising to find that the theories, practices, and policies that have informed social science analysis of racialized populations today are overwhelmingly rooted in a politics of identity, an approach that is founded on parochial notions of "race" and representation which ignore the imperatives of capitalist accumulation and the existence of class divisions within racialized subordinate populations. The folly of this position is critiqued by Ellen Meiksins Wood in her article entitled "Identity Crisis," where she exposes the limitations of a politics of identity which fails to contend with the fact that capitalism is the most totalizing system of social relations the world has ever known. Yet, in much of the work on African American, Latino, Native American, and Asian populations, an analysis of class and a critique of capitalism is conspicuously absent. And even when it is mentioned, the emphasis is primarily on an undifferentiated plurality of identity politics or an “intersection of oppressions," which, unfortunately, ignores the overwhelming tendency of capitalism to homogenize rather than to diversify human experience. Moreover, this practice is particularly disturbing since no matter where one travels around the world, there is no question that racism is integral to the process of capital accumulation. For example, the current socioeconomic conditions of Latinos and other racialized populations can be traced to the reletless emergence of the global economy and recent economic policies of expansion, such as the North American Free Trade Agreement (NAFTA). A recent United Nations report by the International Labor Organization conﬁrms the negative impact of globalization on racialized populations. By the end of 1998, it was projected that one billion workers would be unemployed. The people of Africa, China, and Latin America have been most affected by the current restructuring of capitalist development.“ This phenomenon of racialized capitalism is directly linked to the abusive practices and destructive impact of the “global factory’ '—a global ﬁnancial enterprise system that includes such transnational corporations as Coca Cola, Walmart, Disney, Ford Motor Company, and General Motors. In a recent speech on "global economic apartheid," John Cavanagh," co-executive director of the Institute for Policy Studies in Washington, D.C., comments on the practices of the Ford Motor Company. The Ford Motor Company has its state-of-the-art assembly plant in Mexico . . . where because it can deny basic worker rights, it can pay one-tenth the wages and yet get the same quality and the same productivity in producing goods. . . .The same technologies by the way which are easing globalization are also primarily cutting more jobs than they're creating. The failure of scholars to confront this dimension in their analysis of contemporary society as a racialized phenomenon and their tendency to continue treating class as merely one of a multiplicity of (equally valid) perspectives, which may or may not "intersect" with the process of racialization, are serious shortcomings. In addressing this issue, we must recognize that identity politics, which generally gloss over class differences and/ or ignore class contradictions, have often been used by radical scholars and activists within African American, Latino, and other subordinate cultural communities in an effort to build a political base. Here, fabricated constructions of "race" are objectified and mediated as truth to ignite political support, divorced from the realities of class struggle. By so doing, they have unwittingly perpetuated the vacuous and dangerous notion that the political and economic are separate spheres of society which can function independently—a view that ﬁrmly anchors and sustains prevailing class relations of power in society.

#### 2. The logic of capitalism results in extinction through the creation of ecological catastrophe and violent imperialist wars that will turn nuclear

Foster 5 [John Bellamy, Monthly Review, September, Vol. 57, Issue 4, “Naked Imperialism”, <http://www.monthlyreview.org/0905jbf.htm>]

From the longer view offered by a historical-materialist critique of capitalism, the direction that would be taken by U.S. imperialism following the fall of the Soviet Union was never in doubt. Capitalism by its very logic is a globally expansive system. The contradiction between its transnational economic aspirations and the fact that politically it remains rooted in particular nation states is insurmountable for the system. Yet, ill-fated attempts by individual states to overcome this contradiction are just as much a part of its fundamental logic. In present world circumstances, when one capitalist state has a virtual monopoly of the means of destruction, the temptation for that state to attempt to seize full-spectrum dominance and to transform itself into the de facto global state governing the world economy is irresistible. As the noted Marxian philosopher István Mészáros observed in Socialism or Barbarism? (2001)—written, significantly, before George W. Bush became president: “[W]hat is at stake today is not the control of a particular part of the planet—no matter how large—putting at a disadvantage but still tolerating the independent actions of some rivals, but the control of its totality by one hegemonic economic and military superpower, with all means—even the most extreme authoritarian and, if needed, violent military ones—at its disposal.” The unprecedented dangers of this new global disorder are revealed in the twin cataclysms to which the world is heading at present: nuclear proliferation and hence increased chances of the outbreak of nuclear war, and planetary ecological destruction. These are symbolized by the Bush administration’s refusal to sign the Comprehensive Test Ban Treaty to limit nuclear weapons development and by its failure to sign the Kyoto Protocol as a first step in controlling global warming. As former U.S. Secretary of Defense (in the Kennedy and Johnson administrations) Robert McNamara stated in an article entitled “Apocalypse Soon” in the May–June 2005 issue of Foreign Policy: “The United States has never endorsed the policy of ‘no first use,’ not during my seven years as secretary or since. We have been and remain prepared to initiate the use of nuclear weapons—by the decision of one person, the president—against either a nuclear or nonnuclear enemy whenever we believe it is in our interest to do so.” The nation with the greatest conventional military force and the willingness to use it unilaterally to enlarge its global power is also the nation with the greatest nuclear force and the readiness to use it whenever it sees fit—setting the whole world on edge. The nation that contributes more to carbon dioxide emissions leading to global warming than any other (representing approximately a quarter of the world’s total) has become the greatest obstacle to addressing global warming and the world’s growing environmental problems—raising the possibility of the collapse of civilization itself if present trends continue. The United States is seeking to exercise sovereign authority over the planet during a time of widening global crisis: economic stagnation, increasing polarization between the global rich and the global poor, weakening U.S. economic hegemony, growing nuclear threats, and deepening ecological decline. The result is a heightening of international instability. Other potential forces are emerging in the world, such as the European Community and China,that could eventually challenge U.S. power, regionally and even globally. Third world revolutions, far from ceasing, are beginning to gain momentum again, symbolized by Venezuela’s Bolivarian Revolution under Hugo Chávez. U.S. attempts to tighten its imperial grip on the Middle East and its oil have had to cope with a fierce, seemingly unstoppable, Iraqi resistance, generating conditions of imperial overstretch. With the United States brandishing its nuclear arsenal and refusing to support international agreements on the control of such weapons, nuclear proliferation is continuing. New nations, such as North Korea, are entering or can be expected soon to enter the “nuclear club.” Terrorist blowback from imperialist wars in the third world is now a well-recognized reality, generating rising fear of further terrorist attacks in New York, London, and elsewhere. Such vast and overlapping historical contradictions, rooted in the combined and uneven development of the global capitalist economy along with the U.S. drive for planetary domination, foreshadow what is potentially the most dangerous period in the history of imperialism. The course on which U.S and world capitalism is now headed points to global barbarism—or worse. Yet it is important to remember that nothing in the development of human history is inevitable. There still remains an alternative path—the global struggle for a humane, egalitarian, democratic, and sustainable society. The classic name for such a society is “socialism.” Such a renewed struggle for a world of substantive human equality must begin by addressing the system’s weakest link and at the same time the world’s most pressing needs—by organizing a global resistance movement against the new naked imperialism.

#### 3. Vote negative to adopt the historical material criticism of the 1NC - historical analysis of the material conditions of capital is the only way to break free from is contradictions and social inequalities it causes

Tumino 1 (Steven, teaches at the City University of New York, Spring, What is Orthodox Marxism and Why it Matters Now More Than Ever Before)

Any effective political theory will have to do at least two things: it will have to offer an integrated understanding of social practices and, based on such an interrelated knowledge, offer a guideline for praxis. My main argument here is that among all contesting social theories now, only Orthodox Marxism has been able to produce an integrated knowledge of the existing social totality and provide lines of praxis that will lead to building a society free from necessity. But first I must clarify what I mean by Orthodox Marxism. Like all other modes and forms of political theory, the very theoretical identity of Orthodox Marxism is itself contested—not just from non-and anti-Marxists who question the very "real" (by which they mean the "practical" as under free-market criteria) existence of any kind of Marxism now but, perhaps more tellingly, from within the Marxist tradition itself. I will, therefore, first say what I regard to be the distinguishing marks of Orthodox Marxism and then outline a short polemical map of contestation over Orthodox Marxism within the Marxist theories now. I will end by arguing for its effectivity in bringing about a new society based not on human rights but on freedom from necessity. I will argue that to know contemporary society—and to be able to act on such knowledge—one has to first of all know what makes the existing social totality. I will argue that the dominant social totality is based on inequality—not just inequality of power but inequality of economic access (which then determines access to health care, education, housing, diet, transportation, . . . ). This systematic inequality cannot be explained by gender, race, sexuality, disability, ethnicity, or nationality. These are all secondary contradictions and are all determined by the fundamental contradiction of capitalism which is inscribed in the relation of capital and labor. All modes of Marxism now explain social inequalities primarily on the basis of these secondary contradictions and in doing so—and this is my main argument—legitimate capitalism. Why? Because such arguments authorize capitalism without gender, race, discrimination and thus accept economic inequality as an integral part of human societies. They accept a sunny capitalism—a capitalism beyond capitalism. Such a society, based on cultural equality but economic inequality, has always been the not-so-hidden agenda of the bourgeois left—whether it has been called "new left," "postmarxism," or "radical democracy." This is, by the way, the main reason for its popularity in the culture industry—from the academy (Jameson, Harvey, Haraway, Butler,. . . ) to daily politics (Michael Harrington, Ralph Nader, Jesse Jackson,. . . ) to. . . . For all, capitalism is here to stay and the best that can be done is to make its cruelties more tolerable, more humane. This humanization (not eradication) of capitalism is the sole goal of ALL contemporary lefts (marxism, feminism, anti-racism, queeries, . . . ). Such an understanding of social inequality is based on the fundamental understanding that the source of wealth is human knowledge and not human labor. That is, wealth is produced by the human mind and is thus free from the actual objective conditions that shape the historical relations of labor and capital. Only Orthodox Marxism recognizes the historicity of labor and its primacy as the source of all human wealth. In this paper I argue that any emancipatory theory has to be founded on recognition of the priority of Marx's labor theory of value and not repeat the technological determinism of corporate theory ("knowledge work") that masquerades as social theory.

#### 4. Class divisions are the root of all other oppressions

Kovel 2 (Alger Hiss Professor of Social Studies at Bard College, awarded Fellowship at the John Guggenheim Foundation, Joel, The Enemy of Nature, pages 123-124)

If, however, we ask the question of efficacy, that is, which split sets the others into motion, then priority would have to be given to class, for the plain reason that class relations entail the state as an instrument of enforce­ment and control, and it is the state that shapes and organizes the splits that appear in human ecosystems. Thus class is both logically and historically distinct from other forms of exclusion (hence we should not talk of 'classism' to go along with 'sexism' and 'racism,' and `species-ism'). This is, first of all, because class is an essentially man-made category, without root in even a mystified biology. We cannot imagine a human world without gender dis­tinctions – although we can imagine a world without domination by gender. But a world without class is eminently imaginable – indeed, such was the human world for the great majority of our species' time on earth, during all of which considerable fuss was made over gender. Historically, the difference arises because 'class' signifies one side of a larger figure that includes a state apparatus whose conquests and regulations create races and shape gender relations. Thus there will be no true resolution of racism so long as class society stands, inasmuch as a racially oppressed society implies the activities of a class-defending state.'° Nor can gender inequality be enacted away so long as class society, with its state, demands the super-exploitation of woman's labour. Class society continually generates gender, racial, ethnic oppressions and the like, which take on a life of their own, as well as profoundly affecting the concrete relations of class itself. It follows that class politics must be fought out in terms of all the active forms of social splitting. It is the management of these divisions that keeps state society functional. Thus though each person in a class society is reduced from what s/he can become, the varied reductions can be combined into the great stratified regimes of history — this one becoming a fierce warrior, that one a routine-loving clerk, another a submissive seamstress, and so on, until we reach today's personi­fications of capital and captains of industry. Yet no matter how functional a class society, the profundity of its ecological violence ensures a basic antagonism which drives history onward. History is the history of class society — because no matter how modified, so powerful a schism is bound to work itself through to the surface, provoke resistance (`class struggle'), and lead to the succession of powers. The relation of class can be mystified without end — only consider the extent to which religion exists for just this purpose, or watch a show glorifying the police on television — yet so long as we have any respect for human nature, we must recognize that so funda­mental an antagonism as would steal the vital force of one person for the enrichment of another cannot be conjured away.

#### 5. Historical materialism must come first - it predetermines consciousness and the very possibilities of reflective thinking

**Marx 1859** (Karl, a pretty important dude. “A Contribution to the Critique of Political Economy: Preface” http://www.marxists.org/archive/marx/works/1859/critique-pol-economy/preface.htm) JM

>edited for gendered language<

In the social production of their existence, [people] inevitably enter into definite relations, which are independent of their will, namely relations of production appropriate to a given stage in the development of their material forces of production. The totality of these relations of production constitutes the economic structure of society, the real foundation, on which arises a legal and political superstructure and to which correspond definite forms of social consciousness. The mode of production of material life conditions the general process of social, political and intellectual life. It is not the consciousness of [people] that determines their existence, but their social existence that determines their consciousness. At a certain stage of development, the material productive forces of society come into conflict with the existing relations of production or – this merely expresses the same thing in legal terms – with the property relations within the framework of which they have operated hitherto. From forms of development of the productive forces these relations turn into their fetters. Then begins an era of social revolution. The changes in the economic foundation lead sooner or later to the transformation of the whole immense superstructure. In studying such transformations it is always necessary to distinguish between the material transformation of the economic conditions of production, which can be determined with the precision of natural science, and the legal, political, religious, artistic or philosophic – in short, ideological forms in which [people] become conscious of this conflict and fight it out. Just as one does not judge an individual by what he thinks about himself, so one cannot judge such a period of transformation by its consciousness, but, on the contrary, this consciousness must be explained from the contradictions of material life, from the conflict existing between the social forces of production and the relations of production. No social order is ever destroyed before all the productive forces for which it is sufficient have been developed, and new superior relations of production never replace older ones before the material conditions for their existence have matured within the framework of the old society.

### States CP

### 1NC Shell -- Regular State CP

#### The 50 states and all relevant U.S. territories should enact legislation to extend production tax credit for use in funding offshore wind farms.

#### State action gets modeled due to local innovation

Lash 7 (Jonathan, “Climate Policy in the State Laboratory: How States Influence Federal Regulation and the Implications for U.S. Policy,” World Resources Institute, September, <http://www.wri.org/publication/climate-policy-in-the-state-laboratory>, TGA)

America has a long and inspiring tradition of policy innovation and activism that is incubated at the state level. The states often take to the front lines of cutting-edge policy development, creating fresh and inventive programs to address the concerns and needs of their constituents. From standards for organic agriculture, to removing asbestos from schools, to creating enterprise zones, and reducing acid rain pollution, the states have shown a path forward and provided both the problem-solving acumen as well as the pressure to induce the Federal government to act. Of all the environmental problems now confronting this nation and the rest of the world, none holds greater potential for irrevocable and destructive disruption to our lives than climate change. Yet, up to now, our national government has failed to respond with initiatives appropriate to what looms ahead. The most significant first steps designed to measure and control the emission of greenhouse gases have come from an impressive number of states in this country. Ten states in the Northeast, seven in the West, and several in the Midwest are in the process of implementing mandatory programs to measure and reduce greenhouse gas emissions. And not surprisingly, as well, is the fact that over 100 cities have gotten on board, to one degree or another, taking concrete steps to reduce their contribution to climate change or to add their political clout to efforts to spur the national commitment needed to help catalyze essential international compacts. This timely report documents state efforts now underway to address the problem of climate change and our contribution to it. It puts them into the historical context of previous initiatives by states to lead our country in making difficult but necessary national decisions. Just as there is no “silver-bullet” technology that will solve climate change, there is no “silver-bullet” policy either. The commitment to policy innovation by U.S. states may prove to be the wellspring from which we build the low-carbon economy of the future.

### Wind

#### Turbines increase warming

**Carrington 12 (**Damian Carrington head of environment at the Guardian. „Windfarms can increase night time temperatures, research reveals” The Guardian April 29, 2012 DOA August 16, 12 <http://www.guardian.co.uk/environment/2012/apr/29/wind-farms-night-temperatures-study> )

Large windfarms can increase local night time temperatures by fanning warmer air onto the ground, new research has revealed. The study used satellite data to show that **the building of huge windfarms** in west Texas **over the last decade has warmed the nights by up to 0.72C.**

“Wind power is going to be a part of the solution to the climate change, air pollution and energy security problem," said Liming Zhou, at the University of Albany in New York. "But understanding the impacts of windfarms is critical for developing management strategies to ensure the long-term sustainability of wind power."

West Texas has seen rapid expansions of windfarms, with turbine numbers rising from 111 in 2003 to 2358 in 2011. Zhou's team compared the land surface temperatures at the windfarms with other areas across this period and detected a clear rise at night.

They note, however, that the effect on the air temperature, which is usually given in weather forecasts, will be lower than 0.72C rise because they respond less quickly to changes than land temperatures.

The scientists say **the effect is due to the gentle turbulence caused by the wind turbines. After** the **sun** has **set**, the **land cools** down **more quickly than the air, leaving a cold blanket of air just above the ground.** But **the turbine wakes mix this cold layer with the warmer air above, raising the temperature.** A previous study found a similar effect but was based on data from only two weather stations over just six weeks.

### Warming

#### Unless China reduces its GHGs, warming can’t be stopped

**Leggett 11** (Jane A. Leggett Specialist in Environmental and Energy Policy at [Library of Congress](http://www.linkedin.com/company/library-of-congress?trk=ppro_cprof) former Senior Advisor at Environmental Protection Agency, Director, Climate Change Division at [US EPA](http://www.linkedin.com/company/us-epa?trk=ppro_cprof), Administrator at Organisation for Economic Cooperation and Development, Administrator at OECD, Regulatory Impact Analyst at [US EPA](http://www.linkedin.com/company/us-epa?trk=ppro_cprof). “China’s Greenhouse Gas Emissions and Mitigation Policies” Congress Research Service July 18, 2011 DOA August 16, 12 <http://www.fas.org/sgp/crs/row/R41919.pdf>)

**China’s** greenhouse gas **(GHG) emissions have drawn attention** in the United States **because of their environmental and economic implications.** China’s actions to address climate change also hold implications for broader economic and security concerns in the United States.

Scientific evidence that the Earth’s climate is changing, and that human-related GHG emissions are a major driver of that change, has led to debate over whether and how to control GHG emissions. Once emitted, GHG persist in the atmosphere for years to centuries (and for some gases, millennia). They allow solar radiation to enter the Earth’ system, but prevent much of the absorbed energy from escaping back out to space. Scientists agree that the Earth’s atmosphere serves as a “blanket” that warms the Earth’s surface and that a certain concentration of GHG is essential to maintain the planet at habitable temperatures. There is less agreement on how much warming would result from the higher atmospheric GHG concentrations expected if emissions from fossil fuel use, deforestation, and some agricultural and industrial processes continue. Scientific concerns in the 1980s led to initiation of inter-governmental discussions in 1989 to stabilize GHG concentrations and avoid potentially “dangerous” global temperature rise. These concerns led to negotiation of the United Nations Framework Convention on Climate Change (UNFCCC).

In the late 1980s, climate experts broadly understood that climate change driven by human- related GHG emissions was a global challenge: all major emitting countries would need to engage in slowing then reducing their emissions of GHG as well as increasing GHG removals by “sinks” (e.g., growing forests). When the UNFCCC was opened for signature in 1992,1 the already industrialized countries2 emitted almost 80% of the global carbon dioxide (CO2) from energy and industry.3,4 The CO2 emissions of the United States and the European Union were about 23% and 20%, respectively, of the global total. China’s were about 11%. All the “developing” countries at the time contributed about one-third. Low income countries saw GHG-driven climate change as a problem made by the industrialized countries. Considering low income countries’ challenged financial, technological, and governance capacities, they were not included in the UNFCCC’s Annex I, which lists countries with quantitative GHG control targets for the 1990s. Nonetheless, the UNFCCC contained a principle of “common but differentiated responsibilities” among its Parties, with consensus that the already industrialized countries should lead in controlling their emissions and that all countries have obligations to address climate change. Annex I established a bifurcation between the Parties listed in Annex I and the Non-Annex I Parties. (Countries are frequently referred to as “developed” versus “developing,” although the distinction is undefined and arguably a misleading simplification of the spectrum of differences among countries).

**Scientific analyses have concluded that rising GHG concentrations in the atmosphere cannot be stabilized unless all major emitting countries abate their net emissions to near zero.5** Despite efforts of many countries to reduce their GHG emissions, the continued and rapid growth of emissions from such large emitters as China and the United States has called into question the efficacy of the UNFCCC in meeting its objective of stabilizing concentrations of GHG in the atmosphere. **As China’s share of global GHG emissions has grown from about 11% in 1990 to** about **21% today, and continues to grow**, a broad set of observers have concluded that **effectively slowing human-induced climate change depends on Chinese reductions of its emissions**, as well as reductions from the United States and all other large emitters.

### Bio Diversity

#### Warming increases biodiversity.

**Lovett 12** (Richard Lovett Ph.D. *Nature* “Species multiply as Earth heats up” 3 September 2012 <http://www.nature.com/news/species-multiply-as-earth-heats-up-1.11350> DOA 10/1/12)

Rather than kicking off the expected cycles of extinction, **periods of warming in Earth's history were accompanied by increased biodiversity**, according to a report published this week. But this does not mean that the mass extinctions that are taking place today, with Earth warming at an unprecedented rate, will be reversed in future. **Researchers examined the number of known families of marine invertebrates, as well as sea-surface temperatures, over** the course of **540 million years of Earth's history**. They found that **when temperatures were high, so was biodiversity. When temperatures fell, biodiversity** also **declined**.The results contradict previous work, including findings from lead author Peter Mayhew's group, that reported an inverse correlation between high temperatures and biodiversity. The reason for the about-face, says Mayhew, an evolutionary ecologist at the University of York, UK, is that the earlier work measured fossil diversity by tallying the first and last appearances of each group of species, then assuming that the creatures existed only during the intervening years. This might sound logical, but overlooks the fact that some geological periods are better studied than others. To correct this, the new study looked only at the well-sampled periods. And, instead of interpolating organisms' presence from origination and extinction dates, it merely tallied species groups present during each period. Even so, given that climate change is generally viewed as disruptive, Mayhew admits it was a "big surprise" to find that eras of warming were accompanied by increases in biodiversity. The work also provided a solution to another puzzle, Mayhew says. **Tropical ecosystems are known to be Earth's most diverse, and the tropics would be expected to expand during warm eras**. Yet in the past these eras were thought to be species-poor compared with cooler ones. The new results resolve that contradiction.

Also, their cards are from 1988 and many species have become extinct.