De-forresting trends lead to Biodiversity destruction

Cardillo, 6 – Dr. Marcel Cadillo Proffesor in the Biology Divison at Imperial College London (2006, Dr. Marcel Cadillo, “Disapearing Forests and Biodiversity Loss: Which areas should we protect?,” International Forestry Review, Vol. 8, pp. 251-255, CS)

Forests are the most biodiverse terrestrial habitats on earth. Despite a growing awareness that biodiversity and properly- functioning natural ecosystems make a crucial contribution to human wellbeing (Rashid *et al*. 2003), deforestation is proceeding at a rapid pace throughout much of the world. In Brazil, for example, more forest was lost in the 16 years up to 2004 than in all the preceding centuries. With massive investmentsinroads,damsandothereconomicinfrastructure *International Forestry Review Vol.****8****(2), 2006* 251252 *M. Cardillo* on the drawing board, it is predicted that 40% of remaining forest in the Amazon basin will be lost by 2050 (Soares- Filho *et al*. 2006). In other heavily-forested countries, such as Indonesia and Papua New Guinea, deforestation rates are also at historically high levels (FAO 2006).

**Deforestation and Species Extinction make the impact inevitable**

Cardillo, 6 – Dr. Marcel Cadillo Proffesor in the Biology Divison at Imperial College London (2006, Dr. Marcel Cadillo, “Disapearing Forests and Biodiversity Loss: Which areas should we protect?” International Forestry Review, Vol. 8, pp. 251-255 CS)

Using this method it has been predicted, for example, that endemic mammal species richness in the Brazilian Amazon could be reduced by 5- 18% under different modelled scenarios of forest loss to 2020 (Grelle 2005). The principal aims of global prioritisation schemes such as these are firstly, to conserve as much biodiversity as possible, and secondly, to conserve a sample of biodiversity that represents the broadest possible range of species and ecosystem types. The emphasis is largely on those parts of the world deemed to have the most biodiversity to lose, or where species are perceived to be under the most immediate threat of extinction. These aims are a natural response to a crisis situation of rapid habitat loss and species declines, combined with limited funding available for conservation. But relatively little attention has been paid to systematic forward planning for extinctions. Many parts of the world still retain large areas of intact habitat. In these areas, what is the most effective way to avoid a future rerun of the widespread extinctions that have already occurred in more heavily-modified regions? One way is to identify and prioritise areas where species appear to be especially sensitive to human disturbance. In terms of protecting biodiversity, there are two basic responses to the current situation. The first is to attempt to mitigate the underlying causes of deforestation by addressing the social, political and economic factors that allow forest destruction to prevail over sustainable management (Geist and Lambin 2002). The second is to accept that deforestation will continue at high rates for the foreseeable future, and concentrate on conserving the species and habitats that remain. These are of course not mutually exclusive alternatives, but in this article, I focus on the second of these responses. Because of limited resources, planning for conservation is largely an exercise in prioritisation. I examine some of the approaches that have been taken to global conservation prioritisation, and describe a new approach based on the identification of areas where many species appear particularly extinction-prone.

**Current Climate trends make Biodiversity loss inevitable**

**The European Commision, 8** (7/17/08, The European Commisson, “Planning for the inevitable: the impact of climate change on biodiversity,” The European Commission DG ENV, News Alert Issue 116 CS)

Climate change is already having an impact on habitats and species in Europe, for example a decrease in plant species has been recorded in some areas. According to recent research, spatial planning is a key concept in making European ecosystems more resilient to climate change, as it takes into account all factors that affect a habitat, including economic development, transport, environmental protection, health and culture. Many scientific reports suggest that unavoidable changes in climate will happen over the next 40-50 years as a result of past emissions. Areas seen as most vulnerable to climate change include the Mediterranean and southern Europe, mountain and sub-arctic areas, and densely occupied floodplains and coastal zones. Annual temperatures could increase by 2.0-6.3 degrees centigrade by 2100. Rainfall could also increase by 1-2 per cent per decade for northern Europe and decrease by 1 per cent in southern Europe. Events affecting habitats and biodiversity will include heat waves, droughts, storms and rising sea levels. The impact may cause species to move towards the north and an increase in extinction rates. Mitigation remains the key focus of climate change policy, with less attention given to understanding how to adapt to inevitable rising temperatures. The pressures of climate change present a major challenge, not just for biodiversity policy, but also for land use policy, which affects biodiversity. The EU’s 2006 Biodiversity Communication and its Action Plan set an agenda for action to halt the loss of biodiversity by 2010, as agreed in the Gothenburg summit, 2001. However, biodiversity continues to decline under pressure from land use change and development. For example, as water supplies for urban populations shrink, building new infrastructures may place stress on existing ground and surface water systems and the flora and fauna that rely on it. The research1 reviewed land use plans and policy in three countries: France, the Netherlands and the UK. It looked at their use of natural resources, management of water and coastal zones, plans for designated sites and case studies on urban, rural, inland and coastal sites. The policies were examined for their ability to account for biodiversity adaptation to climate change and to identify ways of integrating ‘spatial planning’ and biodiversity policy. Spatial planning has a broader sense than ‘land use’, in that it accounts for all activities and interests that concern a particular area. The authors found that although dynamic biodiversity is becoming more fully realised in spatial planning policy, existing EU directives such as the Birds Directive (CEC 1979), the Habitats Directive (CEC 1992), and the Natura 2000 network set up to create a network of protected sites, by themselves cannot fully protect landscape features necessary to support biodiversity under a period of prolonged climate change. They recommend ‘climate-proofing’ plans through the use of Environmental Impact Assessment and Strategic Environmental Assessment. Land use plans should be integrated with the adoption of common objectives, time horizons and boundaries. The study also highlighted the need for more flexible responses to climate change, with stakeholders safeguarding habitats in between protected areas. This would result in more robust conservation planning across whole landscapes, reducing fragmentation of sites and creating corridors and networks for wildlife. International cooperation was also found to be critical, as wildlife moves across national boundaries. Integration with agriculture, transport and water sectors would also lead to a better capacity to adapt to climate change. Barriers to putting a fully effective policy in place include: planning time-scales that are too short, a lack of consensus on intervention measures, uncertainty on the actual impact of climate change impacts, conflicts of interest and public opinion which is sensitive to change, especially in treasured landscapes.

**Impact to Biodiversity is a myth**

NPR, 7 (5/30/2007, Donald J. Dodds M.S. P.E., President of the North Pacific Research, “The Myth of Biodiversity,” northpacificresearch.com/downloads/The\_myth\_of\_biodiversity.doc CS)

Biodiversity is a corner stone of the environmental movement. But there is no proof that biodiversity is important to the environment. Something without basis in scientific fact is called a Myth. Lets examine biodiversity through out the history of the earth. The earth has been a around for about 4 billion years. Life did not develop until about 500 million years later. Thus for the first 500 million years bio diversity was zero. The planet somehow survived this lack of biodiversity. For the next 3 billion years, the only life on the planet was microbial and not diverse. Thus, the first unexplainable fact is that the earth existed for 3.5 billion years, 87.5% of its existence, without biodiversity. Somewhere around 500 million years ago life began to diversify and multiple celled species appeared. Because these species were partially composed of sold material they left better geologic records, and the number of species and genera could be cataloged and counted. The number of genera on the planet is a indication of the biodiversity of the planet. Figure 1 is a plot of the number of genera on the planet over the last 550 million years. The little black line outside of the left edge of the graph is 10 million years. Notice the left end of this graph. Biodiversity has never been higher than it is today.

Biodiversity collapsed don’t cause extinction

NPR, 7 (5/30/2007, Donald J. Dodds M.S. P.E., President of the North Pacific Research, “The Myth of Biodiversity,” northpacificresearch.com/downloads/The\_myth\_of\_biodiversity.doc CS)

Notice next that at least ten times biodiversity fell rapidly; none of these extreme reductions in biodiversity were caused by humans. Around 250 million years ago the number of genera was reduce 85 percent from about 1200 to around 200, by any definition a significant reduction in biodiversity. Now notice that after this extinction a steep and rapid rise of biodiversity. In fact, if you look closely at the curve, you will find that every mass-extinction was followed by a massive increase in biodiversity. Why was that? Do you suppose it had anything to do with the number environmental niches available for exploitation? If you do, you are right. Extinctions are necessary for creation. Each time a mass extinction occurs the world is filled with new and better-adapted species. That is the way evolution works, its called survival of the fittest. Those species that could not adapted to the changing world conditions simply disappeared and better species evolved. How efficient is that? Those that could adapt to change continued to thrive. For example, the cockroach and the shark have been around well over 300 million years. There is a pair to draw to, two successful species that any creator would be proud to produce. To date these creatures have successful survived six extinctions, without the aid of humans or the EPA.

**Mammals can survive Biodiversity collapse**

NPR, 7 (5/30/2007, Donald J. Dodds M.S. P.E., President of the North Pacific Research, “The Myth of Biodiversity,” northpacificresearch.com/downloads/The\_myth\_of\_biodiversity.doc CS)

A closer look at the KT extinction 65 million years ago reveals at least three things. First the 1500 genera that remained had passed the test of environmental compatibility and remained on the planet. This was not an accident. Second, these extinctions freed niches for occupation by better-adapted species. The remaining genera now faced an environment with hundreds of thousands of vacant niches. Third, it only took about 15 million years to refill all of those niches and completely replaced the dinosaurs, with new and better species. In this context, a better species is by definition one that is more successful in dealing with a changing environment. Many of those genera that survived the KT extinction were early mammals, a more sophisticated class of life that had developed new and better ways of facing the environment. These genera were now free to expand and diversify without the presences of the life dominating dinosaurs. Thus, as a direct result of this mass extinction humans are around to discuss the consequences of change. If the EPA had prevented the dinosaur extinction, neither the human race, nor the EPA would have existed. The unfortunate truth is that the all-powerful human species does not yet have the intelligence or the knowledge to regulate evolution. It is even questionable that they have the skills to prevent their own extinction.

**Biodiversity is impossible to regulate**

NPR, 7 (5/30/2007, Donald J. Dodds M.S. P.E., President of the North Pacific Research, “The Myth of Biodiversity,” northpacificresearch.com/downloads/The\_myth\_of\_biodiversity.doc CS)

Humans are working against nature when they try to prevent extinctions and freeze biodiversity. Examine the curve in figure one, at no time since the origin of life has biodiversity been constant. If this principal has worked for 550 million years on this planet, and science is supposed to find truth in nature, by what twisted reasoning can fixing biodiversity be considered science? Let alone good for the environment. Environmentalists are now killing species that they arbitrarily term invasive, which are in reality simply better adapted to the current environment. Consider the Barred Owl, a superior species is being killed in the name of biodiversity because the Barred Owl is trying to replace a less environmentally adapted species the Spotted Owl. This is more harmful to the ecosystem because it impedes the normal flow of evolution based on the idea that biodiversity must remain constant. Human scientists have decided to take evolution out of the hands of Mother Nature and give it to the EPA. Now there is a good example of brilliance. We all know what is wrong with lawyers and politicians, but scientists are supposed to be trustworthy. Unfortunately, they are all to often, only people who think they know more than anybody else. Abraham Lincoln said, “Those who know not, and know not that the know not, are fools shun them.” Civilization has fallen into the hands of fools. What is suggested by geologic history is that the world has more biodiversity than it ever had and that it maybe overdue for another major extinction. Unfortunately, today many scientists have too narrow a view. They are highly specialized. They have no time for geologic history. This appears to be a problem of inadequate education not ignorance. What is abundantly clear is that artificially enforcing rigid biodiversity works against the laws of nature, and will cause irreparable damage to the evolution of life on this planet and maybe beyond. The world and the human species may be better served if we stop trying to prevent change, and begin trying to understand change and positioning the human species to that it survives the inevitable change of evolution. If history is to be believed, the planet has 3 times more biodiversity than it had 65 million years ago. Trying to sustain that level is futile and may be dangerous. The next major extinction, change in biodiversity, is as inevitable as climate change. We cannot stop either from occurring, but we can position the human species to survive those changes.

**GE Technology solves Biodiversity**

Carpenter, 11-Consultant for ISB (June 2011, Information Systems For Biotechnology, “Impacts of GE Crops on Biodiversity” [www.isb.vt.edu/news/2011/Jun/**Impacts**-**GE**-**Crops**-**Biodiversity**.pdf](http://www.isb.vt.edu/news/2011/Jun/Impacts-GE-Crops-Biodiversity.pdf) CS)

Knowledge gained over the past 15 years that GE crops have been grown commercially indicates that the impacts on biodiversity are positive on balance. By increasing yields, decreasing insecticide use, increasing use of more environmentally friendly herbicides, and facilitating adoption of conservation tillage, GE crops have contributed to increasing agricultural sustainability. Previous reviews have also reached the general conclusion that GE crops have had little to no negative impact on the environment. Most recently, the U.S. National Research Council released a comprehensive assessment of the effect of GE crop adoption on farm sustainability in the U.S. that concluded, “[g]enerally, [GE] crops have had fewer adverse effects on the environment than non-[GE] crops produced conventionally”7. GE crops can continue to decrease pressure on biodiversity as global agricultural systems expand to feed a world population that is expected to continue to increase for the next 30 to 40 years. Due to higher income elas- ticities of demand and population growth, these pressures will be greater in developing countries. Both current and pipeline technology hold great potential in this regard. The potential of currently commercialized GE crops to increase yields, decrease pesticide use, and facilitate the adoption of conservation tillage has yet to be realized, as there continue to be countries where there is a good technological fit, but they have not yet approved these technolo- gies for commercialization. In addition to the potential benefits of expanded adoption of current technology, several pipeline technologies offer additional promise of alleviating the impacts of agriculture on biodiversity. Continued yield improvements in crops such as rice and wheat are expected with insect resistant and herbicide tolerant traits that are already com- mercialized in other crops. Technologies such as drought tolerance and salinity tolerance would alleviate the pressure to convert high bio- diversity areas into agricultural use by enabling crop production on suboptimal soils. Drought tolerance technology, which allows crops to withstand prolonged periods of low soil moisture, is anticipated to be commercialized within five years. The technology has particular relevance for areas like sub-Saharan Africa, where drought is a common occurrence and access to irrigation is limited. Salt tolerance addresses the increasing problem of saltwater encroach- ment on freshwater resources. Nitrogen use efficiency technology is also under development, which can reduce run-off of nitrogen fertilizer into surface waters. The technology promises to decrease the use of fertilizers while maintaining yields, or increase yields achievable with reduced fertilizer rates where access to fertilizer inputs is limited. The technology is slated to be commercialized within the next 10 years.

**Major failures in assessing species biodiversity loss**

Haber, 8 - head of the Institute for Landscape Management at the TU Munich in Freising-Weihenstephan. Federal Minister for the Environment, Nature Conservation and Nuclear Safety. And President of the International Association of Ecology (2008, Wolfgang Haber, “Biological Diversity – a Concept Going Astray?,” GAIA 17/51 (2008), pp. 91-95 CS)

The species approach to biodiversity hits upon several funda- mental obstacles. About two thirds of all species concern tiny animals, algae and fungi that only a few specialists can identify. Many other groups of organisms, in particular the numerous, ecologically indispensable fungi and microorganisms, even defy a distinction of species. Still worse: the biological subdisciplines of systematics and taxonomy, the only ones capable to investigate, identify and classify the huge diversity of organisms – they have, since Linnaeus’ times, never received sufficient personal and fi- nancial means to comply with these necessities (Glaubrecht 2007), and today suffer from further reductions and even closures. How many species have existed and still exist on earth will never be known; there are only speculative estimates. Their number, however, depends on the species concept – a mental construct with which scientists are always grappling. Liv- ing nature consists of innumerable individual organisms that taxonomists compare with each other for similarity of essential properties in order to assign them to “species”. Rather easy as this may be with most higher plants and animals, it becomes ev- er more difficult with lower and smaller organisms like flies or mites. Depending on choice and weight of criteria for assigning an individual to a species, taxonomists may create from 10 000 individuals of flies or mites between, for example, 50 and 1800 species. This alone is reason enough to reject species numbers as measures of biodiversity. You often read or hear that between 30 and 200 species (the numbers vary considerably) become extinct every day. I always ask the authors of such statements to give me the names of at least five to ten of those species, and to explain their importance for the ecosystems where they live – I never got an answer. But such unsound and erroneous argumentation for biodiversity continues in spite of serious warnings of scientists!

1. Seriously, there will be wars: economics, security dilemma, nationalism

Mearsheimer, Distinguished Professor of Political Science, 1999.

(John Mearsheimer, “Is Major War Obsolete?” 1999, http://www.ciaonet.org/conf/cfr10/index.html)

A second reason that states go to war which, of course, is dear to the heart of realists like me, and that’s to enhance their security. Take the United States out of Europe, put the Germans on their own; you got the Germans on one side and the Russians on the other, and in between a huge buffer zone called eastern or central Europe. Call it what you want. Is it impossible to imagine the Russians and the Germans getting into a fight over control of that vacuum? Highly likely, no, but feasible, for sure. Is it hard to imagine Japan and China getting into a war over the South China Sea, not for resource reasons but because Japanese sea-lines of communication run through there and a huge Chinese navy may threaten it? I don’t think it’s impossible to imagine that.  What about nationalism, a third reason? China, fighting in the United States over Taiwan? You think that’s impossible? I don’t think that’s impossible. That’s a scenario that makes me very nervous. I can figure out all sorts of ways, none of which are highly likely, that the Chinese and the Americans end up shooting at each other. It doesn’t necessarily have to be World War III, but it is great-power war. Chinese and Russians fighting each other over Siberia? As many of you know, there are huge numbers of Chinese going into Siberia. You start mixing ethnic populations in most areas of the world outside the United States and it’s usually a prescription for big trouble. Again, not highly likely, but possible. I could go on and on, positing a lot of scenarios where great powers have good reasons to go to war against other great powers.  Second reason: There is no question that in the twentieth century, certainly with nuclear weapons but even before nuclear weapons, the costs of going to war are very high. But that doesn’t mean that war is ruled out. The presence of nuclear weapons alone does not make war obsolescent. I will remind you that from 1945 to 1990, we lived in a world where there were thousands of nuclear weapons on both sides, and there was nobody running around saying, “ War is obsolescent.” So you can’t make the argument that the mere presence of nuclear weapons creates peace. India and Pakistan are both going down the nuclear road. You don’t hear many people running around saying, “ That’s going to produce peace.” And, furthermore, if you believe nuclear weapons were a great cause of peace, you ought to be in favor of nuclear proliferation. What we need is everybody to have a nuclear weapon in their back pocket. You don’t hear many people saying that’s going to produce peace, do you?

2. Even Mandelbaum thinks you should default to war

Mandelbaum, Professor of American Foreign Policy at Johns Hopkins University 1999

Michael, Christian A. Herter Professor of American Foreign Policy, The Paul H. Nitze School of Advanced International Studies, Johns Hopkins University; Director, Project on East-West Relations, Council on Foreign Relations “Is Major War Obsolete?”

An introductory note: The position I’m proposing in this discussion occupies the high ground morally. After all, we all wish to believe that major war is obsolete. But it does not occupy, I must in all honesty say, the high ground intellectually. History and logic weigh on the other side. The burden of proof or, I should say, the burden of argument, for this is a proposition that cannot be proven, is on me. And many of you here will recognize this argument as the descendant of a familiar one, one two centuries old that originates with the philosopher Immanuel Kant, which was proposed in dramatic form by the American President Woodrow Wilson, which is identified with the liberal Anglo-American view of the world.

3. War is not impossible it is just out of style at the Moment

Mandelbaum, Professor of American Foreign Policy at Johns Hopkins University 1999

Michael, Christian A. Herter Professor of American Foreign Policy, The Paul H. Nitze School of Advanced International Studies, Johns Hopkins University; Director, Project on East-West Relations, Council on Foreign Relations “Is Major War Obsolete?”

There have been four such wars in the modern period: the wars of the French Revolution, World War I, World War II, and the Cold War. Few though they have been, their consequences have been monumental. They are, by far, the most influential events in modern history. Modern history which can, in fact, be seen as a series of aftershocks to these four earthquakes.So if I am right, then what has been the motor of political history for the last two centuries that has been turned off? This war, I argue, this kind of war, is obsolete; less than impossible, but more than unlikely. What do I mean by obsolete? If I may quote from the article on which this presentation is based, a copy of which you received when coming in, “ Major war is obsolete in a way that styles of dress are obsolete. It is something that is out of fashion and, while it could be revived, there is no present demand for it. Major war is obsolete in the way that slavery, dueling, or foot-binding are obsolete. It is a social practice that was once considered normal, useful, even desirable, but that now seems odious. It is obsolete in the way that the central planning of economic activity is obsolete. It is a practice once regarded as a plausible, indeed a superior, way of achieving a socially desirable goal, but that changing conditions have made ineffective at best, counterproductive at worst.”

Yes War Frontline (2/3)

4. Energy competition increases the risk of major power escalation

Klare, A professor of peace and world security studies at Hampshire College, 2008

(Michael T.,"The End of the World as You Know It,", http://zmag.org/znet/viewArticle/17176)

Until very recently, the mature industrial powers of Europe, Asia, and North America consumed the lion's share of energy and left the dregs for the developing world. As recently as 1990, the members of the Organization of Economic Cooperation and Development (OECD), the club of the world's richest nations, consumed approximately 57% of world energy; the Soviet Union/Warsaw Pact bloc, 14% percent; and only 29% was left to the developing world. But that ratio is changing: With strong economic growth in the developing countries, a greater proportion of the world's energy is being consumed by them. By 2010, the developing world's share of energy use is expected to reach 40% and, if current trends persist, 47% by 2030. China plays a critical role in all this. The Chinese alone are projected to consume 17% of world energy by 2015, and 20% by 2025 -- by which time, if trend lines continue, it will have overtaken the United States as the world's leading energy consumer. India, which, in 2004, accounted for 3.4% of world energy use, is projected to reach 4.4% percent by 2025, while consumption in other rapidly industrializing nations like Brazil, Indonesia, Malaysia, Thailand, and Turkey is expected to grow as well.**These rising economic dynamos will have to compete with the mature economic powers for access to remaining untapped reserves of exportable energy** -- in many cases, bought up long ago by the private energy firms of the mature powers like Exxon Mobil, Chevron, BP, Total of France, and Royal Dutch Shell. Of necessity, the new contenders have developed a potent strategy for competing with the Western "majors": they've created state-owned companies of their own and fashioned strategic alliances with the national oil companies that now control oil and gas reserves in many of the major energy-producing nations.

5. War does pay – industrial capacity, raw materials, security

Mearsheimer, Distinguished Professor of Political Science, 1999.

(John Mearsheimer, “Is Major War Obsolete?” 1999, http://www.ciaonet.org/conf/cfr10/index.html)

Let me make three quick points on that. One is, there’s a book by Peter Liberman, who actually teaches at Queens College, called Does Conquest Pay? which addresses this issue. And it shows very nicely that even though we live in the post-industrial age, conquest does pay, and that you can extract resources when you conquer countries in the modern age. Second point is, even if you don’t buy that argument, you can still make the raw-materials argument, which is the one that I went to because it’s the easier argument to make, involving things like the South China Sea and oil in the Persian Gulf. And my third and final point would be, even if you take the economic arguments off the table-let’s say that they just don’t hold any water-the security arguments remain alive and well. We knocked the Soviet Union down the toilet bowl during the Cold War. It produced no economic benefits for us, but what it did was it eliminated our principal competitor, which, from a realist’s perspective, is a wonderful thing. And I think most people in the audience think it was a wonderful thing. It had no economic benefits, but it had significant strategic benefits, because we wanted no peer competitors in the world because that’s the way we like it.