**Dedev updates**

#### Yearly MIT computer models proves growth is unsustainable – assumes massive technological advances and renewables

Simms 12 (Andrew, policy director of the new economics foundation, 2/1/12, “Clinging to economic growth suffocates the imagination”, http://www.guardian.co.uk/commentisfree/2012/feb/01/limits-to-economic-growth)

¶ For one thing, the model used by the MIT scientists didn't make precise "predictions", but projected what was likely to happen if certain trends continued, allowing for "adjustable assumptions" of resource use. Their real finding was not that collapse was likely to occur by a particular year, but that population and the global economy would contract rapidly after peaking. The only circumstances under which some kind of stabilisation, rather than collapse, was achieved, was constraining population and the scale of the economy.¶ ¶ Models and reality are not the same thing. But – strikingly given the relatively crude computer modelling available at the time – the MIT projections have proved remarkably accurate. Today they can be checked against decades of actual data. Population, industrial output, pollution and food consumption all track the lines in the model.¶ ¶ 1There is a popular view that economic growth can be saved by efficiency measures, recycling and technological substitution, such as nuclear and renewable energy replacing fossil fuels. Yet the model allowed even for these variables, and crashed under the pressure of growth just the same.¶ I took part in a debate last week with Michael Jacobs who was an environmental adviser to Gordon Brown's Treasury. My job was to respond to a lecture he gave at University College London called The Green Moment? The Crises of Capitalism and the Response of Progressive Politics. Jacobs's critique, which several on the left share, is that pointing out the non-viability of economic growth (at least at the global aggregate level and where rich countries are concerned) is a mistaken article of faith in the green movement.¶ His argument is that, firstly, opposing growth is bad politics, it's bad spin for the green movement that "puts people off". Secondly he argues that low growth is compatible, even in rich countries, with environmental constraints. The first point is immaterial if the limits are scientifically real. It is an inconvenient reality that cannot be spun away. The second point is a claim that must be backed with evidence, it cannot simply be asserted.¶ And while I have yet to see any figures to illustrate how growth in rich countries can, in perpetuity, be compatible with environmental limits, several assessments point to the opposite conclusion. The Tyndall Centre for Climate Change Research at Manchester University found that to prevent dangerous global warming, economic growth in rich countries would not be possible. With colleagues at the New Economics Foundation, I came to a similar conclusion.¶ Jacobs quotes, admiringly, the work of Tim Jackson on "prosperity without growth" with the former government advisory body the Sustainable Development Commission. Yet Jackson's work too, as the name suggests, foresees a future without growth.¶ Work by the Stockholm Resilience Centre on environmental "planetary boundaries" shows several have already been transgressed, requiring large absolute reductions of consumption in rich countries.¶ One thing is sure: advocates of growth need to be able to show not only that environmental impact can be cancelled out by efficiency and resource substitution, but that deep, absolute reductions in resource use can be achieved simultaneously, and that such gains can be made year, after year, after year, ad infinitum.¶ A key insight by the original MIT group was the problem of time lag. Environmental problems became obvious and were acted on too late. Damage became locked in. This is the moment we are now living through. Nasa climate scientist James Hansen recently pointed out that if the rich world had started reducing emissions as recently as 2007, the annual reductions necessary would have been 3%. Wait until next year and the figure rises to 6%, wait further until 2020 and the annual target leaps to a staggering 15% reduction per year.¶

#### Economic collapse is inevitable by 2030 - debt

Bond ’00 **(Michael. Economic author and Environmental Reformer with over 30 years of experience, “eve of the apocalypse” http://www.eveoftheapoc.com.au/Downloads/DebtVsGrowth.html)**

The present global economy is caught in a catch-22 of its own making. Solutions exist, but the blindness that created the problem also stops the solutions from being seen. Problem 1 How Much Is Enough? The present economy is obliged to grow annually at between 3% and 6%. Too much less than 3% for too long and the economy will collapse from lack of currency. Too much over 6% for too long and inflation will spiral out of control, rendering currency meaningless. Below is a table that points out how long it takes for something to double, triple, etc in size, when it increases at rates of 3%, 4%. 5% and 6% per year. For the last 15 years the global economy has been growing at an average of about 4% per year. Note that at 4% growth the economy doubles every 19 years, and grows 10 times its size in a mere 59 years. By the beginning of the 21st century the world's environment was in critical decline. Oceans are turning acidic from atmospheric CO2 threatening marine life, melting glaciers are flooding cities where soon little water will flow at all, species are disappearing from the Earth at a faster rate than during the dinosaur extinction 65 million years ago. The design of the global economy demands that by 2019 the economy will be twice the size it was in 2000. At its present rate of growth, by 2059 the global economy will be ten times its 2000 size. But Earth cannot sustainably support a global economy the size it was in 2000. Even if the economy slid along at a minimal 3% growth it would still be 10 times its 2000 size by the year 2080. So in order to survive, the global economy is compelled to keep growing like a cancer, at an unsustainable rate that will kill its host. This self-destructive design is a direct result of the flaw in the global money system (see accompanying article Money - Deadlier Than Plutonium). But wait - there's more! Let's assume, like most corporations and politicians do, that the world's resources are endless and that no environmental threats exist. Even if that were the case, the global economy is self-destructive for an entirely different reason, if the first way isn't fast enough. Problem 2 - Coming Ready Or Not! The second problem stems from the fact that in order to sustain 4% annual economic growth, global debt must increase at about 10% annually. Because it is annual growth, this means it is exponential rather than mathematical growth. The difference between the two is shown below. Mathematical Growth 1 + 1 + 1 + 1 + 1 + 1 + 1 = 7 Exponential Growth 1 + 2 + 4 + 8 + 16 + 32 + 64 = 127 (Much faster growth in same time.) Because global debt increases exponentially 6% faster than the global economy, debt will quickly smother the economy by demanding its entire output merely in interest payment. o the left is a table that illustrates the global situation using the Australian economy as an example. In 2003 the OECD rated Australia's economy as "one of the best performers" in the developed world. The table to the left showing Australia's debt and income figures, demonstrates that even the best performers in the global economy will be bankrupt before 2030. If Australia stays on its present "good" course, within a few decades Australia's interest bill each year will be larger than Australia's entire national income. . Australia would be bankrupt well before it got to this. The figures of 4% economic growth and 10% debt growth are about the same for the entire global economy. The Global Economy is on course to collapse well before 2030 due to a looming global inability to repay annual interest. The reason why debt outpaces economic growth stems from a fault in global money supply.

#### Fuel and food shortages as well as structural instabilities in our economic structure make further growth unsustainable. Collapse now will ensure a mindset shift and allow a sustainable localized economy to develop. Further growth causes catastrophic failure and localization solves value to life.

#### Korowicz 11 (5/14/11, David, physicist and human systems ecologist, the director of The Risk/Resilience Network in Ireland, a board member of FEASTA (The Foundation for the Economics of Sustainability), “In the world, at the limits to growth,”http://www.feasta.org/2011/05/14/in-the-world-at-the-limits-to-growth/)

Yet our feet of clay are that our economy and civilisation exist only by virtue of resource flows from our environment. The only laws in economics are the laws of physics, everything else is contingent, supposition or vanity. An economy, growing in size and complexity, is firstly a thermodynamic system requiring increasing energy flows to grow and avoid decay. Waste, be it greenhouse gasses or landfill is also a natural outcome of such a thermodynamic process. News from Elsewhere It’s been part of the background noise for over half a century, warnings about resource scarcity, biodiversity loss, soil erosion or climate change. But impacts were always on the imaginative horizon. Sometime, far enough into the future to be re-assuring to a species that evolved with a clear preference for the short-term. Or on the hinterland between our safe European home and the barbarian other, where starvation, environmental disasters, angry mobs and crazy despots have always demanded our attention, at least while on TV. Yes we can! Yes we can! - chanted the posse of teenagers following Al Gore through a pavilion in Poznan, Poland for the annual gathering of climate policy acronyms. When not distracted by the ever-present, we’ve responded to these warnings with treaties and laws, technology and exhortation. Of course, every ecological indicator kept getting worse. And we kept on about treaties and laws, and break-through technologies. Our mythic world-views gave us the shared faith that we may not be there yet, but we could, once a brilliant scheme is in place, a climate law passed, technologies adopted, evil bankers restrained, or once people just realised our predicament. Yes We Can! Yes We Can! Indeed, we could transcend our grubby selfishness and short-termism so we tied together the belief that we could will ecological sustainability and global equity. Still, our resource and environmental sink demands keep increasing, ecological indicators decline and inequality rises. The reality is that we are locked into an economy adapted to growth, and that means rising energy and resource flows and waste. By lock-in, we mean that our ability to change major systems we depend upon is limited by the complexity of interdependencies, and the risk that the change will undermine other systems upon which we depend. So we might wish to change the banking or monetary system, but if the real and dynamic consequences lead to a major bank freeze lasting more than a couple of days we will have major food security risks, massive drops in economic production, and risks to infrastructure. And if we want to make our food production and distribution more resilient to such shocks, production will fall and food prices will need to be higher, which will in the short-to-medium term drive up unemployment, lead to greater poverty, and pose even greater risks to the banking system. It is an oxymoron to say we can do something unsustainable forever. How would you know if we were approaching a limit, the end of growth? By warnings? Listen. By the great and the good, standing shoulder-to-shoulder, saying “Ladies & gentleman we have a really big problem!”? Politicians and civil servants, the IMF and the OECD, all missed the credit crisis of 2007, despite having expertise in the area and an abundant historical literature about asset bubbles. They embody the dogmatism of the age, they are a pivot point about which are world-views are confirmed. They mirror the authority of the court of Pope Urban VIII, stuffed with astronomer-astrologers, the economists of their age, confirming the earth centric universe against Galileo and Copernicus before him. What the Galileos of today are saying is that we are at or near the peak of global oil production now. That as affordable oil declines, the global economy must contract. That we do not have the time, nor resources to keep the economy growing by substituting for oil with efficiency measures, renewable or nuclear energy, or technology. That talk of an electric car future, advanced IT-renewable energy convergent infrastructure, and global super-grids is a fancy. The most obvious problem with focusing on this vision at the horizon is that you don’t see that the ground is opening up beneath your feet. We will not get to that horizon because all the things you need to get there- monetary and financial systems, purchasing power and economies of scale, production systems, infrastructure and global trust networks-will be undermined by the convergence of a peak of global oil production, a peak of food production, and a giant credit bubble. The ground will open up, we will fall, and our visions will fall further and further from our grasp. They are saying that global food production is hitting an array of ecological constraints, while population growth and changing diets are driving up demand. They note that current food production is massively subsidised through fossil fuel inputs, and that as those inputs become less available, and people become poorer due to economic contraction, food productivity and access will be undermined. In totality, we are at the edge of an evolving systemic crisis. Peak oil and food constraints are likely to undermine the stability of our integrated globalised economy. The core pillars of that economy: critical infrastructure, production flows, economies of scale, the financial and monetary system, behavioural adaptation, resource access and energy flows-are likely to begin forcing contagious failure. The driving force of this failure is likely to be the fastest and most unstable process-the impact of energy and food constrained economic growth, and an already vulnerable monetary and financial system dependent upon continuing growth. Tightening binds Whatever of Ireland’s economic woes, the real debt bubble is global. The debt relative to GDP is far greater now in the US, UK, and much of Europe, than it ever was leading up to the great depression. Like many countries we responded to our debt bubble with more debt, we just shifted it onto the sovereign or the printing press. The indebted world, even without oil and food price rises is straining at the limits of debt servicing and credibility. Yet it is demanding even more credit, while its ability to service the debt is being undermined by debt deflation, austerity, rising job losses, and defaults. The bank lenders of that money can only lose so much before they are too are insolvent. Rising food and energy prices are driving the deflationary forces even harder. And if central banks misinterpret the cause of food and oil price rises, and raise interest rates, the deflationary pressures risk becoming cyclonic. The cost of essentials and debt servicing rise, while income declines. Discretionary spending will collapse, job losses and defaults rise, income will declines further. This re-enforcing spiral of decline will increase, and spread to more and more countries. The fear of contagion from peripheral Eurozone defaults are not merely that they could topple French, UK, and German banks, but that this could brink down US banks and effectively shut down the global financial system in very short shift. The destabilising force is not just that the banks are already in a precarious position, but a monstrous pile of derivative contracts worth ten to twenty times the global economy that hangs over the financial system. Some of those contracts are effectively insurance against default. If bank defaults start spreading, then other banks and the shadow financial system will be forced to cover obligations on default, or increase premiums on their insurance. This may cause a fire-sale of assets, whereby the banks bluff is called, and they are shown to have values far below what is required for solvency. What everybody wants and needs is a sudden and explosive increase in the production of real goods and services (GDP) to make their continual debt requirements serviceable. But that, even were it remotely possible, would require a big increase in oil flows through the global economy, just as global oil production has peaked and begins its decline. It cannot happen. This means that the global financial system is essentially insolvent now. The only choice is default or inflation on a global scale. It mean banks are insolvent, because their assets (loans) cannot be repaid; or they can be solvent (assuming appropriate action taken) but their depositors cannot redeem their deposits at anything like their real value. It means the vast overhang of stocks and bonds, including pensions, and insurance cannot be realised in real goods. It means our monetary systems, dependent on fiat money, fractional reserve banking, and interest can only collapse. High oil and food prices are essentially probing the limits of the stability of the globalised economy. They will probe until there is a major collapse in global economic production. At which point our energy prices may fall, but our real income and purchasing power will fall faster. And markets will discover this truth quicker than monetary authorities and governments. Its expression will be in deeper and deeper economic stresses and major systemic banking collapses. Official responses will become more and more impotent, as their fundamental economic and policy tools no longer work, and their patina of control becomes hollow. If and when banking system contagion spreads to supply-chain contagion we may face existential challenges. Even were we to have the perfect monetary and financial system, without debt and well controlled, peak oil and food would present an unprecedented shock. As incomes shrunk while essentials such as food and energy become more expensive, non-discretionary spending would be squeezed out. In the developed world, non-discretionary goods and services are just about all we produce. So the result would still be mass unemployment. Our critical infrastructure would still be increasingly vulnerable for various reasons, and monetary instability would still destabilise supply-chains. Facing Ourselves & Facing Our Future We are at the beginning of a process in which our world-views crash against a fundamentally unstable financial system and ecological constraints. A time where we will learn that what was, will never return; and what was expected, can never be. We are facing a time of loss and uncertainty. A time of bank-runs, lost savings and pensions, of mass unemployment, electricity and mobile phone black-outs, of hunger and empty super-market shelves. A localised economy will no longer be something environmentalists aspire to develop; rather it will be forced upon us as bank failures, monetary uncertainty, and lost purchasing power sever links in the web of the global economy. But we no longer have indigenous economies to fall back upon. The gap between expectations and what can be realised is historically a major source of popular anger, and can ignite a cycle of fear, blame, violence, scape-goating, and authoritarian leadership from either left or right. It can give the avaricious the power and cover to appropriate wealth that might better be used for collective welfare. Yet who gave us the right to our expectations? They were built on the semi-blind self-organisation of a complex human society over generations. They were built on deep threads of human behaviour-competition and cooperation, mating selection and status-that result from our evolution over the history of life on earth. They were built on the deposits of ancient sunlight hidden below the Earth’s surface, the minerals in soil, and the global climate that provided the stability for our species to flourish. As a species there is no one to blame, unless we cling to the delusion that we are the displaced God who transcended our own ecology. Yes, we can and will build a largely local economy out of the ruins of a collapsed globalised one. It will be a much poorer one and one where we will have lost much of what we take for granted. It can also provide a good life, where our basic needs are met, where meaningful lives can be lived, and a rich texture of experience found.

The world post-collapse is not mutually exclusive with technology—a focus on needs alleviates wasteful spending.
Trainer 07— Senior Lecturer of School of Social Work @ University of New South Wales [Ted, “Renewable Energy Cannot Sustain A Consumer Society”, p. 125-159)
The Simpler Way is not opposed to modem technology. In fact there will be more resources available for research and development of the things that matter, such as better medical services and windmill design, than there are now, when the vast sums presently wasted on unnecessary products, and arms, cease being spent. However it is a mistake to think better technology is important in solving global problems, let alone the key. Most of the things we need in The Simpler Way can be produced by traditional technologies. Hand tools can produce excellent food, clothes, furniture, houses, etc., and craft production is in general the most satisfying way. Of course we will use machinery where that makes sense and many basic items could be mass produced in automated factories. There would also be intensive research into improving crops and techniques, especially for deriving chemicals, drugs and materials from local plant sources. There will also be more resources than at present to invest in realms that have "spiritual" significance rather than economic value, such as astronomy, history, philoso

**Economic collapse prevents inevitable extinction from nuclear war and ecocide - forces societal transportation
Djordjevic 98** (Johnny BA Global Econ, studies global sustainability at U. Cali, Peer reviewed by PETER A. BOWLER: Ph.D. U Cali, Senior Lecturer in Evolutionary Biology and Global Sustainability, and citing Senior Lecturer in Sociology at the School of Social Work, University of New South Wales Ted Trainer. March, “Sustainability,” <http://www.dbc.uci.edu/sustain/global/sensem/djordj98.html>)

Max Weber believed in the power of an idea. This political theorist discussed how Calvinism was one idea that perpetuated the rise of capitalism. Few people ever examine the power of an idea, but if one examines and contemplates this theory, a realization comes across: that ideas drive society. The key premise is that some values of our society must be altered in order to avert catastrophic consequences. The way of life in developed countries is "the origin of many of our most serious problems"(Trainer, 1985). Because developed countries have high material living standards and consume massive quantities of all resources, "hundreds of millions of people in desperate need must go without the materials and energy that could improve their conditions while these resources flow into developed countries, often to produce frivolous luxuries"(Trainer, 1985). People's way of life seems to be a glaring example of values leading to high rates of personal consumption of resources and the waste of these same materials. In addition to overconsumption, the services used to supply our society with goods, (examples of these goods would be food, water, energy, and sewage services.) tends to be wasteful and expensive. Production is organized in such a way, (usually highly centralized) that travel becomes an enormous burden. Another consideration is that our population is expected to increase to rise to eleven billion within the next half century. Considering the mineral and energy resources needed in the future, these estimates must also include the consumption of a population almost doubled from its current status and these same figures must include an expected increase in the affluence of developed countries. "If we are willing to endorse an already affluent society in which there is continued growth on this scale,(american resource use increasing 2% each year), then we are assuming that after 2050 something like 40 times as many resources can be provided each year as were provided in the 1970's, and that it is in order for people in a few rich countries to live in this superaffluent way while the other 9.5 billion in the world do not"(Trainer, 1985). The environment is in danger from our pursuit of affluence. Serious worries come from predictions about the atmosphere. The burning of fossil fuels will raise temperatures and result in climatic effects. Rising temperatures could have horrific effects. First of all, food production could seriously be imperiled even by increases of only one degree celcius. If the temperature should increase by five degrees scientists predict the coastal island nations would be submerged and possibly trigger the next ice age. Another environmental concern deals with the soil. Our agricultural practices disregard the value of recycling food waste. Also, the use of pesticides and chemicals in agriculture lead to the poisoning of the soil and topsoil loss through erosion. Yields per acre for grain are falling and "we do not produce food in ways that can be continued for centuries"(Trainer, 1985). Even more disturbing is the deforestation of rainforests. This results in the extinction of many species, concentration of carbon dioxide, the loss of many potential medical breakthroughs, and possibly the disruption of rainfall. Opponents of the deforestation fail to realize that our expensive way of life and greedy economic system are the driving forces. "Nothing can be achieved by fighting to save this forest or that species if in the long term we do not change the economic system which demands ever-increasing production and consumption of non-necessities"(Trainer, 1985). There also lies a problem in the Third World. Developed countries high living standards and quest for an ever-increasing quality of life lead to Third World poverty and the deprivation of the Third World's access to its own resources. As Third World countries get deprived of materials, the developed world consumes and imports over half of their resources. A few developed countries seem to be consuming the globe's resources and this consumption rate is always increasing. "The rich must live more simply that the poor may simply live"(Trainer, 1985). The Third World is exploited in many ways. One way is that the best land in a developing country is used for crops exported to developed countries, while citizens of the Third World starve and suffer. Another way is the poor working conditions of the Third World. A third exploitation can be overlooked but no less disgusting; "The world's greatest health problem could be simply by providing water for the perhaps 2.000 million people who now have to drink form rivers and wells contained by human and animal wastes. Technically it is a simple matter to set up plants for producing iron and plastic pipes. But most of the world's iron and plastic goes into the production of luxurious cars, soft-drink containers, office blocks and similar things in rich countries"(Trainer, 1985). The threat of nuclear war and international conflict rises with countries of all kinds entranced with the logic and idea of materialism. Perhaps the most dangerous and likely chances for a nuclear conflict arise from the competition for dwindling resources by developed countries. Similar events can be seen all across the globe. Major superpowers get themselves involved in domestic matters not concerning them, providing arms and advice to try and obtain the inside track on possible resources. International tension will rise in the competition for resources and so will the "ever-increasing probability of nuclear war"(Trainer, 1985). As developed countries pursue affluence they fail to see the inherent contradiction in this idea; as growth is the quest, the quality of life will decrease. For a healthy community, there exists a list of non-material conditions which must be present, "a sense of purpose, fulfilling work and leisure, supportive social relations, peace of mind, security from theft and violence, and caring and co-operative neighborhoods"(Trainer, 1985). And as developed countries think their citizens are the happiest in the world, "In most affluent societies rates of divorce, drug-taking, crime, mental breakdown, child abuse, alcoholism, vandalism, suicide, stress, depression, and anxiety are increasing"(Trainer, 1985). Despite all the gloomy facts and sad stories, there is a solution, to create a sustainable society. Rather than being greedy and only thinking about the self, each individual must realize the impacts of his/her selfish tendencies, and disregard their former view of the world. One must come into harmony with what is really needed to survive, and drawn a strict distinction between what is necessity and what is luxury. Not every family needs three cars, or five meals a day or four telephones and two refrigerators. Countries do not need to strive for increasing growth, less materials could be imported/exported and international tension could be greatly reduced. The major problems seem not to step from the determination of what a sustainable society is, but on how to get people to change their values. This task is not an easy one. People must be forced to realize the harmful and catastrophic consequences lie in their meaningless wants and greed. The problem of cognitive dissonance is hard to overcome, but it is not impossible. The solution to this dilemma lies in castastrophe. The only event that changes people's minds is social trauma or harm. The analogy is that a person who refuses to wear a seat belt and one day gets thrown through his/her windshield will remember to wear the seat belt after the accident. The logic behind this argument is both simple and feasible. So the question of dissonance is answered in part, but to change a whole society obviously takes a bigger and more traumatic event to occur. An economic collapse or ice age would trigger a new consciousness leading to a sustainable society. The power of an idea should never be underestimated. Hitler's idea of the Aryan race lead to the Holocaust, Marx's idea of socialism lead to Stalin's reign and the deaths of over 50 million people. But ideas change be changed, disregarded and adopted. As developed countries find themselves engaging in a greedy philosophy, once that realization is made, the first step to a better society is taken. Our current path will lead to massive suffering all across the world, with extinction a distinct possibility. Global sustainability must be adopted by every person on the planet, (starting in the developed world), otherwise the world will cease to support life.

phy, the arts and humanities.

#### Economic collapse is the only way to avoid apocalyptic environmental catastrophe and extinction – delaying the collapse makes all impacts drastically worse

Barry 10 (Glen, Ph.D. in "Land Resources" from the U of Wisconsin-Madison, Jan 7, www.australia.to/2010/index.php?option=com\_content&view=article&id=308:resisting-global-ecological-change&catid=69:reports&Itemid=272)

The human family faces imminent and (Copenhagen would suggest) inevitable collapse of the biosphere – the thin layer of life upon an otherwise lifeless planet – that makes Earth habitable. Marshes and rivers and forests and fish are far more than resources – they and all natural ecosystems are a necessity for humanity’s existence upon Earth. A few centuries of historically unprecedented explosion in human numbers and surging, albeit inequitable, consumption and resultant resource use, ecosystem destruction and pollution; is needlessly destroying being for all living things. Revolutionary action such as ending coal use, reforming industrial agriculture and protecting and restoring old forests and other natural ecosystems, is a requirement for the continuation of shared human being. Earth is threatened by far more than a changing atmosphere causing climate change. Cumulative ecosystem destruction – not only in climate, but also water, forests, oceans, farmland, soils and toxics -- in the name of “progress” and “development” -- threatens each of us, our families and communities, as well as the Earth System in total and all her creatures. Any chance of achieving global ecological sustainability depends urgently upon shifting concerns regarding climate change to more sufficiently transform ourselves and society to more broadly resist global ecological change. Global ecological, social and economic collapse may be inevitable, but its severity, duration and likelihood of recovery are being determined by us now. It does not look good as the environmental movement has been lacking in its overall vision, ambition and implementation. The growing numbers of ecologically literate global citizens must come forward to together start considering ecologically sufficient emergency measures to protect and restore global ecosystems. We need a plan that allows humans and as many other species as possible to survive the coming great ecological collapse, even as we work to soften the collapse, and to restore to the extent practicable the Earth’s ecosystems. This mandates full protection for all remaining large natural ecosystems and working to reconnect and enlarge biologically rich smaller remnants that still exist. It is time for a hard radical turn back to a fully functioning and restored natural Earth which will require again regaining our bond with land (and air, water and oceans), powering down our energy profligacy, and taking whatever measures are necessary to once again bring society into balance with ecosystems. This may mean taking all measures necessary to stop those known to be destroying ecosystems for profit. As governments dither and the elite profit, it has become dreadfully apparent that the political, economic and social structures necessary to stop human ecocide of our and all life’s habitats does not yet exist. The three hundred year old hyper-capitalistic and nationalistic growth machine eating ecosystems is not going to willingly stop growing. But unless it does, human and most or all other life will suffer a slow and excruciating apocalyptic death. Actions can be taken now to soften ecological collapse while maximizing the likelihood that a humane and ecologically whole Earth remains to be renewed.

**environmental destruction kills all life by 2050 without dedev – statistics and studies prove**

The Observer 02 ( Citing the WWF – world wildlife fund study. July 7, 2002, [http://www.observer.co.uk/international/story/0,6903,750783,00.html](http://www.observer.co.uk/international/story/0%2C6903%2C750783%2C00.html) )

A study by the World Wildlife Fund (WWF), to be released on Tuesday, warns that the human race is plundering the planet at a pace that outstrips its capacity to support life. In a damning condemnation of Western society's high consumption levels, it adds that the extra planets (the equivalent size of Earth) will be required by the year 2050 as existing resources are exhausted. The report, based on scientific data from across the world, reveals that more than a third of the natural world has been destroyed by humans over the past three decades. Using the image of the need for mankind to colonise space as a stark illustration of the problems facing Earth, the report warns that either consumption rates are dramatically and rapidly lowered or the planet will no longer be able to sustain its growing population. Experts say that seas will become emptied of fish while forests - which absorb carbon dioxide emissions - are completely destroyed and freshwater supplies become scarce and polluted. The report offers a vivid warning that either people curb their extravagant lifestyles or risk leaving the onus on scientists to locate another planet that can sustain human life. Since this is unlikely to happen, the only option is to cut consumption now. Systematic overexploitation of the planet's oceans has meant the North Atlantic's cod stocks have collapsed from an estimated spawning stock of 264,000 tonnes in 1970 to under 60,000 in 1995. The study will also reveal a sharp fall in the planet's ecosystems between 1970 and 2002 with the Earth's forest cover shrinking by about 12 per cent, the ocean's biodiversity by a third and freshwater ecosystems in the region of 55 per cent. The Living Planet report uses an index to illustrate the shocking level of deterioration in the world's forests as well as marine and freshwater ecosystems. Using 1970 as a baseline year and giving it a value of 100, the index has dropped to a new low of around 65 in the space of a single generation. It is not just humans who are at risk. Scientists, who examined data for 350 kinds of mammals, birds, reptiles and fish, also found the numbers of many species have more than halved. Martin Jenkins, senior adviser for the World Conservation Monitoring Centre in Cambridge, which helped compile the report, said: 'It seems things are getting worse faster than possibly ever before. Never has one single species had such an overwhelming influence. We are entering uncharted territory.'