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AS I SEE IT

The ethics of global resource allocation

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A politician thinks of the next election—a statesman of the next generation. James Freeman Clarke

Against our will comes wisdom. Aeschylus

On a finite planet with finite resources, competition is always fierce for these limited resources, especially if any species produces offspring beyond replacement rate. Increasing evidence indicates that economic growth based on material consumption benefits the wealthy minority, increases environmental damage, and disproportionately affects the impoverished majority. The evidence is mostly circumstantial but is persuasive—at least until more empirical evidence generated from research becomes available. Wackernagel et al. (1999) have compared the planet's biophysical carrying capacity to the population size of various countries by using each country's ecological footprint as a proportion of the total productive land and water area. Not surprising, the US has, by far, the largest percentage appropriation of planetary carrying capacity (somewhat less than 25%) with a comparatively small population (somewhat less than 5%). In sharp contrast, the vastly larger populations of China and India use a significantly lower percentage of the planet's carrying capacity. This discrepancy is justified neither ethically nor environmentally. Clearly, the stability of human society is gravely threatened by the striking contrast between human population size and allocation of resources per capita per nation. For example, in Anantapur, India 2,000 to 3,000 farmers are believed to have committed suicide in the last six years because of dry land and crushing debt (Waldman 2004). When an Indian villager watches community television, s/he sees an affluent world that s/he wants to access (Friedman 2004). Both television and the Internet have heightened awareness of the disparity in resource allocation to an unprecedented degree.

Technology can temporarily expand the resource base for humans but not indefinitely while the population is growing exponentially. Technology also has drawbacks (e.g. Howard et al. 2004). As the human population expands, one species takes even more resources from the other 30+ million species on the planet. Humankind is already co-opting a huge percentage of the resource base and is steadily increasing its share. Inevitably, this misappropriation damages the integrity of natural systems and the ecosystem services they provide. By acquiring a disproportionate share of these resources, humankind is endangering Earth's biospheric life support system. Folke et al. (1997) estimated that the 29 largest cities of Baltic Europe appropriate an ecological area that is at least 565 to 1,130 times larger than the area occupied by the cities.

Global resource allocation to protect the integrity of the biospheric life support system is essential. No precise information is available on what percentage of the global resources is needed by the biospheric life support system to maintain its ability for self-regulation. However, if humankind continues its present unsustainable practices, a tipping point will be reached that will cause malfunction of the biospheric life support system. Enlightened self-interest requires that something be done to correct this situation at once. Arguably, resource allocation for the biospheric life support system should have the highest priority because a healthy biospheric life support system is essential to the continuation of human society and even to the continued existence of *Homo sapiens*. For example, toxic chemicals in Greenland that originate in the industrialized world are carried to the Arctic by ocean currents and wind. Because these chemicals are concentrated as they are transferred up the food chain, both humans and marine mammals (at the top of the food chain) are consuming large amounts of toxic substances when they eat fish.[1]

[1]See, for example, www.ourstolenfuture.org/NewScience/ubiquitous/2000courtneyetal.htm

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Resource allocation among individuals of the human species is also a difficult problem. A disproportionate allocation of resources and the disproportionate impact of pollution are placed upon the poor. Agyeman et al. (2003, p. 2) emphasize the need to 'ensure a better quality of life for all now, and into the future, in a just and equitable manner, while living within the limits of supporting ecosystems.' However, Hardin (1968) cautions that the general principle of the tragedy of the commons is that individuals will exploit anything that is free in order to maximize personal advantage despite the cost to all society. In this context, the problems become: (1) how can the needy be succored without making them dependent upon continual assistance and how can society prevent more births than replacement requires (i.e. maintain a stable population)? and (2) how can the decrease in per capita share of resources be avoided on a finite planet if population increases? Most ecological problems are resolved by a simple balance of supply and demand (Hardin 1993). However, resources are finite on a finite planet while demand, at least short term, can increase dramatically. Eventually, nature will strike a balance through famine and disease, but humankind has shown very little evidence of being able to strike a balance. Hardin (1993, p. 251) asserts that humans fail to achieve ecological and economic sanity 'because our brains are addled by …compassion.' The connections between environmental justice and sustainable use of the planet are more evident than the solutions when one considers the problems (Millbrath 1989). Dobson (2003, p. 89) concludes that social justice and sustainable use of the planet are not necessarily compatible objectives: 'should a theory of distributive justice be impartial in respect of views of the "good life" or should it act in the service of such views?' Like Hardin, Dobson is asking if the consequences of an action are more important than the intent.

Without question, Dobson has emphasized a very important point in sustainable use of the planet. Sending food or medical assistance to a population that has exceeded its carrying capacity and has no systematic, orderly, and persuasive plan for staying within carrying capacity limits is an exceedingly cruel practice. Death control without birth control will, long term, result in more misery for a larger number of people. Yet providing assistance is widely regarded as compassionate, even noble. However, the ethics of resource allocation should not include enabling acts that ultimately lead to continually exceeding carrying capacity. As Eisenberg (1997) remarks, the nonprofit sector ignores the complexity and connectedness of the global system and continues to treat the issues in isolation from each other.

Many signs indicate that humans have exceeded the carrying capacity of Earth with their present practices. The average ecological footprint is estimated at 2.8 hectares per capita, making an estimated aggregate human footprint of 17 billion hectares (Wackernagel et al. 1999). These figures indicate that humankind is exceeding the carrying capacity of the planet. If the human population reaches 10 billion, as predicted for 2050, carrying capacity would be vastly exceeded. Carrying capacity is not based on short-term factors but rather on using natural capital on a sustainable, long-term basis. Although these excesses disproportionately harm the poor, the consequent destabilization of human society will adversely affect both the wealthy and poor. Even if harm is not intended, ignorance is no excuse if harm is done. Humankind has now reached a stage in both social and biological evolution where policies and decisions will make the difference in societal stability, and even survival. The old competitive paradigm no longer works. Nature can quickly restore balance between population size and carrying capacity by eliminating both individuals and species.

If reallocating resources under present circumstances seems visionary, difficulties need to be considered if the resource base diminishes markedly, which seems to be increasingly probable. At present, alarming reports have been published about the diminishing resource base. The United Nations (UN) has reported that one-third of Earth's surface is at risk.[2] Since the 1950s, China has lost 36,000 square miles to desert; 31% of Spain is threatened. Although the UN just marked the tenth anniversary of the Convention to Combat Desertification, the pace of desertification has doubled since the 1970s. The UN believes that, by 2025, two-thirds of the arable land in Africa will disappear, along with one-third of Asia's and one-fifth of South America's. Clearly, these events will have a major deleterious impact on world food supplies, which in turn will probably result in increased resource wars and political instability. To further exacerbate this disturbing forecast, the UN estimates that about 135 million people (equal to the present populations of both France and Germany) will be displaced. In the US, 61% of the Gulf of Mexico shoreline is eroding.[3]

[2]See Hawley C (2004) World's land turning to desert at an alarming speed, warns United Nations. Associated Press, 16 June, available at www.globalecho.org/view_article.php?aid=660

[3]——— (2004) Erosion changes more than half of the Gulf of Mexico shoreline, Environmental News Service, 14 June, available at www.ens-newswire.com/ens/jun2004/2004-06-14-09.asp#anchor3 (Subscription required)

Scientists are increasingly worried about climate change and feel evidence is robust enough to demand action.[4] A good metaphor for this situation is a drunk driver in heavy traffic on a winding road. The probability of a tragic accident is high if something is not done. The climate experts who met at the American Association for the Advancement of Science agree that debate still continues about the precision of the predictive models, but they also assert that the extent of the problem is underestimated.[5] Politicians and oil company executives who downplay the threat of global warming are expected to be enraged by the a statement by Ron Oxburgh, the chairman of Shell, that there is an urgent need to capture emissions of carbon dioxide, one of the greenhouse gases. Lord Oxburgh admits that sequestration is difficult, but, if it is not done, hope for the world is dismal.[6] A warning from ten of the top US climate researchers asserts that policymakers must act soon to address the risks associated with global warming (Eilperin 2004). The drought gripping the western US could be the worst in 500 years.[7] Scientists indicate that the drought, with effects in the Colorado River basin, is considerably worse than the 'Dust Bowl' years that displaced a huge number of American farmers.

Mainstream scientists have been outspoken about the environmental crises, especially global warming and climate change. In one far-ranging article (Senkowsky 2004), some important components of this critical issue are identified: (1) reductionist thinking (i.e. excessive preoccupation with species and all the component-level interactions; starting with an in-depth knowledge of all the pieces will provide all the key interactions and key dynamics), (2) citizen participation (i.e. encouraging citizens to make their voices known; an American Association for the Advancement of Science study noted that, although more than 80% of the 2,300 Americans surveyed felt that human activities were harming the oceans, fewer than one-third felt they could do anything about it), (3) hesitation by the scientific community to publicize bad decisions of politicians, (4) tendency of the media to treat science as 'sound bites', (5) realization of the consequences of not taking action, and (6) recommendations that rely too heavily on voluntary approaches and minor changes that have proven ineffective.

Orr (2004, p. 5) has concisely stated the basic dilemma confronting humankind:

> We will soon see the mounting consequences of climate change, the loss of biological diversity, toxic pollution, the breakdown of entire ecosystems, rising population, growing poverty, terrorism, ecological refugees, political instability, and new diseases for which we have no new remedies. Rather than deal with these issues in a timely and systematic way as common sense would suggest, we've done a quarter-century equivalent of an Australian 'walk about,' in which delay, denial, and dereliction became the norm in our national politics.

Humans were primarily in small tribal groups until the agricultural revolution about 10,000 years ago. Before then, more equity and fairness existed in resource allocation. Because humans were a small group species spread thinly over the planet, stress upon natural systems was minimal in comparison to what it is now. Humankind has yet to demonstrate persuasively that it can live in huge urban groups in a sustainable fashion. Perhaps no species can live sustainably through evolutionary time, but the attempt by humans to do so is far more attractive than the alternative.

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[6]See Adam D (2004) Oil chief: my fears for the planet: Shell boss's "confession" shocks industry. Guardian Unlimited, available at www.guardian.co.uk/climatechange/story/0,12374,1240566,00.html

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